Safety Data Sheets

PG Pool and Spa
10601 Grant Rd Suite 200
Houston, TX 77070

Safety Data Sheets
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File Name	Manufacturer
2-Cycle Oil	Lucas
A-B Epoxy Putty	PPG
Alkalinity Plus	Regal
Alkalinity Up	Leslies
Alum	Leslies
Alum	Usalco
Anti-Foam	Leslies
Antifreeze Premix	Prestone
Automatic Transmission Fluid Dexron III	Valvoline
Brake Fluid Dot 3	Prestone
Bromine Tabs	Leslies
Cal-Hypo Chlorine Tabs	Leslies
Cal-Hypo Shock	Leslies
Calcium Hardness Increaser	Leslies
Calcium Increaser	Regal
Cellulose Fiber	Leslies
Chlor Neutralizer	Leslies
Conditioner	Leslies
Copper Algaecide	Leslies
Cyanuric Acid	Regal
DE Diatomaceous Earth	Leslies
DPD Reagent R-0001	Taylor
DPD Reagent R-0002	Taylor

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SAFETY DATA SHEET

Lucas Semi-Synthetic 2-Cycle Oil

Section 1. Identification

GHS product identifier : Lucas Semi-Synthetic 2-Cycle Oil

Other means of identification : Not available.

Product number : 10058, 10059, 10110, 10115, 10120, 10125

Identified uses

Fuel/Lubricating Oil

Supplier's details : Lucas Oil Products, Inc
302 North Sheridan Street
Corona, California 92878
Toll Free: (800) 342-2512
Tel: (951) 270-0154
Fax: (951) 270-1902
Website: www.LucasOil.com

Emergency telephone number (with hours of operation) : ChemTel 1-800-255-3924 (USA, Canada, Puerto Rico, US V.I.)
+1-813-248-0585 (International)

24 hrs/day, 7 days/week

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 4
ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Combustible liquid.
May be fatal if swallowed and enters airways.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Keep away from flames and hot surfaces. - No smoking.

Response : IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Section 2. Hazards identification

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 10058, 10059, 10110, 10115, 10120, 10125

Ingredient name	%	CAS number
Solvent naphtha (petroleum), medium aliph.	10 - 30	64742-88-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Straight streams of water.

Specific hazards arising from the chemical : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : carbon monoxide, carbon dioxide and oxides of manganese.

Special protective actions for fire-fighters : Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Solvent naphtha (petroleum), medium aliph.	**OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Clear.]

Color : Blue-Green.

Odor : Petroleum solvent

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 191.11 to 211.11°C (376 to 412°F)

Flash point : Closed cup: 83.33°C (182°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.866

Solubility : Negligible at 25°C

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (100°C (212°F)): 0.075 cm^2/s (7.5 cSt)

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Excessive heat, flames and sparks.

Incompatible materials : Reactive or incompatible with the following materials: Strong oxidizers, exposure to light.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

There is no data available.

Section 11. Toxicological information

Sensitization

There is no data available.

Carcinogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

Name	Result
Solvent naphtha (petroleum), medium aliph.	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : There is no data available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	NA1993	Not regulated.	Not regulated.
UN proper shipping name	COMBUSTIBLE LIQUID, N.O.S. (Solvent naphtha (petroleum), medium aliph.)	-	-
Transport hazard class(es)	Combustible liquid.	-	-

Section 14. Transport information

Packing group	III	-	-
Environmental hazards	No.	No.	No.
Additional information	Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials.	-	-

AERG : 128

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: All components are listed or exempted.

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard

Composition/information on ingredients

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: Distillates (petroleum), hydrotreated heavy paraffinic; Residual oils (petroleum), solvent-dewaxed; Residual oils (petroleum), hydrotreated; Distillates (petroleum), solvent-dewaxed heavy paraffinic

Pennsylvania : None of the components are listed.

California Prop. 65

Section 15. Regulatory information

No products were found.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 1 * **Flammability :** 2 **Physical hazards :** 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 1 **Flammability :** 2 **Instability :** 0

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History

Date of issue mm/dd/yyyy : 12/15/2020

Version : 2

Revised Section(s) : Update Emergency contact Information

Prepared by : KMK Regulatory Services Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Date of issue/Date of revision 2 June 2021
Version 4

Section 1. Identification

Product name : MULTIPURPOSE A/B EPOXY PUTTY
Product code : FG600401300
Other means of identification : Not available.
Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Industrial applications.
Use of the substance/ mixture : Coating. Paints. Painting-related materials.
Uses advised against : Not applicable.

Manufacturer : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
SETIQ Interior de la República: 800-00-214-00 (México)
SETIQ Ciudad de México: (55) 5559-1588 (México)
Technical Phone Number : (414) 764-6000 (OAK CREEK, WI) 8:00 a.m. - 5:00 p.m. Central

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 33.3% (oral), 74.6% (dermal), 98.9% (inhalation)

GHS label elements

Hazard pictograms :

Section 2. Hazards identification

Signal word : Danger

Hazard statements : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
May cause cancer.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Use only outdoors or in a well-ventilated area. Avoid breathing dust. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Sanding and grinding dusts may be harmful if inhaled. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Emits toxic fumes when heated.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product name : MULTIPURPOSE A/B EPOXY PUTTY

Ingredient name	%	CAS number
Talc, not containing asbestiform fibers	≥20 - ≤50	14807-96-6
glass, oxide, chemicals	≥20 - ≤50	65997-17-3
Epoxy resin (MW ≤ 700)	≥10 - ≤20	25068-38-6
bis-[4-(2,3-epoxipropoxi)phenyl]propane	≥10 - ≤20	1675-54-3
zinc sulphide	≥1.0 - ≤5.0	1314-98-3
crystalline silica, respirable powder (<10 microns)	<1.0	14808-60-7

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

Eye contact : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Special precautions : If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Do not store below the following temperature: 5°C (41°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Talc, not containing asbestiform fibers	**ACGIH TLV (United States, 3/2020).** TWA: 2 mg/m³ 8 hours. Form: Respirable **OSHA PEL Z3 (United States).** TWA: 2 mg/m³
glass, oxide, chemicals	**OSHA PEL (United States).** TWA: 15 mg/m³ TWA: 5 mg/m³ Form: Respirable TWA: 15 mg/m³ Form: Total dust **ACGIH TLV (United States).** TWA: 1 f/cc Form: Continuous filament glass fibers TWA: 5 mg/m³, (Inhalable) Form: Continuous filament glass fibers TWA: 3 mg/m³ Form: Respirable TWA: 10 mg/m³ Form: Total dust **ACGIH TLV (United States, 3/2020).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction

Section 8. Exposure controls/personal protection

	TWA: 1 f/cc 8 hours. Form: Respirable fibers: length greater than 5 uM; aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination.
Epoxy resin (MW ≤ 700)	None.
bis-[4-(2,3-epoxipropoxi)phenyl]propane	None.
zinc sulphide	None.
crystalline silica, respirable powder (<10 microns)	**ACGIH TLV (United States, 3/2020).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable **OSHA PEL Z3 (United States, 6/2016).** TWA: 10 mg/m³ / (%SiO2+2) 8 hours. Form: Respirable TWA: 250 mppcf / (%SiO2+5) 8 hours. Form: Respirable **OSHA PEL (United States, 5/2018).** TWA: 50 µg/m³ 8 hours. Form: Respirable dust

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	STEL	=	Short term Exposure limit values
IPEL	=	Internal Permissible Exposure Limit	TD	=	Total dust
OSHA	=	Occupational Safety and Health Administration.	TLV	=	Threshold Limit Value
R	=	Respirable	TWA	=	Time Weighted Average
Z	=	OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances			

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves : butyl rubber

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. The respiratory protection shall be in accordance to 29 CFR 1910.134.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not applicable.

Evaporation rate : Not available.

Vapor pressure : Not available.

Section 9. Physical and chemical properties

Vapor density : Not applicable.

Relative density : 1.92

Density (lbs / gal) : 16.02

Solubility : Insoluble in the following materials: cold water.

Partition coefficient: n-octanol/water : Not applicable.

Viscosity : Kinematic (40°C (104°F)): Not applicable.

Volatility : 0% (v/v), 0% (w/w)

% Solid. (w/w) : 100

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.

Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

Hazardous decomposition products : Depending on conditions, decomposition products may include the following materials: carbon oxides sulfur oxides halogenated compounds metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Epoxy resin (MW ≤ 700)	LD50 Dermal	Rabbit	>2 g/kg	-
	LD50 Oral	Rat	>2 g/kg	-
bis-[4-(2,3-epoxipropoxi) phenyl]propane	LD50 Dermal	Rabbit	23000 mg/kg	-
	LD50 Oral	Rat	15000 mg/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Epoxy resin (MW ≤ 700)	Skin - Mild irritant	Rabbit	-	-	-
	Eyes - Mild irritant	Rabbit	-	-	-
bis-[4-(2,3-epoxipropoxi) phenyl]propane	Eyes - Redness of the conjunctivae	Rabbit	0.4	24 hours	-
	Eyes - Mild irritant	Rabbit	-	24 hours	-
	Skin - Erythema/Eschar	Rabbit	0.8	4 hours	-
	Skin - Edema	Rabbit	0.5	4 hours	-
	Skin - Mild irritant	Rabbit	-	4 hours	-

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Eyes : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Epoxy resin (MW ≤ 700)	skin	Mouse	Sensitizing
bis-[4-(2,3-epoxipropoxi) phenyl]propane	skin	Mouse	Sensitizing

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Classification

Product/ingredient name	OSHA	IARC	NTP
glass, oxide, chemicals	-	3	-
bis-[4-(2,3-epoxipropoxi) phenyl]propane	-	3	-
crystalline silica, respirable powder (<10 microns)	-	1	Known to be a human carcinogen.

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4
NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen
OSHA: +
Not listed/not regulated: -

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Talc, not containing asbestiform fibers	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
crystalline silica, respirable powder (<10 microns)	Category 1	inhalation	-

Target organs : Contains material which may cause damage to the following organs: lungs, cardiovascular system, upper respiratory tract, skin, eyes.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : May cause respiratory irritation.
Skin contact : Causes skin irritation. May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Conclusion/Summary : There are no data available on the mixture itself. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Short term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Long term exposure

Section 11. Toxicological information

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
MULTIPURPOSE A/B EPOXY PUTTY	12727.7	4852.3	N/A	N/A	N/A
Epoxy resin (MW ≤ 700)	2500	2500	N/A	N/A	N/A
bis-[4-(2,3-epoxipropoxi)phenyl]propane	15000	23000	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Epoxy resin (MW ≤ 700)	Acute LC50 1.8 mg/l	Daphnia	48 hours
	Chronic NOEC 0.3 mg/l	Daphnia	21 days
bis-[4-(2,3-epoxipropoxi) phenyl]propane	Acute LC50 1.8 mg/l Fresh water	Daphnia - daphnia magna	48 hours
	Chronic NOEC 0.3 mg/l	Daphnia	21 days

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Epoxy resin (MW ≤ 700)	OECD 301F	5 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Epoxy resin (MW ≤ 700)	-	-	Not readily
bis-[4-(2,3-epoxipropoxi) phenyl]propane	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Epoxy resin (MW ≤ 700)	3	31	low

Section 12. Ecological information

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class (es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : None identified.

IMDG : None identified.

IATA : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14. Transport information

Transport in bulk according to IMO instruments : Not applicable.

Section 15. Regulatory information

United States

United States inventory (TSCA 8b) : All components are active or exempted.

SARA 302/304

SARA 304 RQ : Not applicable.

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Composition/information on ingredients

Name	%	Classification
Talc, not containing asbestiform fibers	≥20 - ≤50	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Epoxy resin (MW ≤ 700)	≥10 - ≤20	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B
bis-[4-(2,3-epoxipropoxi)phenyl] propane	≥10 - ≤20	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B
zinc sulphide	≥1.0 - ≤5.0	EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B
crystalline silica, respirable powder (<10 microns)	<1.0	CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

SARA 313

Supplier notification : zinc sulphide

Chemical name	CAS number	Concentration
zinc sulphide	1314-98-3	1 - 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

⚠ **WARNING**: Cancer - www.P65Warnings.ca.gov.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 0 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on MSDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 0 **Instability** : 0

Date of previous issue : **1/20/2021**

Organization that prepared the SDS : EHS

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

SAFETY DATA SHEET

REGAL® POOL CARE SYSTEM ALKALINITY PLUS

SDS No.: R31510R **SDS Revision Date:** 06-May-2015

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured For and Registered By:	Alliance Trading, Inc. 109 Northpark Boulevard, 4Th Floor Covington, LA 70433
Supplier Identification:	Occidental Chemical Corporation 5005 LBJ Freeway P.O. Box 809050 Dallas, TX 75380-9050 1-800-752-5151
24 Hour Emergency Telephone Number:	1-800-733-3665 or 1-972-404-3228 (USA); CHEMTREC (within USA and Canada): 1-800-424-9300; CHEMTREC (outside USA and Canada): +1 703-527-3887; CHEMTREC Contract No: CCN16186
Emergency Medical:	1-800-255-3924
OxyChem® Customer Service:	1-800-752-5151 or 1-972-404-3700
Product Identifier:	**REGAL® POOL CARE SYSTEM ALKALINITY PLUS**
Synonyms:	Sodium bicarbonate; Baking soda; Bicarbonate of soda; Sodium acid carbonate; Monosodium carbonate; Carbonic acid monosodium salt; Sodium hydrogen carbonate
Product Use:	Adjustment of water alkalinity in pools.
Uses Advised Against:	None identified.

2. HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

****

EMERGENCY OVERVIEW:

Color: White
Appearance: Granules, Powder
Odor: Odorless

Signal Word: **NONE Non-hazardous**

MAJOR HEALTH HAZARDS: MAY CAUSE MILD IRRITATION WITH SKIN CONTACT, EYE CONTACT, RESPIRATORY TRACT CONTACT, OR INGESTION.

PRECAUTIONARY STATEMENTS: Always use good hygiene measures. Avoid contact with skin and eyes. Avoid breathing dust. Wash thoroughly after handling.

ADDITIONAL HAZARD INFORMATION: Even though this material is not classified as hazardous according to US OSHA's 2012 Hazard Communication Standard, good hygiene and safety practices should be followed. Good hygiene practices include but are not limited to: wearing suitable gloves and/or eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

****

GHS CLASSIFICATION:

Note: There is not a GHS classification associated with this non-hazardous material.

GHS: CARCINOGENICITY:	This product is not classified as a carcinogen by NTP, IARC or OSHA.

Unknown Acute Dermal Toxicity:
100% of this product consists of ingredient(s) of unknown acute dermal toxicity.

GHS SYMBOL: None

GHS SIGNAL WORD: **NONE, NOT OSHA HAZARDOUS CHEMICAL**

GHS HAZARD STATEMENTS:

GHS - Physical Hazard Statement(s)
Not classified as a hazardous substance or mixture

GHS - Health Hazard Statement(s)
Not classified as a hazardous substance or mixture

GHS - Precautionary Statement(s) - Prevention
Not classified as a hazardous substance or mixture
There are no Precautionary Statement(s)-Prevention phrases assigned

GHS - Precautionary Statement(s) - Response
Not classified as a hazardous substance or mixture
There are no Precautionary Statement(s)-Response phrases assigned

GHS - Precautionary Statement(s) - Storage
Not classified as a hazardous substance or mixture
There are no Precautionary Statement(s) - Storage phrases assigned

GHS - Precautionary Statement(s) - Disposal
There are no Precautionary Statement(s) - Disposal phrases assigned.

Hazards Not Otherwise Classified (HNOC)
None identified

See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Baking soda, Bicarbonate of Soda, Sodium Acid Carbonate, Monosodium Carbonate, Carbonic Acid Monosodium Salt, Sodium hydrogen carbonate

Component	Percent [%]	CAS Number
Sodium Bicarbonate	100	144-55-8

4. FIRST AID MEASURES

INHALATION: No effects expected. If inhalation of this material occurs and you feel unwell, move to fresh air.

SKIN CONTACT: Brush off excess material. Irrigate with water. If skin irritation occurs, get medical advice/attention.

EYE CONTACT: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

INGESTION: No effect expected. Carbon dioxide may be released when neutralized by gastric acid. If large amounts are ingested, get medical advice/attention.

Most Important Symptoms/Effects (Acute and Delayed) :.

Acute Symptoms/Effects: Listed below.
Inhalation (Breathing): Respiratory Irritation: Upper airway irritation, may cause cough, redness of mouth and upper airways.
Skin: Skin Irritation. Exposure to powder or fine particulates of this material may cause slight skin redness, irritation.
Eye: Eye Irritation: Eye exposure may cause irritation, and redness to the eye lids, conjunctiva.
Ingestion (Swallowing): No known effects.

Delayed Symptoms/Effects:
- No delayed / chronic effects have been identified

Interaction with Other Chemicals Which Enhance Toxicity: None known.

Medical Conditions Aggravated by Exposure: May aggravate preexisting conditions such as: eye disorders that decrease tear production or have reduced integrity of the eye; skin disorders that compromise the integrity of the skin; and respiratory conditions including asthma and other breathing disorders.

Protection of First-Aiders: Avoid contact with skin and eyes. Do not breathe dust. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.

Notes to Physician: This material dissociates into sodium and bicarbonate ions upon contact with water. Despite wide use of sodium bicarbonate orally, little toxicity has occurred. Risks of acute and chronic oral bicarbonate ingestion may include metabolic alkalosis and related metabolic alterations.

5. FIRE-FIGHTING MEASURES

Fire Hazard: Negligible fire hazard.

Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

Fire Fighting: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode.

Hazardous Combustion Products:	Oxides of carbon, Oxides of sodium, Heating above 100 °C may cause dangerous levels of carbon dioxide gas to be present in the atmosphere
Sensitivity to Mechanical Impact:	Not sensitive.

Sensitivity to Static Discharge: Not sensitive.

Lower Flammability Level (air): Not flammable

Upper Flammability Level (air): Not flammable

Flash point: Not flammable

Auto-ignition Temperature: Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes. Avoid breathing dust. Avoid generating dust. Wash thoroughly after handling. When handling this material, wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

Methods and Materials for Containment and Cleaning Up:
Shovel dry material into suitable container. Flush spill area with water, if appropriate.

Environmental Precautions:
Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate agencies.

7. HANDLING AND STORAGE

Precautions for Safe Handling:
Observe good personal hygiene practices and recommended procedures. Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing dust. Use methods to minimize dust. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS.

Safe Storage Conditions:
Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Material is very hygroscopic. Store in a cool, dry area. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

Incompatibilities/ Materials to Avoid:
Acids

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Regulatory Exposure Limit(s): Listed below for the product components that have regulatory occupational exposure limits (OEL's) established.

Component	OSHA Final PEL TWA	OSHA Final PEL STEL	OSHA Final PELCeiling
Particles Not Otherwise Regulated (PNOR) 00-00-001	15 mg/m^3 (Total) 5 mg/m^3 (Respirable)	-----	-----

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

NON-REGULATORY EXPOSURE LIMIT(S): Listed below for the product components that have advisory (non-regulatory) occupational exposure limits (OEL's) established.

Component	CAS Number	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Particulates Not Otherwise Specified (PNOS)	Not Assigned	10 mg/m^3 (Inhalable) 3 mg/m^3 (Respirable)	-----	-----	-----	-----	-----

- The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).

- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

Additional Advice: Even though this material is not classified as hazardous according to US OSHA's 2012 Hazard Communication Standard, good hygiene and safety practices should be followed.

ENGINEERING CONTROLS: General or local exhaust ventilation and other forms of engineering controls are the preferred means for controlling exposures. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Use good hygiene practices when handling this material. Safety glasses with side-shields or goggles are recommended when there is a potential for eye contact.

Skin and Body Protection: Use good hygiene practices when handling this material. As a good hygiene practice, wear protective clothing to minimize skin contact such as standard industrial work clothes, coveralls, safety footwear. Contaminated clothing should be removed and laundered before reuse.

Hand Protection: As a good hygiene practice, wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

Protective Material Types: Butyl rubber, Natural rubber, Neoprene, Nitrile

Respiratory Protection: No personal respiratory protective equipment normally required. A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. In dusty or misty atmospheres use an approved particulate respirator. The added protection of a full face-piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

HYGIENE MEASURES: Handle in accordance with good industrial hygiene and safety practices. Good hygiene practices include but are not limited to: wearing suitable gloves and/or eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Granules, Powder
Color:	White
Odor:	Odorless
Molecular Weight:	84.02
Molecular Formula:	NaHCO3
Decomposition Temperature:	212 - 392 °F (100 - 200 °C)
Boiling Point/Range:	Not applicable to solids
Freezing Point/Range:	Not applicable to solids.
Melting Point/Range:	No data available
Vapor Pressure:	Not applicable
Vapor Density (air=1):	Not applicable
Relative Density/Specific Gravity (water=1):	2.159
Density:	No data available
Bulk Density:	62 lb./ft3
Water Solubility:	8.6 g/100ml @ 20 °C
pH:	8.2
Volatility:	No data available
Evaporation Rate (ether=1):	Not applicable
Partition Coefficient (n-octanol/water):	No data available
Flash point:	Not flammable
Flammability (solid, gas):	Not flammable
Lower Flammability Level (air):	Not flammable
Upper Flammability Level (air):	Not flammable
Auto-ignition Temperature:	Not applicable
Viscosity:	Not applicable to solids
Hygroscopic:	Yes

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal temperatures and pressures.

Chemical Stability: Stable at normal temperatures and pressures. Stable in dry air, but slowly decomposes in moist air.

Possibility of Hazardous Reactions:
Reacts with acids to yield carbon dioxide. May yield free caustic in the presence of lime dust (CaO) and moisture (i.e., water, perspiration). Dangerous reaction with monoammonium phosphate or a sodium-potassium alloy. Heating above 100 C may cause dangerous levels of carbon dioxide to be present in confined spaces. Yields sodium oxide if exposed to temperatures above 850 C.

Conditions to Avoid:
(e.g., static discharge, shock, or vibration) -. None known.

Incompatibilities/ Materials to Avoid:
Acids.

Hazardous Decomposition Products: Sodium oxides, Oxides of carbon (Carbon monoxide, Carbon dioxide)

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

IRRITATION: This material was minimally irritating to unwashed eyes and practically non-irritating to washed eyes (rabbits)

TOXICITY DATA:

PRODUCT TOXICITY DATA: Sodium Bicarbonate

LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
7300 mg/kg (Rat)	No data available	> 4.74 mg/L (4 hr - Rat)

COMPONENT TOXICITY DATA:
Note: The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

Component	LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
Sodium Bicarbonate 144-55-8	4220 mg/kg (Rat)	-----	-----

****

POTENTIAL HEALTH EFFECTS:

Eye contact:	May cause mild eye irritation.
Skin contact:	May cause slight skin irritation.
Inhalation:	May cause slight upper respiratory irritation.
Ingestion:	No known effects.

SIGNS AND SYMPTOMS OF EXPOSURE:

Inhalation (Breathing): Respiratory Irritation: Upper airway irritation, may cause cough, redness of mouth and upper airways.
Skin: Skin Irritation. Exposure to powder or fine particulates of this material may cause slight skin redness, irritation.
Eye: Eye Irritation: Eye exposure may cause irritation, and redness to the eye lids, conjunctiva.
Ingestion (Swallowing): No known effects.

TOXICITY:
SODIUM BICARBONATE is an extremely well-known agent that historically has been used for a variety of medical conditions. Despite the widespread use of oral sodium bicarbonate, little documented toxicity has occurred, and the emergency medicine literature contains no reports of toxicity caused by the ingestion of baking soda. Risks of acute and chronic oral bicarbonate ingestion include metabolic alkalosis, hypernatremia, hypertension, gastric rupture, hyporeninemia, hypokalemia, hypochloremia, intravascular volume depletion, and urinary alkalinzation. Abrupt cessation of chronic excessive bicarbonate ingestion may result in hyperkalemia, hypoaldosteronism, volume contraction, and disruption of calcium and phosphorous metabolism.

Interaction with Other Chemicals Which Enhance Toxicity: None known.

****

GHS HEALTH HAZARDS:
This material is not classified as hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). There is not a GHS classification associated with this non-hazardous material.

GHS: CARCINOGENICITY:
This product is not classified as a carcinogen by NTP, IARC or OSHA.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

Aquatic Toxicity:
This material is believed to be practically non-toxic to aquatic life

Fish Toxicity:
LC50 Bluegill sunfish: 7100 mg/L
LC50 Rainbow trout: 7700 mg/L

Invertebrate Toxicity:
EC50 Daphnids: 4100 mg/L

FATE AND TRANSPORT:

BIODEGRADATION: This material is inorganic and not subject to biodegradation

PERSISTENCE: This material is expected to persist in the environment

BIOACCUMULATIVE POTENTIAL: This material is not expected to bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Waste from material:
Reuse or recycle if possible. May be subject to disposal regulations. Dispose in accordance with all applicable regulations.

Container Management:
Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT

U.S. DOT 49 CFR 172.101:

Status: Not regulated.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

Status: Not regulated.

MARITIME TRANSPORT (IMO / IMDG) :

Status - IMO / IMDG: Not Regulated

15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
Not regulated.

SARA EHS Chemical (40 CFR 355.30)
Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):
None

EPCRA SECTION 313 (40 CFR 372.65):
Not regulated.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):
Not regulated

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.

TSCA 12(b): This product is not subject to export notification.

Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

STATE REGULATIONS

There are no applicable state regulations for this product or its components.

CANADIAN REGULATIONS

• This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

WHMIS - Classifications of Substances:

• Not a controlled product under Canada's Workplace Hazardous Information System

16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Product Stewardship

Rev. Date: Not Revised

HMIS: (SCALE 0-4) (Rated using National Paint & Coatings Association HMIS: Rating Instructions, 2nd Edition)

Health Rating: 0 **Flammability Rating:** 0 **Reactivity Rating:** 0

NFPA 704 - Hazard Identification Ratings (SCALE 0-4)

Health Rating: 0 **Flammability:** 0 **Reactivity Rating:** 0

Reason for Revision:

• Three year review
• New Product
• Changed the SDS format to meet the GHS requirements of the revised 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200}

IMPORTANT:

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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees

End of Safety Data Sheet

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Leslie's Swimming Pool Supplies Alkalinity Up**

Other means of identification Not available

Recommended use Raising alkalinity and stabilizing pH

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name LPM Manufacturing, Inc.

Address 2005 E. Indian School Rd.
Phoenix, AZ 85016
United States

Telephone 602-366-3999

E-mail Not available.

Emergency phone number 800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium bicarbonate		144-55-8	97-100

4. First Aid Measures

Inhalation If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Skin contact Brush away excess of dry material. Flush with water. Obtain medical attention if irritation persists.

Eye contact Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention if irritation develops or persists.

Ingestion Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Rinse mouth with water, then drink one or two glasses of water. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Suitable extinguishing media	Treat for surrounding material.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In the event of fire, cool tanks with water spray.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Sweep up material and place in a disposal container without raising dust. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid breathing dust. Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Practice good housekeeping.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Guard against dust accumulation of this material.

8. Exposure Controls/Personal Protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Not normally required if good ventilation is maintained.

Individual protection measures, such as personal protective equipment

Eye/face protection	Safety goggles or glasses.
Skin protection	
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Other	Wear suitable protective clothing.
Respiratory protection	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
Thermal hazards	Not applicable.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Solid
Physical state	Solid.
Form	Crystalline. Powder
Color	White.
Odor	Odorless
Odor threshold	Not available.
pH	8.4 (Water) Concentration: 8.4 g/l @ 25°C, 8.6 Concentration: 52 g/l
Melting point/freezing point	374 - 377.6 °F (190 - 192 °C)

Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	1.65
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	69 g/l (Water) @ 0°C, 93 g/l (Water) @ 20°C, 165 g/l (Water) @ 60°C
Auto-ignition temperature	Not available.
Decomposition temperature	> 122 °F (> 50 °C)
Viscosity	Not available.
Other information	
Density	2.21 - 2.23 g/cm3
Molecular formula	NaHCO3
Molecular weight	84.01 g/mol

10. Stability and Reactivity

Reactivity	This product may react with acids.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Incompatible materials	Moisture. Acids.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Dust in the eyes will cause irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	**Species**	**Test Results**
Sodium bicarbonate (CAS 144-55-8)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50		> 4.7 mg/l

Components	Species	Test Results
Oral		
LD50	Mouse	3360 mg/kg
	Rat	4220 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Dust in the eyes will cause irritation.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Not available.

Further information This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Sodium bicarbonate (CAS 144-55-8)			
Crustacea	EC50	Daphnia	2350 mg/L, 48 Hours
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	7550 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Texas Effects Screening Levels: Listed substance

Sodium bicarbonate (CAS 144-55-8) Listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

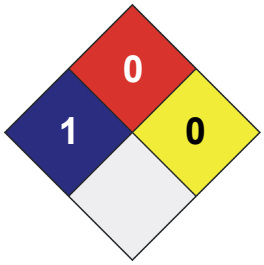
Not regulated.

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

16-December-2014

Further information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Prepared by

Dell Tech Laboratories Ltd. Phone: (519) 858-5021

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Leslie's Swimming Pool Supplies Alum**

Other means of identification Not available

Recommended use Flocculant and filter aid

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name LPM Manufacturing, Inc.

Address 2005 E. Indian School Rd.
Phoenix, AZ 85016
United States

Telephone 602-366-3999

E-mail Not available.

Emergency phone number 800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.

Precautionary statement

Prevention Wash thoroughly after handling. Avoid breathing dust. Use only outdoors or in a well-ventilated area. Wear protective gloves. Wear eye/face protection. Do not eat, drink or smoke when using this product.

Response If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Specific treatment (see this label).
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
If swallowed: Call a poison center/doctor/physician if you feel unwell. Rinse mouth.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 100% of the mixture consists of component(s) of unknown acute inhalation toxicity. 100% of the mixture consists of component(s) of unknown acute dermal toxicity.

3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Aluminum sulphate		10043-01-3	97-100

4. First Aid Measures

Inhalation
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Skin contact
If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye contact
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

Ingestion
If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth.

Most important symptoms/effects, acute and delayed
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Suitable extinguishing media
Treat for surrounding material.

Unsuitable extinguishing media
Do not use water jet.
Do not use halogenated extinguishing agents or foam.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions
In the event of fire, cool tanks with water spray.

Specific methods
Cool containers exposed to flames with water until well after the fire is out.

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear a dust mask if dust is generated above exposure limits. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation.

Methods and materials for containment and cleaning up
Sweep up material and place in a disposal container without raising dust. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling
Observe good industrial hygiene practices. Use care in handling/storage. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment.

Conditions for safe storage, including any incompatibilities
Store locked up. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum sulphate (CAS 10043-01-3)	TWA	1 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Aluminum sulphate (CAS 10043-01-3)	TWA	2 mg/m3

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Not normally required if good ventilation is maintained.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Not applicable.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Solid
Physical state	Solid.
Form	Solid.
Color	White
Odor	Odorless
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	1202 °F (650 °C)
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	1.7 @ 17°C
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	87.5 gr/100 mL @ 20°C
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Molecular weight	594

10. Stability and Reactivity

Reactivity	Do not mix with other chemicals.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of sulfur.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Eye irritation Skin irritation May cause respiratory irritation.

Components	**Species**	**Test Results**
Aluminum sulphate (CAS 10043-01-3)		
Acute		
Inhalation		
LC50	Not available	
Oral		
LD50	Guinea pig	490 mg/kg
	Mouse	> 730 mg/kg
	Rat	1930 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	Causes serious eye damage.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Prolonged inhalation may be harmful.
Further information	Not available.

12. Ecological Information

Ecotoxicity See below

Components		Species	Test Results
Aluminum sulphate (CAS 10043-01-3)			
Aquatic			
Crustacea	EC50	Amphipod (Crangonyx pseudogracilis)	11.8 - 14 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	3.4 - 5.6 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Aluminum sulphate (CAS 10043-01-3) Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Hazardous Substances (Director's): Listed substance

Aluminum sulphate (CAS 10043-01-3) Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Illinois Chemical Safety Act: Listed substance

Aluminum sulphate (CAS 10043-01-3) Listed.

US - Louisiana Spill Reporting: Listed substance

Aluminum sulphate (CAS 10043-01-3) Listed.

US - Minnesota Haz Subs: Listed substance

Aluminum sulphate (CAS 10043-01-3) Listed.

US - New Jersey RTK - Substances: Listed substance

Aluminum sulphate (CAS 10043-01-3) Listed.

US - New York Release Reporting: Hazardous Substances: Listed substance

Aluminum sulphate (CAS 10043-01-3) Listed.

US - Texas Effects Screening Levels: Listed substance

Aluminum sulphate (CAS 10043-01-3) Listed.

US. Massachusetts RTK - Substance List

Aluminum sulphate (CAS 10043-01-3) Listed.

US. Pennsylvania RTK - Hazardous Substances

Aluminum sulphate (CAS 10043-01-3) Listed.

US. Rhode Island RTK

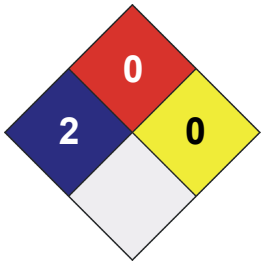
Aluminum sulphate (CAS 10043-01-3) Listed.

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date 16-December-2014

Further information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Other information This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Prepared by Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

SAFETY DATA SHEET

MUL = 150 mg/L

Revision date 18-Dec-2020 **Revision Number** 2

1. Identification

Product identifier

Product Name Aluminum Sulfate, Dry, Iron Free

Other means of identification

Product Code(s) 5403

Synonyms None ACROBAT=(E,Z) 4 - [3- (4-chlorophenyl) - 3 - (3,4 - dimethoxyphenyl) acryloyl) morpholine; Mancozeb= Manganese ethylenebis (dithiocarbamat (polymeric) complex with zinc salt C.I. Basic Green 4

Recommended use of the chemical and restrictions on use

Recommended use No information available

Restrictions on use No information available None known

Details of the supplier of the safety data sheet

Supplier Address
G2O Technologies LLC
1 Riverside Way,
Phillipsburg, NJ 08865
+1-800-453-2586 Hours: Monday-Friday 9:00-5:00 CST (Central Standard Time)

Manufacturer Address
USALCO, LLC
2601 Cannery Ave.
Baltimore, MD 21226

Contact Point sds@usalco.com

Emergency Telephone CHEMTREC: (800) 424-9300
Outside USA - +1 (703) 527-3887 collect calls accepted

2. Hazard(s) identification

Classification

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Corrosive to metals	Category 1

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

DANGER

Hazard statements

Causes severe skin burns and eye damage
May be corrosive to metals

Appearance Crystalline **Physical state** Solid **Odor** Not determined Odorless

Precautionary Statements - Prevention

Do not breathe dusts or mists
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep only in original container

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
Wash contaminated clothing before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Immediately call a POISON CENTER or doctor
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up
Store in corrosive resistant container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

May be harmful if swallowed.

3. Composition/information on ingredients

Substance

Synonyms None. ACROBAT=(E,Z) 4 - [3- (4-chlorophenyl) - 3 - (3,4 - dimethoxyphenyl) acryloyl) morpholine; Mancozeb= Manganese ethylenebis (dithiocarbamat (polymeric) complex with zinc salt. C.I. Basic Green 4.

Chemical name	CAS No	Weight-%	Trade secret
Aluminum sulfate	10043-01-3	> 55%	*
Water	7732-18-5	< 45%	*

*The exact percentage (concentration) of composition has been withheld as a trade secret. While some components are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

4. First-aid measures

Description of first aid measures

Inhalation If inhaled, remove to fresh air. Break an amyl nitrate pearl in a cloth and hold under nose for 15 seconds. Repeat five times at 15 minute intervals. If not breathing (trained personnel should) give artificial respiration. Get immediate medical attention. If inhaled, remove to fresh air. If not breathing (trained personnel should) give artificial respiration, preferably mouth-to-mouth. If breathing is difficult (trained personnel should) give oxygen. Get medical attention. Call a physician immediately.

Eye contact None known. In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists. Get medical attention if irritation develops and persists.

Skin contact None known. In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. If skin irritation occurs: Get medical advice/attention.

Ingestion None known. Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person. If swallowed, induce vomiting immediately by giving two glasses of water and sticking fingers down throat; never give anything to an unconscious person. Get medical attention. Get medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms None known.

Indication of any immediate medical attention and special treatment needed

Note to physicians Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents. Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media
Large Fire None - does not burn. Water fog, carbon dioxide, foam, dry chemical.
CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical Under fire conditions (or at temperatures greater than 650 °C or 1202 °F), product decomposes to give off sulfur trioxide, an oxidizing agent which will support combustion. Sulfur trioxide will react with water to form sulfuric acid.

Explosion data
Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment for fire-fighters Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Wear suitable protective clothing and gloves.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Large spills should be handled according to a predetermined plan. For assistance in developing a plan, call 1-800-453-2586. Use with adequate ventilation where dust may be generated. Ensure adequate decontamination of tools and equipment following cleanup. Sweep up or vacuum into labeled waste containers for disposal.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Keep container closed when not in use. Avoid creating dust. Do not take internally. Avoid contact with eyes, skin and clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions Not determined. Store in a cool, dry place away from ignition sources and open flame.

8. Exposure controls/personal protection

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Aluminum sulfate 10043-01-3	-	(vacated) TWA: 2 mg/m^3 Al Aluminum	TWA: 2 mg/m^3 Al

Biological occupational exposure limits
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Use engineering controls as per code of federal regulations, labor part 1910.94. Exhaust ventilation. Not determined. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.

Individual protection measures, such as personal protective equipment

Eye/face protection None known. Wear safety glasses or goggles to protect against exposure. Safety glasses. Safety glasses (with side shields). Face shield. Wear chemical splash goggles and face shield (when eye and face contact is possible due to splashing or spraying of material).

Hand protection None known. Rubber gloves. Appropriate chemical resistant gloves should be worn. Oil-resistant gloves.

Skin and body protection Not determined. Standard work clothing and work shoes.

Respiratory protection When exposed to elevated dust levels, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid
Appearance	Crystalline
Color	White to light tan
Odor	Not determined Odorless
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	3.5	1% solution
Melting point / freezing point	Loses water of hydration at 88 ◦C (190 ◦F) No data available	No information available
Boiling point / boiling range	No information available No data available	No information available
Flash point	No information available No data available	No information available
Evaporation rate	No information available No data available	No information available
Flammability (solid, gas)	Not applicable No data available	No information available
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	No information available
Relative vapor density	No data available	No information available
Relative density	No data available No information available	None known
Water solubility	No data available 87.3 g/100 g water	No information available
Solubility(ies)	No information available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No information available No data available	None known
Decomposition temperature	No information available	None known
Kinematic viscosity	No data available	No information available
Dynamic viscosity	No data available	No information available

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	No data available.
Chemical stability	Stable at ambient temperatures and atmospheric pressure.
Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	None anticipated. Hazardous polymerization may occur. May occur if the product is mixed with acidic materials. Not anticipated under normal or recommended handling and storage conditions.
Conditions to avoid	Avoid high temperatures greater than 650° C (1200° F) as material may decompose to form aluminum oxide and sulfur trioxide (an oxidizing agent that supports combustion).

Incompatible materials Reacts with strong alkali to form aluminum hydroxide. Weakly corrosive to carbon steel. On contact with moisture, an acidic solution forms.

Hazardous decomposition products Thermal decomposition products include oxides of aluminum and sulfur.

11. Toxicological information

Information on likely routes of exposure

Inhalation Dust extremely irritating to respiratory tract.

Eye contact Concentrated solutions (over 20%) may cause severe eye damage or burns. May cause irritation and inflammation of the eye.

Skin contact May cause skin irritation or burns if the product is wet or in the presence of perspiration.

Ingestion May be harmful if swallowed. May cause abdominal pain, nausea, or vomiting. Concentrated solutions can cause burns of the mouth, bleeding stomach, muscle spasms and kidney injury.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity
No information available

ATEmix (oral) 3386 mg/kg

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum sulfate 10043-01-3	= 1930 mg/kg (Rat)	-	-
Water 7732-18-5	> 90 mL/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Irritating to skin.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.

Reproductive toxicity No information available.

Developmental toxicity No information available.

STOT - single exposure Irritating to respiratory system.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Aluminum sulfate 10043-01-3	--	LC50 (96 h) = 100 mg/L (Carassius auratus) LC50 (96 h static) = 37 mg/L (Gambusia affinis)	-	-

Persistence and degradability Not determined. Na. No information available.

Bioaccumulation No information available.

Mobility Not determined. Na. No information available.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products . Dispose of in accordance with federal, state and local regulations. Federal, state and local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected. Dispose of product in an approved chemical waste landfill or incinerate in accordance with applicable Federal, state and local regulations.

Contaminated packaging Since empty containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT Not regulated
DOT Reportable Quantity lbs. (calculated) 8500 pounds as hydrate
DOT Marine Pollutant Not determined

TDG Not regulated
UN proper shipping name Not determined

MEX Not regulated
Technical Name

IATA Chemical, NOI, Not Regulated by DOT
UN proper shipping name Not determined

IMDG Chemical, NOI, Not Regulated by DOT
UN proper shipping name FLAMMABLE LIQUID NOS (CONTAINS FUEL OIL), FLAMMABLE LIQUID, UN19 93, IMO

CLASS 3.3, HFG, PACKAGING GROUP 3. Not determined

15. Regulatory information

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Aluminum sulfate 10043-01-3	5000 lb	-	-	X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Aluminum sulfate 10043-01-3	5000 lbs. final RQ 2267 kg final RQ	-	RQ 17,500 lbs. as solution RQ 7,937 kg as solution

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 1	**Flammability** 0	**Instability** 1	**Special hazards**
HMIS	**Health hazards** 1	**Flammability** 0	**Physical hazards** 1	**Personal protection** B

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 18-Dec-2020
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SECTION 1. IDENTIFICATION

Product identifier

Trade name : LESLIE'S SWIMMING POOL SUPPLIES SPA ANTI-FOAM

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Water treatment chemical

Details of the supplier of the safety data sheet Innovative Water Care, LLC 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States of America (USA) EHSProductSafetyTeam@solenis.com	**Emergency telephone number** 1-800-654-6911 (Outside the USA:1-423-780-2970) **Product Information** 1-800-511-6737 (Outside the USA:1-423-780-2347)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

If inhaled	:	If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	:	Remove contact lenses. Protect unharmed eye.
If swallowed	:	Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea)
Notes to physician	:	No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO2) Dry chemical
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon monoxide Carbon dioxide (CO2) formaldehyde Hydrocarbons Silicon oxides
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Standard procedure for chemical fires.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Comply with all applicable federal, state, and local regulations.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8.
Conditions for safe storage	:	Electrical installations / working materials must comply with the technological safety standards.
Materials to avoid	:	No materials to be especially mentioned.
Further information on storage stability	:	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required.
Eye protection	:	Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
Skin and body protection	:	Wear as appropriate: Safety shoes Wear resistant gloves (consult your safety equipment

supplier).

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	6.0 - 7.0
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	212 °F / 100 °C
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1.0 (68 °F / 20 °C)
Density	:	No data available
Solubility(ies)		
Water solubility	:	soluble in cold water
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable

Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Product will not undergo hazardous polymerization.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Carbon monoxide Carbon dioxide (CO2) Formaldehyde Hydrocarbons Silicon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological : No data available

information

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

49 CFR
Not regulated as a dangerous good

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
FORMALDEHYDE	50-00-0	100	250000

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
FORMALDEHYDE	50-00-0	100	250000

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

formaldehyde	50-00-0

Pennsylvania Right To Know

formaldehyde	50-00-0
formaldehyde	50-00-0

New Jersey Right To Know

formaldehyde	50-00-0
formaldehyde	50-00-0

California Prop. 65

⚠WARNING: This product can expose you to chemicals including FORMALDEHYDE, which is/are known to the State of California to cause cancer, and ETHYLENE OXIDE, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
AIIC	:	All components are listed on the inventory, regulatory obligations/restrictions apply
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	Not in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

Revision Date : 08/01/2023

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet
Key literature references and sources of data
SOLENIS Internal data
SOLENIS internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

US / EN

SAFETY DATA SHEET

1. Product and Company Identification

SDS ID: SDS862
PRODUCT NAME: Prestone® Platinum Antifreeze Premix
PRODUCT NUMBER: AF2550, AF2550-3/F, AF2550-6/F
FORMULA NUMBER: YA-992-B/R-P56, YA1002-P56, YA-1004-P56

MANUFACTURER:
Prestone Products Corporation
69 Eagle Rd.
Danbury, CT 06810

CANADIAN OFFICE:
Prestone Canada
33 MacIntosh Blvd.
Concord, ON L4K 4L5

MEXICO OFFICE:
ASG Operations Mexico S. de R.L. de C.V.
Carretera Mexico Cuautitlan, Kilometro 31.5, Nave Industrial 5,
Loma Bonita, Cuautitlan, Mexico, 54800

MEDICAL EMERGENCIES AND ALL OTHER INFORMATION PHONE NUMBER:
(888)269-0750 (in the US and Canada)
01-800-715-4135 (in Mexico)
TRANSPORTATION EMERGENCY PHONE NUMBER (Chemical Spills and Transport Accidents only):
CHEMTREC 1-800-424-9300 (in the US and Canada) +1 703 741-5970 (outside the US and Canada)

PRODUCT USE: Automobile Antifreeze – consumer product
RESTRICTIONS ON USE: None identified

2. Hazards Identification

GHS/HAZCOM 2012 Classification:

Health	Physical
Acute Toxicity Category 4 Specific Target Organ Toxicity – Repeated Exposure Category 2 Toxic to Reproduction Category 2	Not Hazardous

Label Elements

WARNING!
H302 Harmful if swallowed.
H361d Suspected of damaging the unborn child.
H373 May cause damage to kidneys through prolonged or repeated exposure.

Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist or vapors.
P264 Wash exposed skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P280 Wear protective gloves and eye protection.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P330 Rinse mouth.
P308 + P313 IF exposed or concerned: Get medical advice.
Storage and Disposal:
P405 Store locked up.
P501 Dispose of contents and container in accordance with local and national regulations.

3. Composition/Information on Ingredients

Component	CAS No.	Percent w/w
Ethylene Glycol	107-21-1	50-60
Water	7732-18-5	40-50
2-Ethyl Hexanoic Acid, Sodium Salt	19766-89-3	1-5
Diethylene Glycol	111-46-6	0-5

The exact concentrations are a trade secret.

4. First Aid Measures

INHALATION: Remove the victim to fresh air. If breathing has stopped administer artificial respiration. If breathing is difficult, have medical personnel administer oxygen. Get medical attention.

SKIN CONTACT: Remove contaminated clothing. Immediately wash contacted area thoroughly with soap and water. If irritation persists, get medical attention.

EYE CONTACT: Immediately flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

INGESTION: Seek immediate medical attention. Immediately call local poison control center or go to an emergency department. Never give anything by mouth to or induce vomiting in an unconscious or drowsy person.

MOST IMPORTANT SYMPTOMS: May cause eye irritation. Inhalation of mists may cause nose and throat irritation and nervous system effects. Ingestion may cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED: Seek immediate medical attention for large ingestions.

NOTES TO PHYSICIAN: The principal toxic effects of ethylene glycol, when swallowed, are kidney damage and metabolic acidosis. The combination of metabolic acidosis, an osmol gap and oxalate crystals in the urine is evidence of ethylene glycol poisoning. Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. Respiratory support with mechanical ventilation may be required. There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects have been reported involving the seventh, eighth, and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing and dysphagia.

Ethanol is antidotal and its early administration may block the formation of nephrotoxic metabolites of ethylene glycol in the liver. The objective is to rapidly achieve and maintain a blood ethanol level of approximately 100 mg/dl by giving a loading dose of ethanol followed by a maintenance dose. Intravenous administration of ethanol is the preferred route. Ethanol blood levels should be checked frequently. Hemodialysis may be required. 4-Methyl pyrazole (Fomepizole®), a potent inhibitor of alcohol dehydrogenase, has been used therapeutically to decrease the metabolic consequences of ethylene glycol poisoning. Fomepizole® is easier to use clinically than ethanol, does not cause CNS depression or hypoglycemia and requires less monitoring than ethanol. Additional therapeutic modalities which may decrease the adverse consequences of ethylene glycol metabolism are the administration of both thiamine and pyridoxine. As there are complicated and serious overdoses, we recommend you consult with the toxicologists at your poison control center.

5. Firefighting Measures

SUITABLE EXTINGUISHING MEDIA: For large fires, use alcohol type or all-purpose foams. For small fires, use water spray, carbon dioxide or dry chemical.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: A solid stream of water or foam directed into hot, burning liquid can cause frothing. Burning may produce carbon monoxide and carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Do not spray pool fires directly. Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Wear appropriate protective clothing and equipment (See Section 8).

METHODS AND MATERIALS FOR CONTAINMENT/CLEANUP: Collect with absorbent material and place in appropriate, labeled container for disposal or, if permitted flush spill area with water.

7. Handling and Storage

PRECAUTIONS FOR SAFE HANDLING:

Harmful or Fatal if Swallowed. Do not drink antifreeze or solution. Avoid eye and prolonged or repeated skin contact. Avoid breathing vapors or mists. Wash exposed skin thoroughly with soap and water after use. Do not store in opened or unlabeled containers. Keep container away from open flames and excessive heat. Do not reuse empty containers unless properly cleaned. Empty containers retain product residue and may be dangerous. Do not cut, weld, drill, etc. containers, even empty.

Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources. Published "autoignition" or "ignition" temperatures cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Use of this product in elevated temperature applications should be thoroughly evaluated to assure safe operating conditions.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Store away from excessive heat and oxidizers.

NFPA CLASSIFICATION: IIIB

8. Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

CHEMICAL	EXPOSURE LIMIT
Ethylene Glycol	25 ppm TWA, 50 ppm STEL ACGIH TLV (as vapor) 10 mg/m^3 TWA ACGIH TLV (as inhalable fraction of the aerosol)
Diethylene Glycol	10 mg/m^3 TWA AIHA WEELs
2-Ethyl Hexanoic Acid, Sodium Salt	None Established

APPROPRIATE ENGINEERING CONTROLS: Use general ventilation or local exhaust as required to maintain exposures below the occupational exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: For operations where the TLV is exceeded a NIOSH approved respirator with organic vapor cartridges and dust/mist prefilters or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select and use in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Chemical resistant gloves such as neoprene or PVC where contact is possible.

EYE PROTECTION: Splash-proof goggles.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Appropriate protective clothing as needed to minimize skin contact.

9. Physical and Chemical Properties

APPEARANCE:	Yellow	ODOR:	Characteristic odor
ODOR THRESHOLD:	Not determined	pH:	8.4 - 9.0
MELTING/FREEZING POINT:	-34 to 0°F (-36° to -18°C)	BOILING POINT/RANGE:	226-229°F (108-109°C)
FLASH POINT:	No flash @ 216°F (102.2°C) SCC	EVAPORATION RATE:	Not determined
FLAMMABILITY (SOLID, GAS)	Not Applicable	FLAMMABILITY LIMITS:	LEL: Not determined UEL: Not determined
VAPOR PRESSURE:	< 0.1 mmHg @ 68°F	VAPOR DENSITY:	> 1
RELATIVE DENSITY:	1.04 - 1.07	SOLUBILITIES	Water: Complete
PARTITION COEFFICIENT (n-octanol/water)	Not determined	AUTOIGNITION TEMPERATURE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined	VISCOSITY:	Not determined

10. Stability and Reactivity

REACTIVITY: Normally unreactive

CHEMICAL STABILITY: Stable

POSSIBILITY OF HAZARDOUS REACTIONS: Reaction with strong oxidizers will generate heat.

CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: Avoid strong bases at high temperatures, strong acids, strong oxidizing agents, and materials reactive with hydroxyl compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

11. Toxicological Information

POTENTIAL HEALTH EFFECTS:

ACUTE HAZARDS:
INHALATION: May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations caused, for example, by heating the material in an enclosed and poorly ventilated workplace, may produce nausea, vomiting, headache, dizziness and irregular eye movements.

SKIN CONTACT: No evidence of adverse effects from available information.

EYE CONTACT: Liquid, vapors or mist may cause discomfort in the eye with persistent conjunctivitis, seen as slight excess redness or conjunctiva. Serious corneal injury is not anticipated.

INGESTION: May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure and pulmonary edema may develop. Severe kidney damage which may be fatal may follow the swallowing of ethylene glycol. A few reports have been published describing the development of weakness of the facial muscles, diminishing hearing, and difficulty with swallowing, during the late stages of severe poisoning.

CHRONIC EFFECTS: Prolonged or repeated inhalation exposure may produce signs of central nervous system involvement, particularly dizziness and jerking eye movements. Prolonged or repeated skin contact may cause skin sensitization and an associated dermatitis in some individuals. Ethylene glycol has been found to cause birth defects in laboratory animals. The significance of this finding to humans has not been determined. 2-Ethyl Hexanoic Acid, Sodium Salt is suspected of causing developmental effects based on animal data.

CARCINOGENICITY LISTING: None of the components of these products is listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, or OSHA.

ACUTE TOXICITY VALUES:

Calculated ATEmix:	LD50 Oral 833 mg/kg (Based on the Point Estimate for Ethylene Glycol)
Ethylene Glycol:	LD50 Oral Rat: 4700 mg/kg LD50 Skin Rabbit: 9530 mg/kg
Diethylene Glycol:	LD50 Oral Rat: 12,565 mg/kg LD50 Skin Rabbit: 11,890 mg/kg

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH:
Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations 150, 1,000 and 2,500 mg/m3 for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentrations, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1,000 and 2,500 mg/m3) and developmental toxicity in with minimal evidence of teratogenicity (2,500 mg/m3). The no-effects concentration (based on maternal toxicity) was 500 mg/m3. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen; there is currently no available information to suggest that ethylene glycol caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity; exposure to high aerosol concentration is only minimally effective in producing developmental toxicity; the major route for producing developmental toxicity is perorally.

Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic

potential for ethylene glycol has been supported by numerous invitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

In a study of Wistar rats, adverse developmental results were reported at a dose of 100 mg / kg of body weight for 2-Ethyl Hexanoic Acid, Sodium Salt.

12. Ecological Information

ECOTOXICITY:

Ethylene Glycol: LC50 Fathead Minnow <10,000 mg/L/96 hr.
EC50 Daphnia Magna 100,000 mg/L/48 hr
Bacterial (Pseudomonas putida): 10,000 mg/l
Protozoa (Entosiphon sulcatum and Uronema parduczi; Chatton-Lwoff): >10,000 mg/l
Algae (Microcystis aeruginosa): 2,000 mg/l
Green algae (Scenedesmus quandricauda): >10,000 mg/l

Diethylene Glycol: LC50 western mosquitofish >32,000 mg/L/96 hr

PERSISTENCE AND DEGRADABILITY:

Ethylene Glycol is readily biodegradable (97-100% in 2-12 days).
Diethylene glycol is readily biodegradable (>70% in 19days).

BIOACCUMULATIVE POTENTIAL:

Ethylene glycol: A BCF of 10, reported for ethylene glycol in fish, Golden ide (Leuciscus idus melanotus), after 3 days of exposure suggests the potential for bio concentration in aquatic organisms is low.
Diethylene glycol: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.

MOBILITY IN SOIL: Ethylene glycol and diethylene glycol are highly mobile in soil.

OTHER ADVERSE EFFECTS: None known

13. Disposal Considerations

Dispose of product in accordance with all local, state/provincial and federal regulations.

14. Transport Information

U.S. DOT HAZARD CLASSIFICATION: Not regulated (unless package contains a reportable quantity)

Note: IF A SHIPMENT OF A REPORTABLE QUANTITY (8,333 LBS/933 GAL.) IN A SINGLE PACKAGE IS INVOLVED, THE FOLLOWING INFORMATION APPLIES:

PROPER SHIPPING NAME: RQ, Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
UN NUMBER: UN3082
PACKING GROUP: III
LABELS REQUIRED: Class 9

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION: Not Regulated

CANADIAN TDG CLASSIFICATION: Not Regulated

15. Regulatory Information

CERCLA SECTION 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Ethylene Glycol (60% maximum) of 5,000 lbs., is 8,333 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA SARA 311/312 HAZARD CLASSIFICATION: Classified under OSHA Hazcom 2012 GHS classification as per Section 2 of this SDS.

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Ethylene Glycol	107-21-1	50-60%

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CALIFORNIA PROPOSITION 65:

WARNING: This product can expose you to chemicals including Ethylene Glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

EPA TSCA INVENTORY: All of the components of this material are listed on or exempt from the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on or exempt from the Canadian Domestic Substances List.

AUSTRALIA: All of the ingredients of this product are listed on or exempt from the Australian Inventory of Chemical Substances. The sodium salt of 2-ethylhexanoic acid is not listed on the chemical inventory however, it is a reaction by product of the neutralization of antifreeze and therefore is exempt.

JAPAN: All of the ingredients of this product are listed on or exempt from the Japanese Existing and New Chemical Substances (MITI) List.

CHINA: All of the components of this product are listed on or exempt from the Inventory of Existing Chemical Substance in China (IECSC). The sodium salt of neodecanoic acid is not listed on the chemical inventory however, it is a reaction by product of the neutralization of antifreeze and therefore is exempt.

KOREA: All of the ingredients of this product are listed on or exempt from the Korean Existing Chemical List (KECL).

PHILIPPINES: All of the ingredients of this product are listed on or exempt from the Philippine Inventory of Chemical and Chemical Substance (PICCS)

NEW ZEALAND: All of the components of this material are listed on or exempt from the New Zealand Inventory of Chemicals. (NZIoC)

16. Other Information

NFPA RATING - FIRE: 1 HEALTH: 2 INSTABILITY: 0

REVISION SUMMARY: Section 1: Added Product Number.

SDS Date of Preparation/Revision: June 20, 2022

This SDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

SAFETY DATA SHEET

1. Product and Company Identification

SDS ID: SDS863
PRODUCT NAME: Prestone® Platinum Antifreeze Concentrate
PRODUCT NUMBER: AF2500, AF2500-3/F, AF2500-6/F
FORMULA NUMBER: YA-992-B/R, YA1002, YA-1004

MANUFACTURER:
Prestone Products Corporation
69 Eagle Rd.
Danbury, CT 06810

CANADIAN OFFICE:
Prestone Canada
33 MacIntosh Blvd.
Concord, ON L4K 4L5

MEXICO OFFICE:
ASG Operations Mexico S. de R.L. de C.V.
Carretera Mexico Cuautitlan, Kilometro 31.5, Nave Industrial 5,
Loma Bonita, Cuautitlan, Mexico, 54800

MEDICAL EMERGENCIES AND ALL OTHER INFORMATION PHONE NUMBER:
(888)269-0750 (in the US and Canada)
01-800-715-4135 (in Mexico)
TRANSPORTATION EMERGENCY PHONE NUMBER (Chemical Spills and Transport Accidents only):
CHEMTREC 1-800-424-9300 (in the US and Canada) +1 703 741-5970 (outside the US and Canada)

PRODUCT USE: Automobile antifreeze – consumer product
RESTRICTIONS ON USE: None identified

2. Hazards Identification

GHS/HAZCOM 2012 Classification:

Health	Physical
Acute Toxicity Category 4 Specific Target Organ Toxicity – Repeated Exposure Category 2 Toxic to Reproduction Category 2	Not Hazardous

Label Elements

WARNING!
H302 Harmful if swallowed.
H361d Suspected of damaging the unborn child.
H373 May cause damage to kidneys through prolonged or repeated exposure.

Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist or vapors.
P264 Wash exposed skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P280 Wear protective gloves and eye protection.

Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P330 Rinse mouth.
P308 + P313 IF exposed or concerned: Get medical advice.
Storage and Disposal:
P405 Store locked up.
P501 Dispose of contents and container in accordance with local and national regulations.

3. Composition/Information on Ingredients

Component	CAS No.	Percent w/w
Ethylene Glycol	107-21-1	80-100
Diethylene Glycol	111-46-6	0-5
2-Ethyl Hexanoic Acid, Sodium Salt	19766-89-3	1-5

The exact concentrations are a trade secret.

4. First Aid Measures

INHALATION: Remove the victim to fresh air. If breathing has stopped administer artificial respiration. If breathing is difficult, have medical personnel administer oxygen. Get medical attention.

SKIN CONTACT: Remove contaminated clothing. Immediately wash contacted area thoroughly with soap and water. If irritation persists, get medical attention.

EYE CONTACT: Immediately flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

INGESTION: Seek immediate medical attention. Immediately call local poison control center or go to an emergency department. Never give anything by mouth to or induce vomiting in an unconscious or drowsy person.

MOST IMPORTANT SYMPTOMS: May cause eye irritation. Inhalation of mists may cause nose and throat irritation and nervous system effects. Ingestion may cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED: Seek immediate medical attention for large ingestions.

NOTES TO PHYSICIAN: When ingested, the principle toxic effects of the product are due to ethylene glycol and include metabolic acidosis and renal failure. The presence of anion gap with accompanying metabolic acidosis is highly suggestive of significant ingestion. Late presenting symptoms may include evidence of an osmol gap, significant hypocalcemia, cardiac arrhythmias, pulmonary edema, presence of calcium oxalate crystals in the urine or effects on seventh, eight, and ninth cranial nerves.

Early administration of either ethanol or fomepizole (Antizol ®) as antidotes can prevent development of the toxic metabolites of ethylene glycol that lead to serious systemic toxicity. Hemodialysis may be needed for the treatment of severely toxic patients. The administration of thiamine and pyridoxine is also recommended.

5. Firefighting Measures

SUITABLE EXTINGUISHING MEDIA: For large fires, use alcohol type or all-purpose foams. For small fires, use water spray, carbon dioxide or dry chemical.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: A solid stream of water or foam directed into hot, burning liquid can cause frothing. Burning may produce carbon monoxide and carbon dioxide.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS: Do not spray pool fires directly. Firefighters should wear positive pressure self- contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Wear appropriate protective clothing and equipment (See Section 8).

METHODS AND MATERIALS FOR CONTAINMENT/CLEANUP: Collect with absorbent material and place in appropriate, labeled container for disposal or, if permitted flush spill area with water.

7. Handling and Storage

PRECAUTIONS FOR SAFE HANDLING:

Harmful or Fatal if Swallowed. Do not drink antifreeze or solution. Avoid eye and prolonged or repeated skin contact. Avoid breathing vapors or mists. Wash exposed skin thoroughly with soap and water after use. Do not store in opened or unlabeled containers. Keep container away from open flames and excessive heat. Do not reuse empty containers unless properly cleaned. Empty containers retain product residue and may be dangerous. Do not cut, weld, drill, etc. containers, even empty.

Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources. Published "autoignition" or "ignition" temperatures cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Use of this product in elevated temperature applications should be thoroughly evaluated to assure safe operating conditions.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Store away from excessive heat and oxidizers.

NFPA CLASSIFICATION: IIIB

8. Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

CHEMICAL	EXPOSURE LIMIT
Ethylene Glycol	25 ppm TWA, 50 ppm STEL ACGIH TLV (as vapor) 10 mg/m^3 TWA ACGIH TLV (as inhalable fraction of the aerosol)
Diethylene Glycol	10 mg/m^3 TWA AIHA WEEL
2-Ethyl Hexanoic Acid, Sodium Salt	None Established

APPROPRIATE ENGINEERING CONTROLS: Use general ventilation or local exhaust as required to maintain exposures below the occupational exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: For operations where the TLV is exceeded a NIOSH approved respirator with organic vapor cartridges and dust/mist prefilters or supplied air respirator is recommended. Equipment selection depends on contaminant

type and concentration. Select and use in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Chemical resistant gloves such as neoprene or PVC where contact is possible.

EYE PROTECTION: Splash-proof goggles.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Appropriate protective clothing as needed to minimize skin contact.

9. Physical and Chemical Properties

APPEARANCE:	Yellow liquid	ODOR:	Characteristic odor
ODOR THRESHOLD:	Not determined	pH:	8.7-9.2
MELTING/FREEZING POINT:	-34°F (-36.6°C) – -36°F (-37.7°C)	BOILING POINT/RANGE:	327°F (164°C) – 340°F (171.1°C)
FLASH POINT:	No flash @ 230°F (110°C) SCC	EVAPORATION RATE:	Not determined
FLAMMABILITY (SOLID, GAS)	Not Applicable	FLAMMABILITY LIMITS:	LEL: Not determined UEL: Not determined
VAPOR PRESSURE:	<0.06 mm Hg @20°C	VAPOR DENSITY:	2.1
RELATIVE DENSITY:	1.07-1.14	SOLUBILITIES	Water: Complete
PARTITION COEFFICIENT (n-octanol/water)	Not determined	AUTOIGNITION TEMPERATURE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined	VISCOSITY:	Not determined

10. Stability and Reactivity

REACTIVITY: Normally unreactive

CHEMICAL STABILITY: Stable

POSSIBILITY OF HAZARDOUS REACTIONS: Reaction with strong oxidizers will generate heat.

CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: Avoid strong bases at high temperatures, strong acids, strong oxidizing agents, and materials reactive with hydroxyl compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

11. Toxicological Information

POTENTIAL HEALTH EFFECTS:

ACUTE HAZARDS:
INHALATION: May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations caused, for example, by heating the material in an enclosed and poorly ventilated workplace, may produce nausea, vomiting, headache, dizziness and irregular eye movements.

SKIN CONTACT: No evidence of adverse effects from available information.

EYE CONTACT: Liquid, vapors or mist may cause discomfort in the eye with persistent conjunctivitis, seen as slight excess redness or conjunctiva. Serious corneal injury is not anticipated.

INGESTION: May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure and pulmonary edema may develop. Severe kidney damage which may be fatal may follow the swallowing of ethylene glycol. A few reports have been published describing the development of weakness of the facial muscles, diminishing hearing, and difficulty with swallowing, during the late stages of severe poisoning.

CHRONIC EFFECTS: Prolonged or repeated inhalation exposure may produce signs of central nervous system involvement, particularly dizziness and jerking eye movements. Prolonged or repeated skin contact may cause skin sensitization and an associated dermatitis in some individuals. Ethylene glycol has been found to cause birth defects in laboratory animals. The significance of this finding to humans has not been determined. 2-Ethyl Hexanoic Acid, Sodium Salt is suspected of causing developmental effects based on animal data.

CARCINOGENICITY LISTING: None of the components of these products is listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH or OSHA.

ACUTE TOXICITY VALUES:

Calculated ATEmix:	LD50 Oral 500 mg/kg (Based on the Point Estimate for Ethylene Glycol)
Ethylene Glycol:	LD50 Oral Rat: 4700 mg/kg LD50 Skin Rabbit: 9530 mg/kg
Diethylene Glycol:	LD50 Oral Rat: 12,565 mg/kg LD50 Skin Rabbit: 11,890 mg/kg

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH:
Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations 150, 1,000 and 2,500 mg/m3 for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentrations, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1,000 and 2,500 mg/m3) and developmental toxicity in with minimal evidence of teratogenicity (2,500 mg/m3). The no-effects concentration (based on maternal toxicity) was 500 mg/m3. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen; there is currently no available information to suggest that ethylene glycol caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity; exposure to high aerosol concentration is only minimally effective in producing developmental toxicity; the major route for producing developmental toxicity is perorally.

Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic potential for ethylene glycol has been supported by numerous invitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

In a study of Wistar rats, adverse developmental results were reported at a dose of 100 mg / kg of body weight for 2-Ethyl Hexanoic Acid, Sodium Salt.

12. Ecological Information

ECOTOXICITY:

Ethylene Glycol: LC50 Fathead Minnow <10,000 mg/L/96 hr
EC50 Daphnia Magna 100,000 mg/L/48 hr
Bacterial (Pseudomonas putida): 10,000 mg/l
Protozoa (Entosiphon sulcatum and Uronema parduczi; Chatton-Lwoff) : >10,000 mg/l
Algae (Microcystis aeruginosa): 2,000 mg/l
Green algae (Scenedesmus quandricauda) : >10,000 mg/l

Diethylene Glycol: LC50 western mosquitofish >32,000 mg/L/96 hr

PERSISTENCE AND DEGRADABILITY: Ethylene Glycol is readily biodegradable (97-100% in 2-12 days).
Diethylene glycol is readily biodegradable (>70% in 19 days).

BIOACCUMULATIVE POTENTIAL:

Ethylene glycol: A BCF of 10, reported for ethylene glycol in fish, Golden ide (Leuciscus idus melanotus), after 3 days of exposure suggests the potential for bioconcentration in aquatic organisms is low.
Diethylene glycol: An estimated BCF of 3 suggests the potential for bioconcentration in aquatic organisms is low.

MOBILITY IN SOIL: Ethylene glycol and diethylene glycol are highly mobile in soil.

OTHER ADVERSE EFFECTS: None known

13. Disposal Considerations

Dispose of product in accordance with all local, state/provincial and federal regulations.

14. Transport Information

U.S. DOT HAZARD CLASSIFICATION: Not Regulated (unless package contains a reportable quantity)

Note: IF A SHIPMENT OF A REPORTABLE QUANTITY (5,000 LBS/525 GAL.) IN A SINGLE PACKAGE IS INVOLVED, THE FOLLOWING INFORMATION APPLIES:

PROPER SHIPPING NAME: RQ, Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
UN NUMBER: UN3082
PACKING GROUP: III
LABELS REQUIRED: Class 9

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION: Not Regulated

CANADIAN TDG CLASSIFICATION: Not Regulated

15. Regulatory Information

EPA SARA 311/312 HAZARD CLASSIFICATION: Classified under OSHA Hazcom 2012 GHS classification as per Section 2 of this SDS.

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Ethylene Glycol	107-21-1	80-100%

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Ethylene Glycol (100% maximum) of 5,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

CALIFORNIA PROPOSITION 65:

WARNING: This product can expose you to chemicals including Ethylene Glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

EPA TSCA INVENTORY: All of the components of this material are listed on or exempt from the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the components are listed on or exempt from the Canadian Domestic Substances List.

AUSTRALIA: All of the components of this product are listed on or exempt from the Australian Inventory of Chemical Substances. The sodium salt of 2-ethylhexanoic acid is not listed on the chemical inventory however, it is a reaction by product of the neutralization of antifreeze and therefore is exempt.

JAPAN: All of the components of this product are listed on or exempt from the Japanese Existing and New Chemical Substances (MITI) List.

KOREA: All of the components of this product are listed on or exempt from the Korean Existing Chemical List (KECL).

PHILIPPINES: All of the components of this product are listed on or exempt from the Philippine Inventory of Chemical and Chemical Substance (PICCS)

CHINA: All of the components of this product are listed on or exempt from the Inventory of Existing Chemical Substance in China (IECSC). The sodium salt of neodecanoic acid is not listed on the chemical inventory however, it is a reaction by product of the neutralization of antifreeze and therefore is exempt.

NEW ZEALAND: All of the components of this product are listed on or exempt from the New Zealand Inventory of Chemicals. (NZIoC)

16. Other Information

NFPA RATING (NFPA 704) - FIRE: 1 HEALTH: 2 INSTABILITY: 0

REVISION SUMMARY: Section 4, 9, 15.

SDS Date of Preparation/Revision: July 15, 2022

This SDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

Conforms to EU Regulation 1907/2006/EC as amended. - SDSGHS_KS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Valvoline™ ATF DEXRON III/MERCON Automatic Transmission Fluid

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Gear and lubricating oil.

1.3 Details of the supplier of the safety data sheet	1.4 Emergency telephone number
Ellis Enterprises B.V., an affiliate of Valvoline Wieldrechtseweg 39 3316 BG Dordrecht Netherlands +31 (0)78 654 3500 (in the Netherlands), or contact your local CSR contact person SDS@valvoline.com	+1-800-VALVOLINE (+1-800-825-8654), or contact your local emergency telephone number at 112 **Product Information** +31 (0)78 654 3500 (in the Netherlands), or contact your local CSR contact person

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.

Prevention:

P273 Avoid release to the environment.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labelling

EUH208 Contains DODECYL HYDROXYPROPYL SULFIDE, 1,2-PROPANEDIOL, 3-AMINO, N,N,-DICOCO ALKYL DERIVS.. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8 265-158-7 649-468-00-3 01-2119487077-29-xxxx	Asp. Tox.1; H304	>= 90,00 - <= 100,00
DODECYL HYDROXYPROPYL SULFIDE	67124-09-8 266-582-5 01-2119953277-30-xxxx	Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,50 - < 1,00
1,2-PROPANEDIOL, 3-AMINO, N,N,-DICOCO ALKYL DERIVS.	Not Assigned 482-000-4 01-0000020142-86-xxxx	Skin Sens.1B; H317 Aquatic Chronic3; H412	>= 0,25 - < 0,50
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	1218787-32-6 01-2119510877-33-xxxx	Acute Tox.4; H302 Skin Corr.1C; H314 Eye Dam.1; H318 Aquatic Acute1; H400	>= 0,025 - < 0,10

		Aquatic Chronic2; H411	
OLEYL HYDROXYETHYL IMIDAZOLINE	95-38-5 202-414-9 01-2119777867-13-xxxx	Acute Tox.4; H302 Skin Corr.1C; H314 Eye Dam.1; H318 STOT RE2; H373 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,025 - < 0,10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : No hazards which require special first aid measures.

If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

In case of eye contact : Remove contact lenses.
Protect unharmed eye.

If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No hazards which require special first aid measures.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Specific extinguishing methods : Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Comply with all applicable federal, state, and local regulations.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For further information see Section 8 and Section 13 of the safety data sheet.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Hygiene measures	:	General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Advice on common storage	:	No materials to be especially mentioned.
Other data	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s)	:	No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
OLEYL HYDROXYETHYL IMIDAZOLINE	Workers	Inhalation	Long-term systemic effects	0,46 mg/m3
Remarks:	RD TOX - Repeated dose toxicity			
	Workers	Inhalation	Acute systemic effects	14 mg/m3
Remarks:	RD TOX - Repeated dose toxicity			

	Workers	Dermal	Long-term systemic effects	0,06 mg/kg
Remarks:	RD TOX - Repeated dose toxicity			
	Workers	Dermal	Acute systemic effects	2 mg/kg
Remarks:	RD TOX - Repeated dose toxicity			

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
OLEYL HYDROXYETHYL IMIDAZOLINE	Sewage treatment plant	0,27 mg/l
	Fresh water sediment	0,376 mg/kg
	Marine sediment	0,0376 mg/kg
	Soil	0,075 mg/kg

8.2 Exposure controls

Engineering measures

General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Safety shoes

Respiratory protection : No personal respiratory protective equipment normally required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : red

Odour : oily

Odour Threshold : No data available

pH : Not applicable

Pour point	:	< -42 °C
Boiling point/boiling range	:	No data available
Flash point	:	214 °C Method: Cleveland open cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	ca. 0,857 g/cm3 (15,6 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	ca. 34 mm2/s (40 °C)
Oxidizing properties	:	No data available

9.2 Other information

Self-ignition	:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Product will not undergo hazardous polymerization.

10.4 Conditions to avoid

Conditions to avoid : excessive heat

10.5 Incompatible materials

Materials to avoid : strong mineral acids
Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:

DODECYL HYDROXYPROPYL SULFIDE:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Components:

2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol:
Acute oral toxicity : LD50 (Rat, female): 1.200 mg/kg
Method: OECD Test Guideline 425

Components:

OLEYL HYDROXYETHYL IMIDAZOLINE:
Acute oral toxicity : LD50 (Rat): ca. 1.265 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:
Result: Slight, transient irritation

DODECYL HYDROXYPROPYL SULFIDE:
Species: Rabbit
Result: No skin irritation

1,2-PROPANEDIOL, 3-AMINO, N,N,-DICOCO ALKYL DERIVS.:
Result: Slight, transient irritation

2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol:
Result: Corrosive after 1 to 4 hours of exposure

OLEYL HYDROXYETHYL IMIDAZOLINE:
Species: Rabbit
Method: OECD Test Guideline 404
Result: Corrosive after 1 to 4 hours of exposure

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: Slight, transient irritation
Remarks: Expected based on components.

Remarks: Unlikely to cause eye irritation or injury.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:
Result: Slight, transient irritation

DODECYL HYDROXYPROPYL SULFIDE:
Species: Rabbit

Result: No eye irritation

1,2-PROPANEDIOL, 3-AMINO, N,N,-DICOCO ALKYL DERIVS.:
Result: Slight, transient irritation

OLEYL HYDROXYETHYL IMIDAZOLINE:
Result: Corrosive

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Components:

DODECYL HYDROXYPROPYL SULFIDE:
Test Type: Local lymph node assay
Species: Guinea pig
Assessment: May cause sensitisation by skin contact.
Method: OECD Test Guideline 429

1,2-PROPANEDIOL, 3-AMINO, N,N,-DICOCO ALKYL DERIVS.:
Assessment: The product is a skin sensitiser, sub-category 1B.

OLEYL HYDROXYETHYL IMIDAZOLINE:
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

Germ cell mutagenicity

Not classified based on available information.

Components:

DODECYL HYDROXYPROPYL SULFIDE:

Genotoxicity in vitro	:	Test Type: Ames test Test species: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative

Carcinogenicity

Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Carcinogenicity - Assessment	:	Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Components:

OLEYL HYDROXYETHYL IMIDAZOLINE:
Exposure routes: Ingestion
Target Organs: Gastrointestinal tract, thymus gland
Assessment: May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:
May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

1-(tert-Dodecylthio)propan-2-ol

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0,75 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): 0,58 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF
Toxicity to algae	:	EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l

Exposure time: 96 h
Test Type: static test
Test substance: WAF

M-Factor (Short-term (acute) aquatic hazard) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL: 0,32 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

M-Factor (Long-term (chronic) aquatic hazard) : 1

1,2-PROPANEDIOL, 3-AMINO, N,N,-DICOCO ALKYL DERIVS.
Ecotoxicology Assessment
Long-term (chronic) aquatic hazard : Harmful to aquatic life with long lasting effects.

2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol
Toxicity to fish : LC50 (Danio rerio (zebra fish)): 0,1 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,043 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0,0867 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,0156 mg/l
Exposure time: 72 h

M-Factor (Short-term (acute) aquatic hazard) : 10

Toxicity to daphnia and other : EC50: 0,0463 mg/l

aquatic invertebrates (Chronic toxicity)
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211

M-Factor (Long-term (chronic) aquatic hazard) : 1

2-(2-Heptadec-8-enyl-2-imidazolin-1-yl)ethanol

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 0,3 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,163 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 0,03 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

M-Factor (Short-term (acute) aquatic hazard) : 10

M-Factor (Long-term (chronic) aquatic hazard) : 1

12.2 Persistence and degradability

Components:

1-(tert-Dodecylthio)propan-2-ol

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

1,2-PROPANEDIOL, 3-AMINO, N,N,-DICOCO ALKYL DERIVS.

Biodegradability : Result: Not readily biodegradable.

2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol

Biodegradability : Inoculum: activated sludge
Concentration: 2,7 mg/l
Result: Readily biodegradable.
Biodegradation: 63 %

Related to: Chemical oxygen demand
Exposure time: 28 d
Method: OECD Test Guideline 301D

2-(2-Heptadec-8-enyl-2-imidazolin-1-yl)ethanol
Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

12.3 Bioaccumulative potential

Components:

1-(tert-Dodecylthio)propan-2-ol
Partition coefficient: n-octanol/water : log Pow: 4,7 - 6,5

2-(2-Heptadec-8-enyl-2-imidazolin-1-yl)ethanol
Partition coefficient: n-octanol/water : log Pow: 8

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.

The product should not be allowed to enter drains, water courses or the soil.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and	:	Not applicable

import of dangerous chemicals

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

Directive 96/82/EC does not apply

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : Not in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : Not in compliance with the inventory

TCSI : Not in compliance with the inventory

TSCA : On TSCA Inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H373	:	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Skin Corr.	:	Skin corrosion
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID -

Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture:		**Classification procedure:**
Aquatic Chronic 3	H412	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

KS / EN

SAFETY DATA SHEET

1. Product and Company Identification

SDS ID: SDS042
PRODUCT NAME: Prestone® Brake Fluid DOT 3
PRODUCT NUMBER: AS400, AS400Y, AS401, AS401Y, AS402Y, AS402, AS402-6, AS403, AS405, AS455, BF5000M3, BF5000MQ, 77405PDQ-6, 77421
FORMULA NUMBER: 2913-92, 2913-93, 2913-94, 2482-138, 2482-191

MANUFACTURER:
Prestone Products Corporation
69 Eagle Rd.
Danbury, CT 06810

CANADIAN OFFICE:
Prestone Canada
101 MacIntosh Blvd.
Concord, ON L4K 4L5

MEXICO OFFICE:
ASG Operations Mexico S. de R.L. de C.V.
Carretera Mexico Cuautitlan, Kilometro 31.5, Nave Industrial 5,
Loma Bonita, Cuautitlan, Mexico, 54800

MEDICAL EMERGENCIES AND ALL OTHER INFORMATION PHONE NUMBER:
(888)269-0750 (in the US and Canada)
01-800-715-4135 (in Mexico)
TRANSPORTATION EMERGENCY PHONE NUMBER (Chemical Spills and Transport Accidents only):
CHEMTREC 1-800-424-9300 (in the US and Canada) +1 703 741-5970 (outside the US and Canada)

PRODUCT USE: Automobile brake fluid – consumer product
RESTRICTIONS ON USE: None identified

2. Hazards Identification

GHS/HAZCOM 2012 Classification:

Health	Physical
Acute Toxicity Category 4 Eye Damage Category 1 Specific Target Organ Toxicity – Repeated Exposure Category 2 Toxic to Reproduction Category 2	Not Hazardous

Label Elements

DANGER!
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H361 Suspected of damaging the unborn child.
H373 May cause damage to kidneys through prolonged or repeated exposure by ingestion.

Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist, vapors or spray.
P264 Wash exposed skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves and eye protection.
Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330 Rinse mouth.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor.
P308 + P313 IF exposed or concerned: Get medical attention.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents and container in accordance with local and national regulations.

The exact concentrations are a trade secret.

3. Composition/Information On Ingredients

Component	CAS No.	Amount
Triethylene glycol monomethyl ether	112-35-6	0-85%
Triethylene glycol monobutyl ether	143-22-6	0-70%
Diethylene glycol	111-46-6	1-60%
2-(2-propoxyethoxy)ethanol	6881-94-3	0-60%
Polyethylene glycol monomethyl ether	9004-74-4	0-50%
Triethylene glycol monoethyl ether	112-50-5	0-40%
Polyalkylene glycol monomethyl ether	23783-42-8	0-30%
Diethylene glycol monobutyl ether	112-34-5	1-30%
Pentaethylene glycol	4792-15-8	0-30%
Tetraethylene glycol	112-60-7	0-25%
Triethylene glycol	112-27-6	0-20%
Triethylene glycol monobutyl ether	1559-34-8	0-20%
Polyethylene glycol monobutyl ether	9004-77-7	0-9%
Polyethylene glycol	25322-68-3	0-5%
Diethylene glycol monomethyl ether	111-77-3	0-5%
Tetraethylene glycol monoethyl ether	5650-20-4	0-5%
Diisopropanolamine	110-97-4	0-5%

The exact concentrations are a trade secret.

4. First Aid Measures

INHALATION: Remove to fresh air if effects occur and seek medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash all affected and exposed areas with soap and water. If skin irritation or redness develops or persists, seek medical attention.

EYE CONTACT: Exposed eyes should be immediately flushed with copious amounts of water using a steady stream for a minimum of 20 minutes. Seek immediate medical attention.

INGESTION: If swallowed, get immediate medical advice by calling a Poison Control Center or hospital emergency room. If advice is not available, take victim and product container to the nearest emergency treatment center or hospital. Do not attempt to give anything by mouth to an unconscious person.

MOST IMPORTANT SYMPTOMS: Eye contact causes severe irritation with possible corneal injury. May cause skin irritation. Breathing high concentrations of vapors or mists may cause irritation, headache, dizziness, drowsiness, nausea, loss

of sense of balance and visual disturbances. Swallowing may cause gastrointestinal disturbances including irritation, abdominal pain, back pain, nausea, vomiting, diarrhea, headache, dizziness, drowsiness, nausea, visual disturbances, decreased urine production, malaise, unconsciousness and liver or kidney damage. Prolonged overexposure may cause damage to the kidneys. May cause developmental

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED: Seek immediate medical attention for eye contact, or large ingestions.

NOTES TO PHYSICIAN: It is estimated that the lethal oral dose of diethylene glycol in adults is 1.0-1.2 ml/kg. Diethylene glycol may cause an elevated anion-gap metabolic acidosis and renal tubular injury. Liver injury may occur, but not as severe as kidney injury. The signs and symptoms in diethylene glycol poisoning are those of metabolic acidosis, CNS depression and kidney injury. Urinalysis may show albuminuria, hematuria and oxaluria. The current medical management of diethylene glycol poisoning includes elimination of diethylene glycol, correction of metabolic acidosis and prevention of kidney injury. It is essential to have immediate and follow-up urinalysis and clinical chemistry. There should be particular emphasis on acid-base balance, and liver and kidney function tests. For severe and/or deteriorating cases, hemodialyis may be required. Dialysis should be considered for patients who have severe metabolic acidosis, or compromise of renal function. There is no conclusive evidence that ethanol treatment will be beneficial. 4-Methyl pyrazole (Fomepizole®) shows some promise as treatment because of its apparent lack of toxicity. Consult your poison control center.

5. Firefighting Measures

SUITABLE EXTINGUISHING MEDIA: Use water spray or fog, foam, carbon dioxide or dry chemical. Cool fire exposed containers with water.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: A solid stream of water or foam directed into hot, burning liquid can cause frothing. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Burning may produce carbon monoxide, carbon dioxide, and nitrogen oxides.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHERS: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Wear appropriate protective clothing and equipment (See Section 8).

METHODS AND MATERIALS FOR CONTAINMENT/CLEANUP: Collect with absorbent material and place in appropriate, labeled container for disposal.

7. Handling and Storage

PRECAUTIONS FOR SAFE HANDLING: Avoid eye contact. Avoid prolonged skin contact. Avoid breathing vapors and mists. Use with adequate ventilation. Wash exposed skin thoroughly with soap and water after use.

Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources. Spills of this product on hot, fibrous insulation may result in spontaneous combustion.

Empty containers retain product residue and may be hazardous. Do not cut, weld, drill, etc. containers, even empty. Do not reuse empty containers unless properly cleaned.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Keep away from excessive heat and open flames. Do not add nitrites or other nitro sating agents. Nitrosamine, which may cause cancer, may be formed. Keep containers closed when not in use. Store in a cool, dry area.

NFPA CLASSIFICATION: Not Applicable

8. Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Triethylene glycol monomethyl ether	None Established
Triethylene glycol monobutyl ether	None Established
Diethylene glycol	25 mg/m^3 TWA AIHA WEEL
2-(2-propoxyethoxy)ethanol	None Established
Polyethylene glycol monomethyl ether	None Established
Triethylene glycol monoethyl ether	None Established
Polyalkylene glycol monomethyl ether	None Established
Diethylene glycol monobutyl ether	35 ppm TWA Manufacturer 10 ppm TWA ACGIH TLV (Inhalable fraction and vapor)
Pentaethylene glycol	10 mg/m^3 TWA Manufacturer
Tetraethylene glycol	None Established
Triethylene glycol	None Established
Triethylene glycol monobutyl ether	None Established
Polyethylene glycol monobutyl ether	None Established
Polyethylene glycol	10 mg/m^3 TWA AIHA WEEL
Diethylene glycol monomethyl ether	None Established
Tetraethylene glycol monoethyl ether	None Established
Diisopropanolamine	10 ppm Manufacturer

APPROPRIATE ENGINEERING CONTROLS: General ventilation should be adequate for normal use. For operations where the product is heated or misted and exposures may be excessive, mechanical ventilation such as local exhaust may be needed to minimize exposure.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: None under normal use conditions. For operations where exposures may be excessive, a NIOSH approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Chemical resistant gloves such as PVC coated gloves are recommended to prevent prolonged/repeated skin contact.

EYE PROTECTION: Splash proof goggles are recommended to prevent eye contact.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Protective clothing if needed to avoid prolonged/repeated skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be removed and laundered or dry cleaned before re-use.

9. Physical and Chemical Properties

APPEARANCE:	Clear amber or yellow liquid	ODOR:	Mild odor
ODOR THRESHOLD:	Not determined	pH:	Not determined
MELTING/FREEZING POINT:	<-60°F (<-51°C)	BOILING POINT/RANGE:	>401°F (>205°C)
FLASH POINT:	> 203°F (>118.3°C) PMCC	EVAPORATION RATE:	Not determined
FLAMMABILITY (SOLID,	Not Applicable	FLAMMABILITY LIMITS:	LEL: Not determined

GAS)			UEL: Not determined
VAPOR PRESSURE:	< 0.01 mmHg @20°F	VAPOR DENSITY:	>1
RELATIVE DENSITY:	1.00 – 1.07	SOLUBILITIES	Water: 100%
PARTITION COEFFICIENT (n-octanol/water)	Not determined	AUTOIGNITION TEMPERATURE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined	VISCOSITY:	Not determined

10. Stability and Reactivity

REACTIVITY: Normally unreactive.

CHEMICAL STABILITY: Stable

POSSIBILITY OF HAZARDOUS REACTIONS: Reaction with strong oxidizers will generate heat.

CONDITIONS TO AVOID: Product may oxidize at elevated temperatures. Generation of gas during composition can cause pressure in closed systems.

INCOMPATIBLE MATERIALS: Strong oxidizing agents, acids and strong alkalis.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition will product carbon monoxide, carbon dioxide, nitrogen oxides, aldehydes, ketones, organic acids.

11. Toxicological Information

POTENTIAL HEALTH EFFECTS:

ACUTE HAZARDS:
INHALATION: None expected from short term exposures at ambient temperatures. At elevated temperatures, product may cause respiratory irritation, headache, dizziness, drowsiness, nausea, loss of sense of balance and visual disturbances. High concentrations of vapors at ambient temperatures may cause lung injury, liver dysfunction or kidney damage.

SKIN CONTACT: Prolonged or repeated exposure may cause mild irritation with redness and discomfort. Prolonged contact may cause defatting or drying of the skin.

EYE CONTACT: May cause irritation with tearing, blurred vision and possible corneal damage.

INGESTION: Ingestion may cause abdominal pain, back pain, nausea, vomiting, diarrhea, headache, dizziness, drowsiness, nausea, visual disturbances, decreased urine production, malaise, cardiopulmonary effects (metabolic acidosis), unconsciousness and liver or kidney damage.

CHRONIC EFFECTS: Prolonged or repeated skin contact with this product may possibly lead to irritation and dermatitis. Prolonged or repeated exposures may cause damage to the central nervous system, blood, lung, liver or kidneys. Adverse reproductive effects may also occur. Prolonged or widespread contact may result in the absorption of potentially harmful amounts resulting in effects similar to those listed under ingestion. Massive contact with damaged skin or with material sufficiently hot to burn the skin may result in absorption of potentially lethal amounts.

CARCINOGENICITY LISTING: None of the components is listed as a carcinogen or potential carcinogen by IARC, NTP, ACGIH, or OSHA.

ACUTE TOXICITY VALUES:

Calculated ATE for product: LD50: Oral 833 mg/kg

Triethylene glycol monobutyl ether	LD50: Oral Rat 5,300 mg/kg LD50: Skin Rabbit 3,540 mg/kg
Polyethylene glycol monomethyl ether	LD50: Oral Rat 22 mL/kg LD50: Skin Rabbit: >20 mL/kg
Tetraethylene glycol monoethyl ether	LD50: Oral Rat 10,610 mg/L LD50: Skin Rabbit 3,540 mg/kg
Triethylene glycol monomethyl ether	LD50: Oral Rat >10,500 mg/kg LD50: Skin Rabbit: 2,700 mg/kg
Triethylene glycol monomethyl ether borate ester	LD50: Oral Rat >2,000 mg/kg LD50: Skin Rabbit: 2,000 mg/kg
Pentaethylene glycol	LD50: Oral Guinea pig: 22,500 mg/kg
Tetraethylene glycol	LD50: Oral Rat >18,000 mg/kg LD50: Skin Rabbit: 20,000 mg/kg
Polyethylene glycol monobutyl ether	LD50: Oral Rat >2,000 mg/kg LD50: Skin Rabbit: 3,540 mg/kg
Triethylene glycol	LD50: Oral Rat >2,000 mg/kg LD50: Skin Rabbit: 16,000 mg/kg
Polyethylene glycol monobutyl ether	LD50: Oral Rat >2,000 mg/kg LD50: Skin Rabbit: 3,540 mg/kg
Triethylene glycol	LD50: Oral Rat >2,000 mg/kg LD50: Skin Rabbit: 16,000 mg/kg
Polyethylene glycol	LD50: Oral Rat >4,000 mg/kg LD50: Skin Rabbit: >20,000 mg
Triethylene glycol monobutyl ether	LD50: Oral Rat >5170 mg/kg LD50: Skin Rabbit: 3540 mg
Diethylene glycol	LD50: Oral Rat 5,660 mg/kg LD50: Skin Rabbit: 2,700 mg/kg
Diethylene glycol monobutyl ether	LD50: Oral Rat 5,660 mg/kg LD50: Skin Rabbit: 2,700 mg/kg
Tetraethylene glycol monoethyl ether	No toxicity data available
Diethylene glycol monomethyl ether	LD50: Oral Rat >7128 mg/kg LC0 Inhalation rat >12 mg/L/6 hr (maximum vapor concentration LD50: Skin Rabbit 9404 mg/kg
Triethylene glycol monoethyl ether	LD50: Oral Rat 10,610 mg/kg LD50: Skin Rabbit: 3,540 mg/kg
Diisopropanolamine	LD50: Oral Rat >4,000 mg/kg LD50: Skin Rabbit: >20,000 mg/kg

12. Ecological Information

ECOTOXICITY:

Triethylene glycol monobutyl ether	LC50: Pimephales promelas (Fathead minnow) 2400 mg/L/96 hr. LC50: Daphnia magna 2210 mg/L /48 hr.
Polyethylene glycol monomethyl ether	No data available
Triethylene glycol monoethyl ether	LC50: Pimephales promelas (Fathead minnow) >10,000 mg/L/96 hr. EC50 Daphnia magna (Water flea) >10,000 mg/L
Triethylene glycol monomethyl ether	LC0 Brachydanio rerio >5000 mg/L/96 hr. LC50 Daphnia magna (Water flea, neonate) >10,000 mg /L/48 hr.
Triethylene glycol monomethyl ether borate ester	LC50: Oncorhynchus mykiss >2222 mg/L/96 hr\ EC50 Daphnia magna (Water flea) >500 mg/L EC50: Pseudokirchneriella subcapitata 731 mg/L/96 hr
Pentaethylene glycol	No data available
Tetraethylene glycol	LC50 Pimephales promelas (fathead minnow) >10,000 mg/L/96 hr. LC50 Daphnia magna (Water flea, neonate) 7746 mg /L/48 hr.

Polyethylene glycol monobutyl ether	LC50: Scophthalmus maximus >1800 mg/L/96 hr EC50 Daphnia magna (Water flea) >3200 mg/L/48 hr EC50: Scenedesmus capricornutum 1075 mg/L/72 hr
Triethylene glycol	LC50 Lepomis macrochirus >10,000 mg/L/96 hr. EC50 Daphnia magna (Water flea, neonate) >10,000 mg /L/48 hr
Polyethylene glycol	LC50 Poecilia reticulata>100 mg/L /96 hr.
Tetraethylene glycol monobutyl ether	No data available
Diethylene glycol	LC50 Western mosquitofish >32,000 mg/L/96 hr
Tetraethylene glycol monoethyl ether	No data available
Diethylene glycol monomethyl ether	LC50: Pimephales promelas (Fathead minnow) 5741 mg/L/ 96 hr EC50 Daphnia magna 1192 mg/L/ 48 hr
Triethylene glycol monoethyl ether	LC50: Pimephales promelas (Fathead minnow) >10,000 mg/L/96 hr. LC50: Daphnia magna 10,000 mg/L /48 hr.
Diisopropanolamine	LC50 Brachydanio rerio (Zebra Fish) >1000 -2200 mg/L/ 96 hr

PERSISTENCE AND DEGRADABILITY: Triethylene glycol monobutyl ether: The theoretical BODs for triethylene glycol monobutyl ether are 0, 5, and 24% for 5 days, 10 days, and 20 days, respectively. Diethylene glycol, triethylene glycol monoethyl ether, diethylene glycol monobutyl ether, triethylene glycol monomethyl ether, tetraethylene glycol, triethylene glycol, polypropylene glycol and polyethylene glycol are readily biodegradable. Diisopropanolamine: Achieved 39% of its theoretical oxygen demand using a sewage sludge following a 20 day incubation period.

BIOACCUMULATIVE POTENTIAL:
Triethylene glycol monobutyl ether: An estimated BCF of 3 was calculated in fish for triethylene glycol monobutyl ether. This BCF suggests the potential for bio concentration in aquatic organisms is low.
Diethylene glycol: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.
Triethylene glycol monoethyl ether: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.
Diethylene glycol monobutyl ether: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.
Triethylene glycol monomethyl ether: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.
Tetraethylene glycol: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.
Triethylene glycol: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.
Diisopropanolamine: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.

MOBILITY IN SOIL: Triethylene glycol monobutyl ether, diethylene glycol, triethylene glycol monoethyl ether, diethylene glycol monobutyl ether, triethylene glycol monomethyl ether, tetraethylene glycol, triethylene glycol and diisopropanolamine are expected to be high mobile in soil.

OTHER ADVERSE EFFECTS: None known

13. Disposal Considerations

Dispose of product in accordance with all local, state/provincial and federal regulations.

14. Transport Information

U.S. DOT HAZARD CLASSIFICATION: Not Regulated

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION: Not Regulated

CANADIAN TDG CLASSIFICATION: Not Regulated

15. Regulatory Information

EPA SARA 311/312 HAZARD CLASSIFICATION: Refer to Section 2 for OSHA GHS Classification.

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Glycol Ethers	NA	<100%

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements, however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

CALIFORNIA PROPOSITION 65: This product contains chemicals known to the State of California to cause reproductive toxicity.

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances List.

AUSTRALIA: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances.

CHINA: All of the ingredients of this product are listed on the Inventory of Existing Chemical Substance in China (IECSC).

16. Other Information

NFPA Rating: Fire: 1 Health: 3 Instability: 0

REVISION SUMMARY: Section 1.

SDS Date of Preparation/Revision: May 27, 2023

This SDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

SAFETY DATA SHEET

Revision Date 06-Aug-2015 **Version** 1

1. IDENTIFICATION

Product identifier
Product Name Leslie's Swimming Pool Supplies Brominating Tabs

Other means of identification
Product Code 14157LSL AND 14158LSL
UN/ID no. UN1479

Recommended use of the chemical and restrictions on use
Recommended Use Swimming Pool Product. Spa Product.
Uses advised against Do not mix with other chemicals

Details of the supplier of the safety data sheet

Manufacturer Address
Bio-Lab, Inc.
P.O. Box 300002
Lawrenceville, GA 30049-1002
Telephone 800-859-7946

Distributor
LPM Manufacturing, Inc.
2005 E. Indian School Road
Phoenix, AZ 85016
Telephone (602) 366-3999

Emergency telephone number
Emergency Telephone Chemtrec (Transportation) 1-800-424-9300, 703-527-3887
Poison Control Center (Medical) : (877) 800-5553

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 5
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

Danger

Hazard statements
Harmful if swallowed
May be harmful in contact with skin
Causes severe skin burns and eye damage

Color white **Physical state** Solid **Odor** Chlorine Bromine

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No.	Weight-%
1-bromo-3-chloro-5,5-dimethylhydantoin	16079-88-2	96

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4. FIRST AID MEASURES

Description of first aid measures

General advice — If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

Eye contact — Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin contact — Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Call a physician.

Inhalation — Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Call a physician.

Ingestion — Call a physician immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Have person sip a glass of water if able to swallow.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Flood fire area with water from a distance.

Unsuitable extinguishing media Do not use dry chemicals, carbon dioxide, or halogenated extinguishing agents.

Specific hazards arising from the chemical
Do not let the fire burn.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Do not add water to spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal. Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form.

Methods for cleaning up Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Do not use floor sweeping compounds to clean up spills. Do not transport wet or damp material. Contact supplier in Section 1 for instructions, especially for damp or contaminated material.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation. Do not mix with other chemicals. Keep/Store away from clothing/ combustible materials. Wash thoroughly after handling. Use only in well-ventilated areas.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in a dry place. Keep in properly labeled containers.

Incompatible materials Incompatible with strong acids and bases. Ammonia. Calcium hypochlorite. Combustible material. Do not mix with other swimming pool/spa chemicals in their concentrated forms. Reducing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid		
Appearance	tablet	**Odor**	Chlorine Bromine
Color	white	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	4.5	0.1% solution
Melting point/freezing point	120 °C / 248 °F	Decomposes on heating
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	

Specific Gravity	No information available	
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Density	0.87-0.92	g/cm3
Bulk density	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available

10. STABILITY AND REACTIVITY

Reactivity
Stable under normal conditions
Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
None under normal processing.
Conditions to avoid
Extremes of temperature and direct sunlight. Protect from moisture. Do not mix with other chemicals.
Incompatible materials
Incompatible with strong acids and bases. Ammonia. Calcium hypochlorite. Combustible material. Do not mix with other swimming pool/spa chemicals in their concentrated forms. Reducing agent.
Hazardous Decomposition Products
Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Irritating to respiratory system.
Eye contact	Risk of serious damage to eyes.
Skin contact	Irritating to skin. Contact with moist skin may cause skin burns. Causes burns.
Ingestion	Harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
1-bromo-3-chloro-5,5-dimethylhydantoin 16079-88-2	= 1390 mg/kg (Rat)	> 2 g/kg (Rabbit)	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

Oral LD50	578 mg/kg (rat)
Dermal LD50	> 2000 mg/kg (rabbit)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container. Refer to all federal, state and local regulations prior to disposal of container and unused contents by reuse, recycle or disposal.

14. TRANSPORT INFORMATION

Note: Limited quantity (LQ) exception is possible

DOT

UN/ID no.	UN1479
Proper shipping name	Oxidizing solid, n.o.s. (Contains bromo-chloro-dimethylhydantoin)
Hazard Class	5.1
Packing Group	III
Description	UN1479, Oxidizing solid, n.o.s. (Contains bromo-chloro-dimethylhydantoin), 5.1, III
Emergency Response Guide Number	140

TDG

UN/ID no.	UN3085
Proper shipping name	Oxidizing solid, corrosive, n.o.s. (Contains Bromo-chloro-dimethylhydantoin)

Hazard Class	5.1
Subsidiary class	8
Packing Group	III
Description	UN3085, Oxidizing solid, corrosive, n.o.s. (Contains bromo-chloro-dimethylhydantoin), 5.1 (8), III

IATA

UN/ID no.	UN3085
Proper shipping name	Oxidizing solid, corrosive, n.o.s. (Contains Bromo-chloro-dimethylhydantoin)
Hazard Class	5.1
Subsidiary hazard class	8
Packing Group	III
Description	UN3085, Oxidizing solid, corrosive, n.o.s. (Contains bromo-chloro-dimethylhydantoin), 5.1 (8), III

IMDG

UN/ID no.	UN3085
Proper shipping name	Oxidizing solid, corrosive, n.o.s. (Contains Bromo-chloro-dimethylhydantoin)
Hazard Class	5.1
Subsidiary hazard class	8
Packing Group	III
EmS-No.	F-A, S-Q
Marine pollutant	This material meets the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

U.S. EPA Label Information
EPA Pesticide Registration Number 5185-420-11411
EPA Statement
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:
Difference between SDS and EPA Pesticide label
DANGER. Highly Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed. Irritating to nose and throat. Do not get in eyes, on skin or on clothing. Wear protective eyewear (goggles or safety glasses). Wear protective clothing and rubber gloves when handling this product. Avoid breathing dust and fumes. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 3	**Flammability** 0	**Instability** 1	**Physical and Chemical Properties** OX
HMIS	**Health hazards** 3	**Flammability** 0	**Physical hazards** 1	**Personal protection** X

Prepared By Regulatory Affairs
Revision Date 06-Aug-2015
Revision Note No information available
Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Leslie's Swimming Pool Supplies Hardness Plus**

Other means of identification Not available

Recommended use Raising calcium hardness levels

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name LPM Manufacturing, Inc.

Address 2005 E. Indian School Rd.
Phoenix, AZ 85016
United States

Telephone 602-366-3999

E-mail Not available.

Emergency phone number 800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 4
Serious eye damage/eye irritation	Category 2A

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Causes serious eye irritation.
Harmful if swallowed.

Precautionary statement

Prevention Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wear eye/face protection.

Response If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Calcium chloride		10043-52-4	94 - 97

4. First Aid Measures

Inhalation If dust from the material is inhaled, remove the affected person immediately to fresh air.

Skin contact Brush away excess of dry material. Flush with water. Obtain medical attention if irritation persists.

Eye contact If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire Fighting Measures

Suitable extinguishing media	Treat for surrounding material.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In the event of fire, cool tanks with water spray.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear a dust mask if dust is generated above exposure limits. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Sweep up material and place in a disposal container without raising dust. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Do not taste or swallow. Avoid contact with eyes, skin and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Use care in handling/storage.
Conditions for safe storage, including any incompatibilities	Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure Controls/Personal Protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Not normally required if good ventilation is maintained.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Not applicable.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Pellets
Physical state	Solid.
Form	Solid.

Color	White
Odor	Odorless
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	1421.6 °F (772 °C)
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Negligible at ambient temperature
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Readily soluble
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	52 - 58 lb/ft3 estimated

10. Stability and Reactivity

Reactivity	Reacts vigorously with acids.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Keep away from moisture.
Incompatible materials	Strong oxidizing agents. Sulfuric acid. Zinc. Sodium.
Hazardous decomposition products	May include and are not limited to: Hydrogen chloride.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	Harmful if swallowed.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	Prolonged skin contact may cause skin irritation.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity	Harmful if swallowed.

Components	Species	Test Results
Calcium chloride (CAS 10043-52-4)		
Acute		
Dermal		
LD50	Rat	2630 mg/kg
Inhalation		
LC50	Not available	
Oral		
LD50	Mouse	1940 mg/kg
	Rat	1000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Causes serious eye irritation.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Not available.

Further information Not available.

12. Ecological Information

Ecotoxicity See below

Components		Species	Test Results
Calcium chloride (CAS 10043-52-4)			
Crustacea	EC50	Daphnia	52 mg/L, 48 Hours
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	3930 - 5360 mg/l, 96 hours

Persistence and degradability Not applicable.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Texas Effects Screening Levels: Listed substance

Calcium chloride (CAS 10043-52-4) Listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

Not regulated.

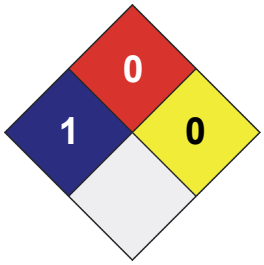
Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

16-December-2014

Further information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Prepared by

Dell Tech Laboratories Ltd. Phone: (519) 858-5021

SAFETY DATA SHEET

Date Issued : 12/07/2022
SDS No. : Regal Calcium Increaser

Regal Pool Care System Calcium Increaser

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Regal Pool Care System Calcium Increaser
GENERAL USE: Calcium Hardness increaser

DISTRIBUTOR

Alliance Trading, Inc.
109 North Park Blvd., 4th Floor
Covington, LA 70433

24 HR. EMERGENCY TELEPHONE NUMBERS

Chem-Tel 24-Hour Emergency # (800) 255-3924

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Serious Eye Damage, Category 2

Health:

Acute Toxicity (Oral), Category 4

GHS LABEL

Exclamation mark

SIGNAL WORD: WARNING

HAZARD STATEMENTS

H319: Causes serious eye irritation.
H302: Harmful if swallowed.

PRECAUTIONARY STATEMENT(S)

General:

P264: Wash ... thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
7488OIHY: Wear eye/face protection.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
P301+P312: IF SWALLOWED: Call a POISON CENTER/ doctor/...if you feel unwell.
P330: Rinse mouth.
P501: Dispose of contents/container to ...

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Calcium Chloride	74 - 100	10043-52-4
Water	0 - 26	7732-18-5
Sodium Chloride	< 3	7647-14-5
Potassium Chloride	< 3	7447-40-7
Magnesium Chloride	< 0.05	7786-30-3

4. FIRST AID MEASURES

SAFETY DATA SHEET

Date Issued : 12/07/2022
SDS No. : Regal Calcium Increaser

Regal Pool Care System Calcium Increaser

EYES: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Obtain medical attention if irritation persists.

SKIN: Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

INGESTION: IF SWALLOWED: Call a POISON CONTROL CENTER or doctor/physician if you feel unwell. Rinse mouth.

INHALATION: Move to fresh air. Get medical attention immediately if symptoms occur.

NOTES TO PHYSICIAN: Treat symptomatically.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD: Avoid generating dust. Under certain conditions may cause respiratory irritation. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Prevent entry into waterways, sewers, basements or confined areas.

GENERAL PROCEDURES: Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically and collect in suitable container for disposal. Use personal protective equipment.

COMMENTS: Avoid contact with the skin and eyes. Avoid dust formation.

7. HANDLING AND STORAGE

HANDLING: Ensure adquate ventilation. Avoid contact with eyes and skin. Wash thoroughly after handling. Avoid breathing dust. Avoid dust formation.

STORAGE: Keep container tighlty closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
	EXPOSURE LIMITS			
Chemical Name	**Type**		**ppm**	**mg/m³**
Calcium Chloride	**OSHA PEL**	**TWA**		
	ACGIH TLV	**TWA**	10 mg/m3 [1]	[1]
	Supplier OEL	**TWA**	10 mg/m3	

Footnotes:
1. For nuisance particulate (inhalable particulate)

ENGINEERING CONTROLS: Local exhaust.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with non-flexible side shields or chemical goggles.

SKIN: Wear appropriate chemical impervious clothing, gloves and boots whenever there is potential for skin contact with product (PVC or Rubber). Launder clothing before reuse. Maintain safety shower at all locations where skin contact is imminent. Contact your local safety equipment supplier to assist the facility in determining proper selection of personal protective equipment for the applications/operations present at your facility. Wear resistant gloves (consult your safety equipment supplier). Discard gloves that show tears, pinholes, or signs of wear.

RESPIRATORY: No respirator is required under normal conditions of use. Use of a NIOSH-approved respirator (N95 or greater) should be based

SAFETY DATA SHEET

on the presence of nuisance dusts.

WORK HYGIENIC PRACTICES: When using, do not eat, drink or smoke. Remove and wash contaminated clothing before reuse. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

ODOR: None.

APPEARANCE: White pellet flakes.

pH: Not Available

FLASHPOINT AND METHOD: Not Applicable.

LOWER EXPLOSION LIMIT: 0

UPPER EXPLOSION LIMIT: 0

VAPOR PRESSURE: Not Available

VAPOR DENSITY: Not Available

MELTING POINT: 187°C (369°F) to 773°C (1424°F)

SOLUBILITY IN WATER: 40% @ 68 deg F (20 deg C) with evolution of heat

SPECIFIC GRAVITY: 2.15 At 77 degrees F.

10. STABILITY AND REACTIVITY

REACTIVITY: No data available.

HAZARDOUS POLYMERIZATION: Will not occur.

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Dust formation.

HAZARDOUS DECOMPOSITION PRODUCTS: Chlorine gas.

INCOMPATIBLE MATERIALS: Zinc, Bromine tri-flouride, Methyl vinyl ether.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

DERMAL LD_{50}: 2630 mg/kg (rat)

Notes: Calcium Chloride

ORAL LD_{50}: 1000 mg/kg - Rat

Notes: Calcium Chloride

CARCINOGENICITY

NOTES: Contains no ingredients above reportable quantities listed as a carcinogen.

COMMENTS: Likely Routes of Exposure:

Inhalation: May cause irritation of respiratory tract.

Eye Contact: Irritating to eyes.

Skin Contact: May cause irritation to skin.

Ingestion: Harmful if swallowed.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY (ACUTE)

SAFETY DATA SHEET

Date Issued : 12/07/2022
SDS No. : Regal Calcium Increaser

Regal Pool Care System Calcium Increaser

96-HOUR LC_{50}: 10650 mg/L (Lepomis macrochirus)

48-HOUR EC_{50}: 2400 mg/L (Daphnia Magna)

Notes: Calcium Chloride

COMMENTS: Product will not biodegrade or accumulate.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose in accordance with all applicable regulations.

RCRA/EPA WASTE INFORMATION: This product does meet the criterial of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HEALTH HAZARDS: Not listed.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: No.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All ingredients in this mixture are in compliance with TSCA.

REGULATIONS

STATE REGULATIONS: Not regulated.

CALIFORNIA PROPOSITION 65: There are no chemicals present known to the State of California to cause cancer.

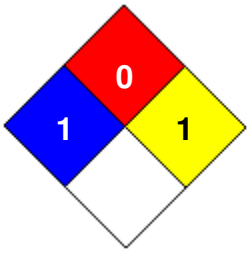
16. OTHER INFORMATION

Date Prepared: 12/07/2022

HMIS RATING

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	

NFPA CODES



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SECTION 1. IDENTIFICATION

Product identifier

Trade name : LESLIE'S PRO CAL-HYPO CHLORINATING TABS

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Pesticide

Details of the supplier of the safety data sheet	**Emergency telephone number**
Innovative Water Care, LLC 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States of America (USA) EHSProductSafetyTeam@solenis.com	1-800-654-6911 (Outside the USA:1-423-780-2970) **Product Information** 1-800-511-6737 (Outside the USA:1-423-780-2347)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids	:	Category 2
Acute toxicity (Oral)	:	Category 4
Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary statements :

Prevention:

P210 Keep away from heat.
P220 Keep/ Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P260 Do not breathe dust.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use water spray to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Classification	Concentration (%)
CALCIUM HYPOCHLORITE	7778-54-3	Ox. Sol. 2; H272 Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335	>= 70 - < 80

CALCIUM HYDROXIDE	1305-62-0	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335	>= 10 - < 15
CALCIUM CHLORIDE	10043-52-4	Eye Irrit. 2A; H319	>= 1.5 - < 5
CALCIUM CARBONATE	471-34-1		>= 1.5 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Move to fresh air. Keep patient warm and at rest. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.
In case of eye contact	:	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye.
If swallowed	:	Get medical attention immediately. Do NOT induce vomiting. Rinse mouth with water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) discomfort in the chest bronchitis Headache Shortness of breath

lung edema (fluid buildup in the lung tissue)
Pulmonary edema may be delayed.
Harmful if swallowed.
Causes serious eye damage.
May cause respiratory irritation.
Causes severe burns.

Notes to physician : Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water

Unsuitable extinguishing media : Dry extinguishers containing ammonium compounds.

Specific hazards during firefighting : May intensify fire, oxidizer.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Chlorine

Further information : Use water to cool containers exposed to fire.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Avoid dust formation.
Avoid breathing dust.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Comply with all applicable federal, state, and local regulations.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Sweep up and shovel using a clean broom or shovel.
Shovel material into clean dry containers.
All spills of this product should be treated as contaminated.
Contaminated product may initiate a chemical reaction that may spontaneously ignite any combustible material present, resulting in a fire.
Avoid getting spilled product wet.
Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Keep away from combustible material. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Avoid dust formation. Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours/dust. Do not smoke. Container hazardous when empty. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. Store in original container.
Recommended storage temperature	:	<= 95 °F / <= 35 °C
Further information on storage stability	:	Do not store next to a heat source, in direct sunlight, or elevated temperatures. Do not store where the daily average temperature exceeds prescribed storage temperature for 7 consecutive days. Prevent ingress of humidity and moisture into container or package. Keep containers tightly closed. Maximum average daily temperature as recommended(where the average daily temperature may be obtained by averaging the minimum and maximum temperatures for each day). Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters /	Basis

		exposure)	Permissible concentration	
CALCIUM HYDROXIDE	1305-62-0	TWA	5 mg/m3	ACGIH
		TWA	5 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA	5 mg/m3	OSHA P0
CALCIUM CARBONATE	471-34-1	TWA (Respirable)	5 mg/m3 (Calcium carbonate)	NIOSH REL
		TWA (total)	10 mg/m3 (Calcium carbonate)	NIOSH REL

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
Dust safety masks are recommended when the dust concentration is more than 10 mg/m3.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles and face shield to protect eyes and skin from airborne dust.
Maintain eye wash station in immediate work area.

Skin and body protection : Wear as appropriate:
Chemical resistant apron
Safety shoes
Dust impervious protective suit
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).
Discard gloves that show tears, pinholes, or signs of wear.

Hygiene measures	:	Avoid breathing dust. Wash hands before breaks and at the end of workday. When using do not eat or drink. Ensure that eyewash stations and safety showers are close to the workstation location. When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	tablet
Colour	:	white
Odour	:	chlorine-like
Odour Threshold	:	No data available
pH	:	11.86 - 11.88 (77 °F / 25 °C) Concentration: 1 % (aqueous suspension)
Melting point/freezing point	:	Not applicable
Initial boiling point and boiling range	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not combustible Dust
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	No data available
Density	:	0.95 g/cm3 (68 °F / 20 °C)
Solubility(ies)		

Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	No data available
Oxidizing properties	:	The substance or mixture is classified as oxidizing with the category 2.
Molecular weight	:	143 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	NFPA Oxidizer Class: Meets the criteria of an NFPA Class 2 Oxidizer.
Conditions to avoid	:	Avoid heat, open flame, and prolonged storage at elevated temperatures. excessive heat Exposure to moisture Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials	:	Do not allow product to come in contact with other materials, including e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. A chemical reaction with such substances can cause a fire. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter.
Hazardous decomposition products	:	Chlorine

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Components:

CALCIUM HYPOCHLORITE:

Acute oral toxicity	:	LD50 (Rat): 850 mg/kg
Acute inhalation toxicity	:	Assessment: Corrosive to the respiratory tract.
Acute dermal toxicity	:	LD50 (Rabbit): > 2 g/kg

CALCIUM HYDROXIDE:

Acute inhalation toxicity	:	Remarks: Corrosive to respiratory system.

CALCIUM CHLORIDE:

Acute oral toxicity	:	LD50 (Rat): 2,301 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

CALCIUM CARBONATE:

Acute oral toxicity	:	LD50 (Rat): 6,450 mg/kg
Acute inhalation toxicity	:	LC 50 (Rat): > 3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: Not classified as acutely toxic by inhalation under GHS. Remarks: Aerosol
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Causes severe burns.

Product:

Remarks	:	Causes severe skin burns and eye damage.

Components:

CALCIUM HYPOCHLORITE:

Result	:	Corrosive after 3 minutes to 1 hour of exposure

CALCIUM HYDROXIDE:
Result : Irritating to skin

CALCIUM CHLORIDE:
Result : Not irritating to skin

CALCIUM CARBONATE:
Result : Not irritating to skin

Serious eye damage/eye irritation
Causes serious eye damage.

Product:
Remarks : May cause irreversible eye damage.

Components:

CALCIUM HYPOCHLORITE:
Result : Corrosive to eyes

CALCIUM HYDROXIDE:
Result : Corrosive to eyes

CALCIUM CHLORIDE:
Result : Severely irritating to eyes

CALCIUM CARBONATE:
Result : Not irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation
Not classified based on available information.

Respiratory sensitisation
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

STOT - single exposure
May cause respiratory irritation.

Components:

CALCIUM HYPOCHLORITE:
Assessment : May cause respiratory irritation.

CALCIUM HYDROXIDE:
Assessment : May cause respiratory irritation.

STOT - repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Further information

Product:
Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment
Acute aquatic toxicity : Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Chronic aquatic toxicity : Not classified based on available information.

Components:

CALCIUM HYPOCHLORITE:
Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.049 - 0.16 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.067 mg/l
Exposure time: 48 h

CALCIUM CHLORIDE:
Toxicity to fish : LC50 (Bluegill (Lepomis macrochirus)): 9,500 mg/l

Exposure time: 96 h
Method: Static
Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Water flea (Ceriodaphnia dubia)): 1,770 - 2,030 mg/l
Exposure time: 48 h
Method: Static
Remarks: Mortality

CALCIUM CARBONATE:

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): > 56,000 mg/l
Exposure time: 96 h
Test Type: static test

Persistence and degradability

Components:

CALCIUM HYPOCHLORITE:

Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

CALCIUM HYDROXIDE:

Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

CALCIUM CHLORIDE:

Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with

chemical or used container.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN number	:	UN 2880
Proper shipping name	:	Calcium hypochlorite, hydrated mixture
Class	:	5.1
Packing group	:	III
Packing instruction (cargo aircraft)	:	563
Packing instruction (passenger aircraft)	:	559

IMDG-Code

UN number	:	UN 2880
Proper shipping name	:	CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Class	:	5.1
Packing group	:	III
EmS Code	:	F-H, S-Q
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

UN number	:	UN 2880
Proper shipping name	:	Calcium hypochlorite, hydrated mixtures
Class	:	5.1
Packing group	:	III
ERG Code	:	140
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
CALCIUM HYPOCHLORITE	7778-54-3	10	14

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Oxidiser (liquid, solid or gas)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

calcium hypochlorite	7778-54-3
CALCIUM HYDROXIDE	1305-62-0
CALCIUM CHLORATE	10137-74-3

Pennsylvania Right To Know

calcium hypochlorite	7778-54-3
WATER	7732-18-5
CALCIUM HYDROXIDE	1305-62-0
CALCIUM CHLORATE	10137-74-3

New Jersey Right To Know

calcium hypochlorite	7778-54-3
WATER	7732-18-5
CALCIUM HYDROXIDE	1305-62-0
calcium chloride	10043-52-4
SODIUM CHLORIDE	7647-14-5
CALCIUM CARBONATE	471-34-1
CALCIUM CHLORATE	10137-74-3

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Exempt
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	Exempt
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

TSCA list

Exempt- This product is exempt from Significant New Use Rule requirements. See information under Biocides for product registration information."

Exempt-This product is exempt from TSCA 12(b) requirements. See information under Biocides for product registration information."

Biocides

EPA Reg. # 1258-1370-11411

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Danger, Corrosive., Causes irreversible eye damage and skin burns., Harmful if swallowed or absorbed through skin or inhaled.

SECTION 16. OTHER INFORMATION

Further information

Revision Date	:	08/04/2023

Full text of H-Statements

H272	:	May intensify fire; oxidizer.
H302	:	Harmful if swallowed.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H335	:	May cause respiratory irritation.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Ox. Sol.	:	Oxidizing solids
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
STOT SE	:	Specific target organ toxicity - single exposure
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet
Key literature references and sources of data
SOLENIS Internal data
SOLENIS internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

US / EN

SECTION 1. IDENTIFICATION

Product identifier

Trade name : Leslie's Power Powder Granular 70

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Pesticide

Details of the supplier of the safety data sheet	**Emergency telephone number**
Innovative Water Care, LLC 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States of America (USA) EHSProductSafetyTeam@solenis.com	1-800-654-6911 (Outside the USA:1-423-780-2970) **Product Information** 1-800-511-6737 (Outside the USA:1-423-780-2347)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids	:	Category 2
Acute toxicity (Oral)	:	Category 4
Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary statements :

Prevention:

P210 Keep away from heat.
P220 Keep/ Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P260 Do not breathe dust.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use water spray to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Classification	Concentration (%)
CALCIUM HYPOCHLORITE	7778-54-3	Ox. Sol. 2; H272 Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335	>= 60 - < 70

CALCIUM CHLORIDE	10043-52-4	Eye Irrit. 2A; H319	>= 1.5 - < 5
CALCIUM HYDROXIDE	1305-62-0	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335	>= 1.5 - < 5
CALCIUM CARBONATE	471-34-1		>= 1.5 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Move to fresh air. Keep patient warm and at rest. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.
In case of eye contact	:	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye.
If swallowed	:	Get medical attention immediately. Do NOT induce vomiting. Rinse mouth with water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) discomfort in the chest bronchitis Headache Shortness of breath

lung edema (fluid buildup in the lung tissue)
Pulmonary edema may be delayed.
Harmful if swallowed.
Causes serious eye damage.
May cause respiratory irritation.
Causes severe burns.

Notes to physician : Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water

Unsuitable extinguishing media : Dry extinguishers containing ammonium compounds.

Specific hazards during firefighting : May intensify fire, oxidizer.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Chlorine

Further information : Use water to cool containers exposed to fire.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Avoid dust formation.
Avoid breathing dust.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Comply with all applicable federal, state, and local regulations.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Sweep up and shovel using a clean broom or shovel.
Shovel material into clean dry containers.
All spills of this product should be treated as contaminated.
Contaminated product may initiate a chemical reaction that may spontaneously ignite any combustible material present, resulting in a fire.
Avoid getting spilled product wet.
Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Keep away from combustible material. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Avoid dust formation. Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours/dust. Do not smoke. Container hazardous when empty. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Store in original container. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. No smoking. Electrical installations / working materials must comply with the technological safety standards.
Recommended storage temperature	:	<= 95 °F / <= 35 °C
Further information on storage stability	:	Do not store next to a heat source, in direct sunlight, or elevated temperatures. Do not store where the daily average temperature exceeds prescribed storage temperature for 7 consecutive days. Prevent ingress of humidity and moisture into container or package. Keep containers tightly closed. Maximum average daily temperature as recommended(where the average daily temperature may be obtained by averaging the minimum and maximum temperatures for each day). Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type	Control	Basis

		(Form of exposure)	parameters / Permissible concentration	
CALCIUM HYDROXIDE	1305-62-0	TWA	5 mg/m3	ACGIH
		TWA	5 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA	5 mg/m3	OSHA P0
CALCIUM CARBONATE	471-34-1	TWA (Respirable)	5 mg/m3 (Calcium carbonate)	NIOSH REL
		TWA (total)	10 mg/m3 (Calcium carbonate)	NIOSH REL

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
Dust safety masks are recommended when the dust concentration is more than 10 mg/m3.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles and face shield to protect eyes and skin from airborne dust.
Maintain eye wash station in immediate work area.

Skin and body protection : Wear as appropriate:
Chemical resistant apron
Safety shoes
Dust impervious protective suit
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).
Discard gloves that show tears, pinholes, or signs of wear.

Hygiene measures	:	Avoid breathing dust. Wash hands before breaks and at the end of workday. When using do not eat or drink. Ensure that eyewash stations and safety showers are close to the workstation location. When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	granular
Colour	:	white
Odour	:	chlorine-like
Odour Threshold	:	No data available
pH	:	10.5 - 11.5 (77 °F / 25 °C) Concentration: 1 %
Melting point/freezing point	:	Not applicable
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not combustible Dust
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.9 - 1.1 g/cm3
Solubility(ies)		
Water solubility	:	ca. 180 g/l (77 °F / 25 °C)

Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	The substance or mixture is classified as oxidizing with the category 2.
Particle size	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	NFPA Oxidizer Class: Meets the criteria of an NFPA Class 3 Oxidizer.
Conditions to avoid	:	Avoid heat, open flame, and prolonged storage at elevated temperatures. excessive heat Exposure to moisture Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials	:	Do not allow product to come in contact with other materials, including e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. A chemical reaction with such substances can cause a fire. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter.
Hazardous decomposition products	:	Chlorine

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Components:

CALCIUM HYPOCHLORITE:

Acute oral toxicity	:	LD50 (Rat): 850 mg/kg
Acute inhalation toxicity	:	Assessment: Corrosive to the respiratory tract.
Acute dermal toxicity	:	LD50 (Rabbit): > 2 g/kg

CALCIUM CHLORIDE:

Acute oral toxicity	:	LD50 (Rat): 2,301 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

CALCIUM HYDROXIDE:

Acute inhalation toxicity	:	Remarks: Corrosive to respiratory system.

CALCIUM CARBONATE:

Acute oral toxicity	:	LD50 (Rat): 6,450 mg/kg
Acute inhalation toxicity	:	LC 50 (Rat): > 3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: Not classified as acutely toxic by inhalation under GHS. Remarks: Aerosol
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Causes severe burns.

Product:

Remarks	:	Causes severe skin burns and eye damage.

Components:

CALCIUM HYPOCHLORITE:

Result	:	Corrosive after 3 minutes to 1 hour of exposure

CALCIUM CHLORIDE:
Result : Not irritating to skin

CALCIUM HYDROXIDE:
Result : Irritating to skin

CALCIUM CARBONATE:
Result : Not irritating to skin

Serious eye damage/eye irritation
Causes serious eye damage.

Product:
Remarks : May cause irreversible eye damage.

Components:

CALCIUM HYPOCHLORITE:
Result : Corrosive to eyes

CALCIUM CHLORIDE:
Result : Severely irritating to eyes

CALCIUM HYDROXIDE:
Result : Corrosive to eyes

CALCIUM CARBONATE:
Result : Not irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation
Not classified based on available information.

Respiratory sensitisation
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

STOT - single exposure
May cause respiratory irritation.

Components:

CALCIUM HYPOCHLORITE:
Assessment : May cause respiratory irritation.

CALCIUM HYDROXIDE:
Assessment : May cause respiratory irritation.

STOT - repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Further information

Product:
Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment
Acute aquatic toxicity : Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Chronic aquatic toxicity : Not classified based on available information.

Components:

CALCIUM HYPOCHLORITE:
Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.049 - 0.16 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.067 mg/l
Exposure time: 48 h

CALCIUM CHLORIDE:
Toxicity to fish : LC50 (Bluegill (Lepomis macrochirus)): 9,500 mg/l

Exposure time: 96 h
Method: Static
Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Water flea (Ceriodaphnia dubia)): 1,770 - 2,030 mg/l
Exposure time: 48 h
Method: Static
Remarks: Mortality

CALCIUM CARBONATE:

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): > 56,000 mg/l
Exposure time: 96 h
Test Type: static test

Persistence and degradability

Components:

CALCIUM HYPOCHLORITE:

Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

CALCIUM CHLORIDE:

Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

CALCIUM HYDROXIDE:

Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with

chemical or used container.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN number	:	UN 2880
Proper shipping name	:	Calcium hypochlorite, hydrated mixture
Class	:	5.1
Packing group	:	II
Packing instruction (cargo aircraft)	:	562
Packing instruction (passenger aircraft)	:	558

IMDG-Code

UN number	:	UN 2880
Proper shipping name	:	CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Class	:	5.1
Packing group	:	II
EmS Code	:	F-H, S-Q
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

UN number	:	UN 2880
Proper shipping name	:	Calcium hypochlorite, hydrated mixtures
Class	:	5.1
Packing group	:	II
ERG Code	:	140
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

49CFR/IMDG: Packages with inner packaging less than 1L or 1kg and gross weight under 30kg may ship under the Limited Quantity Exception.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
CALCIUM HYPOCHLORITE	7778-54-3	10	14

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Oxidiser (liquid, solid or gas)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

calcium hypochlorite	7778-54-3
CALCIUM HYDROXIDE	1305-62-0
CALCIUM CHLORATE	10137-74-3

Pennsylvania Right To Know

calcium hypochlorite	7778-54-3
SODIUM CHLORIDE	7647-14-5
WATER	7732-18-5
CALCIUM HYDROXIDE	1305-62-0
CALCIUM CHLORATE	10137-74-3

New Jersey Right To Know

calcium hypochlorite	7778-54-3
SODIUM CHLORIDE	7647-14-5
WATER	7732-18-5
calcium chloride	10043-52-4
CALCIUM HYDROXIDE	1305-62-0
CALCIUM CARBONATE	471-34-1
CALCIUM CHLORATE	10137-74-3

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Exempt
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	Exempt
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

TSCA list

Exempt- This product is exempt from Significant New Use Rule requirements. See information under Biocides for product registration information."

Exempt-This product is exempt from TSCA 12(b) requirements. See information under Biocides for product registration information."

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This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Danger, Highly Corrosive., Causes skin and eye damage., May be fatal if swallowed., Irritating to nose and throat.

SECTION 16. OTHER INFORMATION

Further information

Revision Date	:	07/28/2023

Full text of H-Statements

H272	:	May intensify fire; oxidizer.
H302	:	Harmful if swallowed.
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Full text of other abbreviations

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Eye Dam.	:	Serious eye damage
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OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization

Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet
Key literature references and sources of data
SOLENIS Internal data
SOLENIS internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

US / EN

Safety Data Sheet

Acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: December 04, 2017 Revision: December 04, 2017

1 Identification

· **Product identifier**

· **Trade name: ZeoFiber Cellulose Fiber**
· **Other product identifiers:** Powdered Cellulose
· **CAS Number:**
9004-34-6

· **Recommended use and restriction on use**
· **Recommended use:** Diatomaceous earth replacement filter media for water.
· **Restrictions on use:** No relevant information available.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
ZEO, Inc.
2104 Augusta Street
McKinney, TX 75070
Phone: +1-972-542-0053
Fax: +1-972-542-0211

· **Emergency telephone number:** +1-972-542-0053

2 Hazard(s) identification

· **Classification of the substance or mixture**
Combustible Dust May form combustible dust concentrations in air.

· **Label elements**
· **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:** Not regulated.
· **Signal word:** Warning
· **Hazard statements:**
May form combustible dust concentrations in air.
· **Additional information:**
Read the label and safety data sheet before use. Prevent dust accumulations to minimize explosion hazard. Keep away from all ignition sources including heat, sparks and flame.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Substances**
· **CAS No. Description**
9004-34-6 cellulose

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.

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Safety Data Sheet

Acc. to OSHA HCS (29 CFR 1910.1200)

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Trade name: ZeoFiber Cellulose Fiber

(Cont'd. of page 1)

· **After skin contact:**
Brush off loose particles from skin.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Do not induce vomiting; immediately call for medical help.
· **Most important symptoms and effects, both acute and delayed:** No relevant information available.
· **Indication of any immediate medical attention and special treatment needed:** Treat symptomatically.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
Carbon dioxide
Fire-extinguishing powder
Foam
Gaseous extinguishing agents
Water fog / haze
· **For safety reasons unsuitable extinguishing agents:** None.
· **Special hazards arising from the substance or mixture**
Can pose a dust explosion hazard if dispersed in air. Avoid ignition sources.
In case of fire, the following can be released:
Carbon monoxide, carbon dioxide.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Avoid formation of dust.
Do not breathe dust.
If airborne dust and/or fume is present, use adequate engineering controls and, if needed, personal protection to prevent overexposure. Refer to recommendations in Section 8.
· **Environmental precautions** No special measures required.
· **Methods and material for containment and cleaning up**
Vacuum or sweep and collect in a suitable container. For a large spill, collect uncontaminated product for possible re-use. Avoid creating dusty conditions.
Send for recovery or disposal in suitable receptacles.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

(Cont'd. on page 3)

Safety Data Sheet

Acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: December 04, 2017 Revision: December 04, 2017

Trade name: ZeoFiber Cellulose Fiber

(Cont'd. of page 2)

7 Handling and storage

· **Handling**
· **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Use personal protective equipment as required.
Take off contaminated clothing and wash it before reuse.
Wash hands before breaks and at the end of work.
Prevent formation of dust.
Avoid breathing dust.
· **Information about protection against explosions and fires:**
May form combustible dust concentrations in air.
Avoid dust cloud formation. Keep ignition sources away. No smoking.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Storage area should be dry and well-ventilated.
· **Information about storage in one common storage facility:** Store away from oxidizing agents.
· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
9004-34-6 cellulose	
PEL (USA)	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m³
EL (Canada)	Long-term value: 10* 3** mg/m³ *total dust, **respirable fraction
EV (Canada)	Long-term value: 10 mg/m³ paper fibre, total dust
LMPE (Mexico)	Long-term value: 10 mg/m³

· **Exposure controls**
· **Engineering measures** Provide adequate ventilation.
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Avoid breathing dust.
Avoid contact with the eyes.
· **Engineering controls:** Provide adequate ventilation.
· **Breathing equipment:**
NIOSH or EU approved dust respirator is highly recommended when ventilation is poor.

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Safety Data Sheet

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Particulate mask should filter at least 99% of airborne particles.

· **Protection of hands:**
Gloves are advised for repeated or prolonged contact.
Protection may be required for spills.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Eye protection:**

Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:**
Not required under normal conditions of use.
Protection may be required for spills.

· **Limitation and supervision of exposure into the environment**
No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **Appearance:**	
Form:	Powder
Color:	White
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value:**	5.0-7.5
· **Melting point/Melting range:**	Not determined.
· **Boiling point/Boiling range:**	Not determined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	May form combustible dust concentrations in air.
· **Auto-ignition temperature:**	~500 °C (~932 °F)
· **Decomposition temperature:**	~200 °C (~392 °F)
· **Danger of explosion:**	Can pose a dust explosion hazard if dispersed in air.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Non-oxidizing.
· **Vapor pressure:**	Not applicable.
· **Density:**	
Relative density:	1.21-1.61 g/cm³ (10.1-13.44 lbs/gal)
Vapor density:	Not applicable.
Evaporation rate:	Not applicable.
· **Solubility in / Miscibility with**	

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Trade name: ZeoFiber Cellulose Fiber

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Water:	Insoluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Other information**	No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions** May form combustible dust concentrations in air.
· **Conditions to avoid** Prevent formation of dust.
· **Incompatible materials** No relevant information available.
· **Hazardous decomposition products**

Under fire conditions only:
Carbon monoxide and carbon dioxide

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.
· **LD/LC50 values that are relevant for classification:** None.
· **Primary irritant effect:**
· **On the skin:** Based on available data, the classification criteria are not met.
· **On the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** Based on available data, the classification criteria are not met.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer):**
Substance is not listed.

· **NTP (National Toxicology Program):**
Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
Substance is not listed.

· **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Repeated dose toxicity:** Long term inhalation of product dust may be harmful.
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

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Safety Data Sheet

Acc. to OSHA HCS (29 CFR 1910.1200)

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Trade name: ZeoFiber Cellulose Fiber

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· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** Generally not hazardous for water
· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Smaller quantities can be disposed of with household waste.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	Not regulated.
· **UN proper shipping name**	
· **DOT, ADR, IMDG, IATA**	Not regulated.
· **Transport hazard class(es)**	
· **DOT, ADR, IMDG, IATA**	
· **Class**	Not regulated.
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	Not regulated.
· **Environmental hazards**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.

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Trade name: ZeoFiber Cellulose Fiber

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· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**

Substance is not listed.

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act)**

Substance is listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **EPA (Environmental Protection Agency):**

Substance is not listed.

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

Substance is not listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** December 04, 2017 / -

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

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Safety Data Sheet

Acc. to OSHA HCS (29 CFR 1910.1200)

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IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
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Website: www.chemtelinc.com

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Leslie's Swimming Pool Supplies Chlor Neutralizer**

Other means of identification Not available

Recommended use Chlorine & Bromine neutralization

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name LPM Manufacturing, Inc.

Address 2005 E. Indian School Rd.
Phoenix, AZ 85016
United States

Telephone 602-366-3999

E-mail Not available.

Emergency phone number 800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 4
Serious eye damage/eye irritation	Category 2
Sensitization, respiratory	Category 1
Sensitization, skin	Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement
Harmful if swallowed.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Causes serious eye irritation.

Precautionary statement

Prevention
Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
Avoid breathing dust. In case of inadequate ventilation wear respiratory protection.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves. Wear eye/face protection.

Response
If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth.
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor.
Specific treatment (see this label).
If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 99% of the mixture consists of component(s) of unknown acute dermal toxicity.

3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium sulfite		7757-83-7	97-100

4. First Aid Measures

Inhalation
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Skin contact
If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion
If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth.

Most important symptoms/effects, acute and delayed
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash. May cause allergic respiratory reaction.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

5. Fire Fighting Measures

Suitable extinguishing media
Treat for surrounding material. Water may be ineffective.

Unsuitable extinguishing media
None known.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions
In the event of fire, cool tanks with water spray.

Specific methods
Cool containers exposed to flames with water until well after the fire is out.

General fire hazards
No unusual fire or explosion hazards noted. Firefighters should wear a self-contained breathing apparatus.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear a dust mask if dust is generated above exposure limits. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation.

Methods and materials for containment and cleaning up
Sweep up material and place in a disposal container without raising dust. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling
Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Wear appropriate particulate respirator if dust is generated. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Practice good housekeeping.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Guard against dust accumulation of this material.

8. Exposure Controls/Personal Protection

Occupational exposure limits
No exposure limits noted for ingredient(s).

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Not normally required if good ventilation is maintained.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Other	Not available.
Respiratory protection	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
Thermal hazards	Not applicable.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and Chemical Properties

Appearance	Granular solid
Physical state	Solid.
Form	granular powder
Color	White.
Odor	Odorless
Odor threshold	Not available.
pH	9.6 - 9.8 (Concentration: 10g/l)
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	-4
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	250 g/l @ 20°C (68°F)
Auto-ignition temperature	Not available.
Decomposition temperature	> 1112 °F (> 600 °C)
Viscosity	Not available.

Other information

Bulk density	1.5 - 1.6 kg/m3

10. Stability and Reactivity

Reactivity	This product may react with strong acids. This product may react with strong oxidizing agents.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Source of ignition. Do not mix with chlorine, bromine, oxidizers and acids. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Incompatible materials Acids. Oxidizers. Reducing agents. Moisture.

Hazardous decomposition products May include and are not limited to: Oxides of sulfur.

11. Toxicological Information

Information on likely routes of exposure

Ingestion Harmful if swallowed.

Inhalation May cause allergy or asthma symptoms or breathing difficulties if inhaled. Inhalation of dusts may cause respiratory irritation.

Skin contact May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Harmful if swallowed. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components	Species	Test Results
Sodium sulfite (CAS 7757-83-7)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Rat	> 5.5 mg/l/4h
Oral		
LD50	Mouse	820 mg/kg
	Rat	3560 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Causes serious eye irritation.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization

Respiratory sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Sodium sulfite (CAS 7757-83-7) 3 Not classifiable as to carcinogenicity to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Not available.

Further information Not available.

12. Ecological Information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Sodium sulfite (CAS 7757-83-7)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	660 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

Leslie's Swimming Pool Supplies Chlor Neutralizer	-4

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Texas Effects Screening Levels: Listed substance

Sodium sulfite (CAS 7757-83-7) Listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

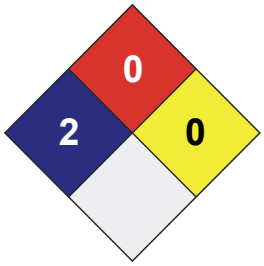
Not regulated.

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date 16-December-2014

Further information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Other information This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Prepared by Dell Tech Laboratories Ltd. Phone: (519) 858-5021

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Leslie's Swimming Pool Supplies Conditioner**

Other means of identification Not available

Recommended use Stabilizing chlorine in swimming pool water

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name LPM Manufacturing, Inc.

Address 2005 E. Indian School Rd.
Phoenix, AZ 85016
United States

Telephone 602-366-3999

E-mail Not available.

Emergency phone number 800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards Not classified.

Health hazards Serious eye damage/eye irritation Category 2

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Causes serious eye irritation.

Precautionary statement

Prevention Wash thoroughly after handling.
Wear eye/face protection.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Cyanuric acid		108-80-5	97-100

4. First Aid Measures

Inhalation If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.

Skin contact Brush away excess of dry material. Flush with water. Obtain medical attention if irritation persists.

Eye contact If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Rinse mouth with water, then drink one or two glasses of water. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Suitable extinguishing media	Water spray. Dry chemical powder. Alcohol foam. Carbon dioxide.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In the event of fire, cool tanks with water spray.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	No unusual fire or explosion hazards noted. Dust may explode. Firefighters should wear a self-contained breathing apparatus.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear a dust mask if dust is generated above exposure limits. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Sweep up material and place in a disposal container without raising dust. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid breathing dust. Avoid contact with eyes, skin and clothing. Avoid prolonged exposure. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Practice good housekeeping.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Guard against dust accumulation of this material.

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Cyanuric acid (CAS 108-80-5)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Not normally required if good ventilation is maintained.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Other	Wear suitable protective clothing.
Respiratory protection	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards	Not applicable.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Solid
Physical state	Solid.
Form	Powder.
Color	White crystalline powder
Odor	Odorless
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	608 - 680 °F (320 - 360 °C)
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	2.5
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	<0.005 Pa @ 25 °C
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	0.27 g/100 mL @ 25°C
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Incompatible materials	Oxidizers. Chlorinated products.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Inhalation of dusts may cause respiratory irritation. Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Cyanuric acid (CAS 108-80-5)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Inhalation		
LC50	Rat	> 612 mg/m3
Oral		
LD50	Mouse	3400 mg/kg
	Rat	> 5000 mg/kg
		7700 mg/kg

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	Causes serious eye irritation.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful. Prolonged or repeated exposure can cause kidney damage.
Further information	Not available.

12. Ecological Information

Ecotoxicity	No ecotoxicity data noted for the ingredient(s).
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Mobility in general	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.

Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

US state regulations CA Reg. No. 11411-50016

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Minnesota Haz Subs: Listed substance

Cyanuric acid (CAS 108-80-5) Listed.

US - Texas Effects Screening Levels: Listed substance

Cyanuric acid (CAS 108-80-5) Listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

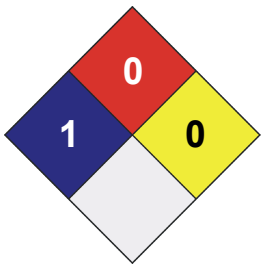
Not regulated.

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer

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Issue date

16-December-2014

Further information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Other information

This chemical is a pesticide product registered by the the California Department of Pesticide Regulations (DPR) and is subject to certain labeling requirements under the California pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION: IRRITANT. MAY CAUSE EYE IRRITATION. MAY CAUSE IRRITATION OF THE RESPIRATORY AND GASTROINTESTINAL TRACT. CONTAINS CYANURIC ACID. Do not get in eyes or on skin. Do not breathe dust. Wear goggles or safety glasses with side-shields and rubber gloves when handling this product. Wash thoroughly after handling. Do not mix with other chemicals This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Prepared by

Dell Tech Laboratories Ltd. Phone: (519) 858-5021

SECTION 1. IDENTIFICATION

Product identifier

Trade name : LESLIE'S COPPER ALGAECIDE

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Pesticide

Details of the supplier of the safety data sheet	**Emergency telephone number**
Innovative Water Care, LLC 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States of America (USA) EHSProductSafetyTeam@solenis.com	1-800-654-6911 (Outside the USA:1-423-780-2970) **Product Information** 1-800-511-6737 (Outside the USA:1-423-780-2347)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	:	Category 4
Eye irritation	:	Category 2B
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H227 Combustible liquid.
H320 Causes eye irritation.
H335 May cause respiratory irritation.

Precautionary statements :

Prevention:

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

P261 Avoid breathing mist or vapours.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Classification	Concentration (%)
TRIETHANOLAMINE	102-71-6	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	>= 10 - < 15
MONOETHANOLAMINE	141-43-5	Flam. Liq. 4; H227 Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335	>= 10 - < 15
CITRIC ACID	77-92-9	Eye Irrit. 2A; H319 STOT SE 3; H335	>= 1.5 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Move to fresh air. Keep patient warm and at rest. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.
In case of eye contact	:	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye.
If swallowed	:	Get medical attention immediately. Do NOT induce vomiting. Rinse mouth with water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) Shortness of breath lung edema (fluid buildup in the lung tissue) This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting. Causes eye irritation. May cause respiratory irritation.
Notes to physician	:	No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Water spray
Foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon monoxide Carbon dioxide (CO2) nitrogen oxides (NOx) Ammonia Hydrocarbons
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Remove all sources of ignition. Use personal protective equipment. Ensure adequate ventilation. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Comply with all applicable federal, state, and local regulations.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Keep away from open flames, hot surfaces and sources of ignition.

Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.

Advice on safe handling : Avoid formation of aerosol.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
No smoking.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
TRIETHANOLAMINE	102-71-6	TWA	5 mg/m3	ACGIH
MONOETHANOLAMINE	141-43-5	TWA	3 ppm	ACGIH
		STEL	6 ppm	ACGIH
		TWA	3 ppm 8 mg/m3	NIOSH REL
		ST	6 ppm 15 mg/m3	NIOSH REL

		TWA	3 ppm 6 mg/m3	OSHA Z-1
		TWA	3 ppm 8 mg/m3	OSHA P0
		STEL	6 ppm 15 mg/m3	OSHA P0

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist.
Maintain eye wash station in immediate work area.

Skin and body protection : Wear as appropriate:
Impervious clothing
Chemical resistant apron
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).
Discard gloves that show tears, pinholes, or signs of wear.

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
Ensure that eyewash stations and safety showers are close to the workstation location.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	9.7 - 10.3
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	212 °F / 100 °C
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1.190 - 1.210 (68 °F / 20 °C)
Density	:	Not applicable
Solubility(ies)		
Water solubility	:	soluble in cold water
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available

Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available
Particle size	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Vapours may form explosive mixture with air.
Conditions to avoid	:	This product should not be heated above 140 degrees F (60 degrees C) in the presence of aluminum due to excessive corrosion and potential chemical reaction releasing flammable hydrogen gas. excessive heat Heat, flames and sparks. Exposure to air. Exposure to moisture Exposure to light. Exposure to air or moisture over prolonged periods. Heat, flames and sparks.
Incompatible materials	:	Acids Aldehydes Alkaline earth metals aluminum carbonates Copper Copper alloys Cyanides galvanized metals halogenated hydrocarbons Iron Ketones Metals metal nitrates nitrites organic anhydrides organic halides organic solvent strong bases Strong oxidizing agents strong reducing agents sulfides sulphites Zinc

Hazardous decomposition products	:	Carbon monoxide Carbon dioxide (CO2) Nitrogen oxides (NOx) Ammonia Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Components:

TRIETHANOLAMINE:

Acute oral toxicity	:	LD50 (Rat): 6,400 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Method: OECD Test Guideline 402

MONOETHANOLAMINE:

Acute oral toxicity	:	LD50 (Rat): 1,515 mg/kg
Acute inhalation toxicity	:	LC0 (Rat): ca. 1.3 mg/l Exposure time: 6 h Test atmosphere: vapour Assessment: No adverse effect has been observed in acute inhalation toxicity tests.
Acute dermal toxicity	:	LD50 (Rabbit, male): 2,504 mg/kg Method: OECD Test Guideline 402 LD50 (Rabbit, female): 2,881 mg/kg Method: OECD Test Guideline 402

CITRIC ACID:

Acute oral toxicity	:	LD50 (Mouse): 5,040 mg/kg
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Assessment: No adverse effect has been observed in acute dermal toxicity tests.

Skin corrosion/irritation

Not classified based on available information.

Product:

Components:

TRIETHANOLAMINE:

Result : Mildly irritating to skin

MONOETHANOLAMINE:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Causes burns.

CITRIC ACID:

Result : Slightly irritating to skin

Serious eye damage/eye irritation

Causes eye irritation.

Product:

Result : Mild eye irritant

Components:

TRIETHANOLAMINE:

Result : Not irritating to eyes

MONOETHANOLAMINE:

Species : Rabbit
Result : Corrosive to eyes

CITRIC ACID:

Result : Severely irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

TRIETHANOLAMINE:

Test Type : Maximisation Test
Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Components:

MONOETHANOLAMINE:

Genotoxicity in vitro : Test system: rat hepatocytes
Method: OECD Test Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Result: negative

Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Carcinogenicity

Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

May cause respiratory irritation.

Components:

MONOETHANOLAMINE:

Exposure routes : Inhalation
Target Organs : Respiratory Tract
Assessment : May cause respiratory irritation.

CITRIC ACID:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Not classified based on available information.

Components:

TRIETHANOLAMINE:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 11,800 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Ceriodaphnia dubia)): 609.88 mg/l
Exposure time: 48 h
Test Type: static test

EC50 (Daphnia magna (Water flea)): 2,038 mg/l
Exposure time: 24 h
Test Type: static test

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 216 - 512 mg/l
Exposure time: 72 h
Test Type: Growth inhibition

MONOETHANOLAMINE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 114 - 196 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Cyprinus carpio (Carp)): 349 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 65 mg/l

aquatic invertebrates		Exposure time: 48 h Test Type: static test
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 2.5 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOEC (Oryzias latipes (Orange-red killifish)): 1.24 mg/l Exposure time: 41 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.85 mg/l Exposure time: 21 d Method: OECD Test Guideline 211

Persistence and degradability

Components:

TRIETHANOLAMINE:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 97 % Exposure time: 28 d

MONOETHANOLAMINE:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: > 70 % Exposure time: 28 d Method: OECD Test Guideline 301F

CITRIC ACID:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 97 % Exposure time: 28 d Method: OECD Test Guideline 301E

Bioaccumulative potential

Components:

TRIETHANOLAMINE:

Partition coefficient: n-octanol/water	:	log Pow: -1.00

MONOETHANOLAMINE:

Partition coefficient: n-octanol/water	:	log Pow: -1.91 (73 °F / 23 °C) pH: 7.3 Method: OECD Test Guideline 107

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Dispose of in accordance with all applicable local, state and federal regulations.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR
Not regulated as a dangerous good

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data

Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

TRIETHANOLAMINE	102-71-6
2-aminoethanol	141-43-5

Pennsylvania Right To Know

WATER	7732-18-5
TRIETHANOLAMINE	102-71-6
Copper ethanolamine complex	14215-52-2
Copper triethanolamine complex	82027-59-6
2-aminoethanol	141-43-5
Citric Acid	77-92-9

New Jersey Right To Know

WATER	7732-18-5
TRIETHANOLAMINE	102-71-6
Copper ethanolamine complex	14215-52-2
Copper triethanolamine complex	82027-59-6
2-aminoethanol	141-43-5

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TCSI : Not in compliance with the inventory

AIIC : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory

TSCA list

Exempt- This product is exempt from Significant New Use Rule requirements. See information under Biocides for product registration information."

Exempt-This product is exempt from TSCA 12(b) requirements. See information under Biocides for product registration information."

Biocides

EPA Reg. # 8959-2-11411

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution.

SECTION 16. OTHER INFORMATION

Further information

Revision Date	:	08/01/2023

Full text of H-Statements

H227	:	Combustible liquid.
H302	:	Harmful if swallowed.
H314	:	Causes severe skin burns and eye damage.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H335	:	May cause respiratory irritation.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Skin Corr.	:	Skin corrosion
STOT SE	:	Specific target organ toxicity - single exposure
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated

values)

OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet
Key literature references and sources of data
SOLENIS Internal data
SOLENIS internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

US / EN

SAFETY DATA SHEET

Date Issued : 12/07/2022
SDS No. : Regal Pool Stabilizer

Regal Pool Care System Pool Stabilizer

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Regal Pool Care System Pool Stabilizer
GENERAL USE: Stabilizer
PRODUCT DESCRIPTION: Chlorine Stabilizer

DISTRIBUTOR

Alliance Trading, Inc.
109 North Park Blvd., 4th Floor
Covington, LA 70433

24 HR. EMERGENCY TELEPHONE NUMBERS

Chem-Tel 24-Hour Emergency # (800) 255-3924

2. HAZARDS IDENTIFICATION

GHS LABEL

GHS-US Classification - Not Classified

PRECAUTIONARY STATEMENT(S)

General:

8219D4CW: This product is not classified as hazardous according to the Globally Harmonized System.

POTENTIAL HEALTH EFFECTS

EYES: May cause mild eye irritation.

SKIN: May cause slight irritation.

CARCINOGENICITY: None of the components present in this material are listed by IARC, NTP, or OSHA as a carcinogen.

COMMENTS: Even though this material is not classified as hazardous according to US OSHa's 2012 Hazard Communication Standard, good hygiene and safety practices should be followed. Good hygiene practices include but are not limited to: wearing suitable gloves and or eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Cyanuric Acid	98 - 100	108-80-5

4. FIRST AID MEASURES

EYES: Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately. *Acute symptoms after contact: inflammation/damage to eye tissue. Corrosion of the eye tissue.*

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

INHALATION: If adverse effects occur, remove to uncontaminated area. If symptoms of overexposure occur, get medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Eye exposure may cause mild irritation of the eye lids and conjuctiva.

SKIN: Exposure to powder or fine particulates of this material may cause slight skin redness, irritation.

INGESTION: No known effects.

INHALATION: Inhaling powder or fine particulates of this material may cause respiratory tract irritation and cough.

CHRONIC EFFECTS: No known effect.

NOTES TO PHYSICIAN: This material causes mild irritation to skin and eyes. Removing the material via irrigation is usually sufficient. There is no antidote. Cyanuric acid is readily removed from the body via the renal system, and is not bioaccumulated. Treatment is supportive care.

ADDITIONAL INFORMATION: Medical Conditions Aggravated by Exposure: May aggravate preexisting conditions such as eye disorders that decrease tear production or have reduced integrity of the eye; skin disorders that compromise the integrity of the skin and respiratory

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Regal Pool Care System Pool Stabilizer

conditions including asthma and other breathing disorders.

Protection of First-Aiders: Avoid contact with skin and eyes. Removing the material via irrigation is usually sufficient. There is no antidote. Cyanuric acid is readily removed from the body via the renal system, and is not bioaccumulated. Treatment is supportive care.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD: Negligible fire hazard.

EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire.

HAZARDOUS COMBUSTION PRODUCTS: Cyanic acid, ammonia, oxides of carbon, oxides of nitrogen

FIRE FIGHTING PROCEDURES: Move container from fire if feasible. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Wear NIOSH-approved positive pressure self-contained breathing apparatus.

FIRE FIGHTING EQUIPMENT: Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Collect spilled material in appropriate container for disposal. Avoid generating dust. Keep out of water supplies and sewers. Releases should be reported, if required.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Avoid runoff to waterways and sewers. Releases should be reported, if required, to appropriate agencies.

7. HANDLING AND STORAGE

HANDLING: Use methods to minimize dust. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Wear person protective equipment. (See Section 8.)

STORAGE: Store in a cool, dry, well-ventilated area away from incompatible materials (oxidizing agents).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
	EXPOSURE LIMITS			
Chemical Name	**Type**		**ppm**	**mg/m³**
Cyanuric Acid	**Supplier OEL**	**TWA**	10 mg/m3 [1]	[1]

Footnotes:
1. (Total Particulate)

ENGINEERING CONTROLS: General or local exhaust.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear chemical resistant safety goggles, if eye contact is likely. An emergency eye wash fountain may be provided.

SKIN: As a good hygiene practice, wear protective clothing to minimize skin contact such as standard industrial work clothes, coveralls, safety footwear. Contaminated clothing should be removed and laundered before reuse.

RESPIRATORY: No personal respiratory protective equipment normally required. A NIOSH approved full-face respirator equipped with N95 (dust, fume, mist) cartridges may be permissible under certain cirumstances where airborne concentrations are expected to exceed exposure limits, or when symtoms have been observed that are indicative of overexposure. In dusty or misty atmospheres use an approved partiulate respirator. A respiratory protection program that meets 29CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

PROTECTIVE CLOTHING: Wear appropriate clothing. Contaminated clothing should be removed and laundered before reuse.

OTHER USE PRECAUTIONS: Protective material types: Butyl rubber; natural rubber; neoprene; nitril; polyvinyl chloride (PVC)

COMMENTS: Even though this material is not classified as hazardous according to US OSHA's 2012 Hazard Communication Standard, good hygiene and safety practices shouls be followed. Good hygiene practices include but are not limited to: wearing suitable gloves and/or eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work

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area and clothing, etc.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

ODOR: Odorless

APPEARANCE: Off-white granular powder.

pH: 4.8

FLASHPOINT AND METHOD: Not Applicable

LOWER EXPLOSION LIMIT: 0

UPPER EXPLOSION LIMIT: 0

VAPOR PRESSURE: 0.000001 Pa @ 25 °C

VAPOR DENSITY: Not Applicable

MELTING POINT: Decomposes without melting

SOLUBILITY IN WATER: 0.2% @ 25 °C

DENSITY: 1.75 g/mL at 25°C

Notes: Bulk Density: 50-56 lbs/ft3 (loose)

SPECIFIC GRAVITY: 1.768

10. STABILITY AND REACTIVITY

REACTIVITY: Not reactive under normal temperatures and pressures.

HAZARDOUS POLYMERIZATION: Will not occur.

STABILITY: Stable at normal temperatures and pressures.

CONDITIONS TO AVOID: Avoid contact with incompatible materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Cyanic acid, ammonia, oxides of carbon, oxides of nitrogen

INCOMPATIBLE MATERIALS: Oxidizing agents.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

DERMAL LD_{50}: > 5000 mg/kg - Rabbit

ORAL LD_{50}: 3400 mg/kg (mice)

Notes: Oral LD50 7700 (rat)

INHALATION LC_{50}: > 5.25 mg/L (4 hour - rat)

GERM CELL MUTAGENICITY: Not mutagenic in 5 salmonella strains and 1 E. coli strain with or without mammalian microsomal activation.

CARCINOGENICITY

NOTES: Not classified as a carcinogen by NTP, IARC or OSHA.

REPRODUCTIVE TOXICITY: Not known or reported to cause reproductive or developmental toxicity.

GENERAL COMMENTS: This material is believed to be non-toxic by inhalation, dermal exposure and ingestion. Monosodium cyanurate was administered via drinking water to rats for 104 weeks at concentrations of 0, 400, 1200, 2400, and 5375 ppm (solubility limit). No compound-related effects on body weights, clinical signs of toxicity or food or water consumption were noted during study. An increased incidence of gross lesions in the urinary tract, calculi in the kidney and lesions in the heart were observed in males receiving the highest dose level of 5375 ppm (solubility limit). The health effects seen in this study were due to precipitation of the test substance in the urinary tract when the test substance was fed at the solubility limit. Adverse health effects were not seen at lower doses where precipitation did not occur.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY (ACUTE):

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Fish Toxicity:

- LC50 Bluegill sunfish: >1000 mg/L (96 hour)
- LC50 Rainbow Trout: >2100 mg/L (96 hour)
- LC50 Fathead minnow: >2100 mg/L (96hour)
- LC50 Inland silversides: 8000 (96 hour)

Invertebrate Toxicity:

- LC50 Water Flea: >1000 mg/L (48 hour)
- LC50 Mysid shrimp: 4438 mg/L (96 hour)

Algae Toxicity:

- EC50 Green Algae: 655-712 mg/L (96 hour)
- EC50 Navicula pelliculosa: >3780 mg/L (96 hour)

Notes: This material is believed to be non-toxic to aquatic life.

CHEMICAL FATE INFORMATION: Biodegradation: Cyanuric acid biodegrades readily under a wide variety of natural conditions, and particularly well in systems of either low or zero dissolved-oxygen levels.

Persistence: This material is believed not to persist in the environment. Cyanuric acid has an estimated Henry's Law Constant of 1.36 x 10(-18) atm-m3/mol. Atmosphere half-life is estimated to be 102 days. Cyanuric acid will have a high soil mobility based on KOC values ranging from 66 to 124.

Bioconcentration: Aquatic bioconcentration and adsorption are not expected to be important fate processes for cyanuric acid. The BCF for cyanuric acid is <0.5 at 1 mg/L for a 6-week duration.

ENVIRONMENTAL DATA: Cyanuric acid is toxic to certain plants including barley and rashishes due to acidic nature of material.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HEALTH HAZARDS: Not listed.

313 REPORTABLE INGREDIENTS: Not regulated.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Not regulated.

CERCLA RQ: No.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All ingredients are listed.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: Not regulated.

CALIFORNIA PROPOSITION 65: There are no chemicals present known to the State of California to cause cancer.

OSHA HAZARD COMM. RULE: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

16. OTHER INFORMATION

SAFETY DATA SHEET

Date Issued : 12/07/2022
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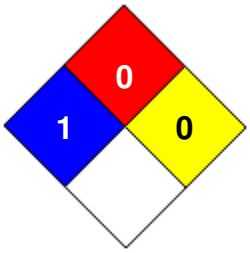
Regal Pool Care System Pool Stabilizer

Date Prepared: 12/07/2022

HMIS RATING

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA CODES



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SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER	Leslie's Swim Pool Diatomaceous Earth
CHEMICAL NAME	Diatomaceous Earth, Flux-Calcined
CHEMICAL FAMILY	Silica
MATERIAL USE	Filter Aid
RESTRICTION ON USE	None Known
MANUFACTURER	EP Minerals, LLC., 9875 Gateway Dr., Reno, NV 89521
TELEPHONE NO.	(775) 824 7600 (Monday – Friday 8:00 am PST – 5:00 pm PST)
EMERGENCY TELEPHONE NO.	(775) 824 7600 (Monday – Friday 8:00 am PST – 5:00 pm PST)
SDS DATE OF PREPARATION	June 15, 2017

SECTION 2: HAZARDS IDENTIFICATION

OSHA GHS HAZARD CLASSIFICATION	Carcinogen Category 1A Specific Target Organ Toxicity, Repeated Exposure Category 1
HAZARDS NOT OTHERWISE CLASSIFIED	None
LABEL ELEMENTS	DANGER May cause cancer by inhalation. Causes damage to lungs through prolonged or repeated exposure. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wear eye protection. If exposed or concerned: Get medical advice. Dispose of contents in accordance with local, state and federal regulations. 

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT IDENTIFICATION	APPROXIMATE CONCENTRATION (%)	C.A.S. NUMBERS
Diatomaceous Earth, Flux-Calcined (kieselguhr) (contains 35-50% Crystalline Silica - Cristobalite)	100%	68855-54-9 14464-46-1

SECTION 4: FIRST AID MEASURES

EYE	Flush eyes with generous quantities of water or eye rinse solution. Consult physician if irritation persists.
SKIN	Use moisture renewing lotions if dryness occurs.
INGESTION	Drink generous amounts of water to reduce bulk and drying effects.
INHALATION	Remove to fresh air. Blow nose to evacuate dust.
Most important symptoms/effects, acute and delayed	Dust may cause abrasive irritation to eyes. Prolonged skin contact may cause dryness. Dust may cause nose, throat and upper respiratory tract irritation. Prolonged inhalation of respirable dust containing silica may cause a progressive lung disease, silicosis and lung cancer. See Section 11 for additional information.
Indication of immediate medical attention and special treatment, if necessary	Immediate medical attention is not normally required. If dust irritates the eyes, seek medical attention.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	Not applicable, the material is not combustible.
SPECIFIC HAZARDS ARISING FROM THE CHEMICAL	Not applicable, the material is not combustible.
SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS	Not applicable, the material is not combustible.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	If dust is present, use respirator fitted with particulate filter as specified in Section 8. Protect eyes with goggles. Do not breathe dust.
ENVIRONMENTAL PRECAUTIONS	This material is not a significant environmental concern.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	Vacuum clean spillage or wet sweep. Avoid creating airborne dust. Place in a container for use or disposal.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	Minimize dust generation. Avoid contact with eyes. Do not breathe dust. Repair or dispose of broken bags. Observe all label precautions and warnings. In the U.S. refer to the OSHA Respirable Crystalline Silica Standards; 29CFR1910.1053, 1915.1053 and 1926.1053 for specific handling and use requirements.
CONDITIONS FOR SAFE STORAGE	Store in a dry place to maintain packaging integrity and product quality. Do not store near hydrofluoric acid or concentrated caustic solutions.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Component	OSHA PEL	ACGIH TLV	MSHA PEL	NIOSH REL
Diatomaceous Earth, Flux-calcined (kieselguhr)	5 mg/m^3 respirable dust 15 mg/m^3 total dust	None Established	5 mg/m^3 respirable dust 15 mg/m^3 total dust	None Established
Crystalline Silica (Cristobalite) (effective until 6/23/2017 for Construction and 6/23/2018 for General Industry and Oil and Gas)	$\frac{1}{2} \times \frac{30\ mg/m^3}{\%\ SiO_2+2}$ total dust $\frac{1}{2} \times \frac{10\ mg/m^3}{\%\ SiO_2+2}$ Respirable dust	0.025 mg/m^3 Respirable dust	$\frac{1}{2} \times \frac{30\ mg/m^3}{\%\ SiO_2+2}$ total dust $\frac{1}{2} \times \frac{10\ mg/m^3}{\%\ SiO_2+2}$ Respirable dust	0.05 mg/m^3 Respirable dust
Crystalline Silica (Cristobalite) (effective 6/23/2017 for Construction and 6/23/2018 for General Industry and Oil and Gas)	$\frac{0.05\ mg/m3}{}$ Respirable dust	0.025 mg/ m3 Respirable dust	$\frac{1 \times 30\ mg/m3}{2 \quad \%\ SiO2+2}$ total dust $\frac{1 \times 10\ mg/m3}{2 \quad \%\ SiO2+2}$ Respirable dust	0.05 mg/ m3 Respirable dust

ENGINEERING CONTROLS	Use general or local exhaust ventilation to control dust within recommended exposure limits. Refer to ACGIH publication “Industrial Ventilation” or similar publications for design of ventilation systems.
PERSONAL PROTECTIVE EQUIPMENT:	
EYE / FACE PROTECTION	Goggles to protect from dust
SKIN PROTECTION	No special equipment is needed.
RESPIRATORY PROTECTION	Respirators fitted with filters certified to standard 42CFR84 under series N95 should be worn when dust is present. If the dust concentration is less than ten (10) times the Permissible Exposure Limit (PEL) use a quarter or half-mask respirator with a N95 dust filter or a single use dust mask rated N95. If dust concentration is greater than ten (10) times and less than fifty (50) times the PEL, a full-face piece respirator fitted with replaceable N95 filters is recommended. If dust concentration is greater than fifty (50) and less than two hundred (200) times the PEL use a power air-purifying (positive pressure) respirator with a replaceable N95 filter. If dust concentration is greater than two hundred (200) times the PEL use a type C, supplied air respirator (continuous flow, positive pressure), with full face piece, hood or helmet.
GENERAL HYGIENE	Avoid breathing dust. Avoid contact with eyes. Wash hands after handling and before eating or drinking.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE, COLOR	Light pink to white powder	**ODOR**	Odorless
PHYSICAL STATE	Solid	**ODOR THRESHOLD**	Not applicable
VAPOR PRESSURE	Not applicable	**VAPOR DENSITY**	Not applicable
BOILING POINT	Not applicable	**MELTING POINT**	> 1300° C
FLASH POINT	Not applicable	**pH (10% SUSPENSION)**	10
FLAMMABILITY LIMITS	Not applicable	**EVAPORATION RATE**	Not applicable
DECOMPOSITION TEMPERATURE	> 1300° C	**SPEC. GRAVITY / RELATIVE DENSITY**	2.3
AUTOIGNITION TEMPERATURE	Not applicable	**PARTITION COEFFICIENT – n-OCTANOL/WATER**	Not applicable
FLAMMABILITY (solid/gas)	Not applicable	**SOLUBILITY – WATER**	< 1%
		VISCOSITY	Not applicable

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY	Material is not reactive.
CHEMICAL STABILITY	Material is stable.
POSSIBILITY OF HAZARDOUS REACTIONS	Material is not reactive under normal conditions of handling unless mixed with incompatible substances below.
CONDITIONS TO AVOID	Not applicable
INCOMPATIBLE MATERIALS	Hydrofluoric acid and concentrated caustic solutions may react violently with the product.
HAZARDOUS DECOMPOSITION PRODUCTS	Not applicable

SECTION 11: TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS	
Likely Routes of Exposure	See below
EYE	May cause irritation (tear formation and redness) if dust gets in eyes.
SKIN	Not absorbed by the skin, but may cause dryness if prolonged exposure.
INGESTION	Ingestion of small quantities is not considered harmful, but may cause irritation of the mouth, throat and stomach.
INHALATION	Acute inhalation can cause dryness of the nasal passage and lung congestion, coughing and general throat irritation. Acute inhalation of high concentrations of respirable crystalline silica may cause acute silicosis.
CHRONIC EFFECTS	This product contains crystalline silica. Respirable crystalline silica may cause lung cancer and lung disease (silicosis) if inhaled for prolonged periods. Symptoms of silicosis include wheezing, cough and shortness of breath.
CARCINOGENICITY	Flux-calcined diatomaceous earth (Kieselguhr) is composed of amorphous and crystalline silica. Respirable crystalline silica (cristobalite) is classified by IARC and NTP as a known human carcinogen. Crystalline silica is only known to cause cancer when inhaled in a respirable form. It is not known to cause cancer by any other route of exposure.
NTP	Respirable crystalline silica (cristobalite) is classified as a known human carcinogen.
IARC	Respirable crystalline silica (cristobalite) is classified as a known human carcinogen.
NUMERICAL MEASURES OF TOXICITY	No data available
CORROSIVENESS, SENSITIZATION, IRRITANCY	Not applicable

REPRODUCTIVE TOXICITY	Not available
TERATOGENICITY, MUTAGENICITY	Not available

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:	Diatomaceous earth products have shown some efficacy as a natural insecticide, but otherwise have no demonstrated toxicity in regards to aquatic or terrestrial life.
PERSISTENCE AND DEGRADABILITY	Non-biodegradable, inert.
BIOACCUMULATIVE POTENTIAL	Little potential for bioaccumulation
MOBILITY IN SOIL	No mobility
OTHER ADVERSE EFFECTS	None known

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL	If this material as supplied becomes a waste, use solid waste disposal common to landfill type operations or in slurry to sumps. Not considered a hazardous waste under RCRA (4OCFR Part 261).
PACKAGING DISPOSAL	Dispose of in accordance with applicable laws and regulations, typically solid waste disposal common to landfill type operations.

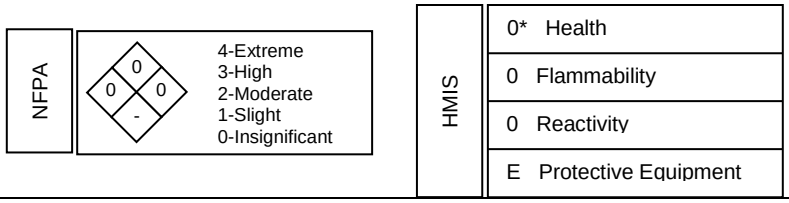
SECTION 14: TRANSPORT INFORMATION

BASIC SHIPPING INFORMATION	DOT shipping classification 55 (no restrictions). Technical name is “Diatomaceous Earth”.
ADDITIONAL INFORMATION	No special requirements or placarding necessary.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL:	
TSCA	Diatomaceous Earth and Cristobalite appear on the EPA TSCA inventory list.
CERCLA	Diatomaceous Earth is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR 302.
SARA TITLE III	Not listed.
California Proposition 65:	This product contains crystalline silica, a chemical known to the State of California to cause cancer.
INTERNATIONAL:	
WHMIS Classification	Class D-2-A
WHMIS Ingredient Disclosure List	Silica, crystalline, cristobalite

SECTION 16: OTHER INFORMATION



ORIGINAL ISSUE DATE	November 18, 1985
REVISION DATE	June 15, 2017
REVISION NO.	14

Disclaimer: As of the date of the preparation of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state laws. No warranty, representation or guaranty of any kind, express or implied, is hereby provided or intended with respect to the completeness of the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by the purchase, resale, use or exposure to our product. Customer users of silica must comply with all applicable health and safety laws, regulations and orders, including OSHA Hazardous Communication Standard.

SAFETY DATA SHEET

According to 29 CFR 1910.1200 Hazard Communication Standard 2012 (HazCom 2012)

Revision: 11/11/2021

SECTION 1: Identification

Product identifier

Product name	DPD Reagent #1
Product number	R-0001; R-0001-PL
Recommended use and restrictions	Water analysis. To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer	Taylor Technologies, Inc. 31 Loveton Circle Sparks, MD 21152 Local: (410) 472-4340 – 8am – 5pm EST Toll-free: (800) 837-8548 – 8am – 5pm EST
Emergency phone number	
CHEMTREC, United States	1-800-424-9300 – 24-hour service
CHEMTREC, International	+1 703-741-5970 – 24-hour service

SECTION 2: Hazard(s) Identification

Physical hazards	Not classified
Health hazards	Not classified
Environmental hazards	Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.
Label elements	
Hazard pictograms	Not applicable
Signal word	Not applicable
Hazard statements	The mixture does not meet the criteria for classification.
Precautionary statements	
Prevention	Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.
Response	This reagent is not defined as a hazardous chemical per OSHA's Hazard Communication Standard 2012; however, use care when handling.
Storage	Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazards not otherwise classified	Not applicable

SECTION 3: Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	% w/w
Water	Dihydrogen oxide	7732-18-5	80-100
Non-hazardous components	Not applicable	Not applicable	7-13

SECTION 4: First-Aid Measures

If inhaled

Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

If swallowed

Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Direct skin or eye contact may cause irritation. Symptoms may include redness or itching. Tearing of the eyes or blurred vision may occur. Inhalation may cause respiratory irritation, such as coughing. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Refer to section 11 of the SDS for delayed and immediate effects and chronic effects from short- and long-term exposure.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting Measures

Extinguishing media

Suitable extinguishing media	Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture

Fire hazard	Not flammable
Explosion hazard	Not explosive
Reactivity	Hazardous reactions will not occur under normal conditions.
Hazardous combustion products	Phosphorous oxides, potassium oxides, sodium oxides. During fire, gases hazardous to health may be formed.

Advice for firefighters

Precautionary measures	Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions	Use water spray or fog for cooling exposed containers.
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up

Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of large spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections

For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and Storage

Personal precautions, protective equipment, and emergency procedures

Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure Controls/Personal Protection

Occupational exposure limits

No exposure limits noted for the ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Personal protective equipment	
Eye/face protection	Wear appropriate safety glasses with side shields (or goggles) if contact is likely to occur.
Skin protection	Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection	Wear appropriate protective clothing if contact is likely to occur.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Liquid
Form	Liquid
Color	Clear, colorless or nearly colorless
Odor	Odorless
Odor threshold	No data available
pH	10
Evaporation rate	No data available
Melting point	No data available
Freezing point	No data available
Initial boiling point (boiling range)	No data available
Flash point	Not applicable
Specific gravity	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Not applicable
Upper Flammability Limit	No data available
Lower Flammability Limit	No data available
Vapor pressure	No data available
Vapor density	No data available
Solubility	Soluble in all proportions
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

SECTION 10: Stability and Reactivity

Reactivity	Hazardous reactions will not occur under normal conditions of use, storage and transport.
Chemical stability	Stable under recommended handling and storage conditions (refer to section 7 of the SDS).
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong acids, strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products known.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical, and toxicological characteristics Refer to section 4 of the SDS for most important symptoms and effects.

Delayed and immediate effects and chronic effects from short- and long-term exposure

Acute toxicity This product is not classified as an acute toxicity hazard.

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

Respiratory sensitization No data available

Skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

US National Toxicology Program (NTP) Report on Carcinogens

Not listed

Reproductive toxicity No data available

Specific target organ toxicity (single exposure) No data available

Specific target organ toxicity (repeated exposure) No data available

Aspiration hazard No data available

SECTION 12: Ecological Information

Ecotoxicity This product is not classified as environmentally hazardous.

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

Other adverse effects Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal Considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport Information

DOT Not regulated as dangerous goods

IATA Not regulated as dangerous goods

IMDG Not regulated as dangerous goods

SECTION 15: Regulatory Information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

TSCA Section 8(b) Chemical Inventory

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Clean Water Act, Toxic and Priority Pollutants (40 CFR 401.15 and CFR 423, Appendix A)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)

Not regulated

Massachusetts Right-to-Know Act

Not regulated

New Jersey Worker and Community Right-to-Know Act

Not regulated

Pennsylvania Worker and Community Right-to-Know Act

Not regulated

Rhode Island Right-to-Know Act

Not regulated

SECTION 16: Other Information

NFPA Rating

Health hazard	0
Fire hazard	0
Reactivity	0
Specific	N/A

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

License granted to make unlimited paper copies for internal use only. This Safety Data Sheet may not be altered in any way without the expressed knowledge and permission of Taylor Technologies, Inc. The information contained in this sheet is based on lab experience and the most current data available.

Issue date:

May 2015

Revision date:

11/11/2021

Revision information:

This document embodies significant change(s) that may impact classification, safe handling, or health information for the associated product(s). The information contained herein should be reviewed in its entirety before handling material.

Hazard identification: label

Supersedes revision dated 05/14/2021.

SAFETY DATA SHEET

According to 29 CFR 1910.1200 Hazard Communication Standard 2012 (HazCom 2012)

Revision: 10/2/2023

SECTION 1: Identification

Product identifier

Product name	DPD Reagent #2
Product number	R-0002; R-0002-PL
Recommended use and restrictions	Water analysis. To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer	Taylor Water Technologies LLC 31 Loveton Circle Sparks, MD 21152 Local: (410) 472-4340 – 8am – 5pm EST Toll-free: (800) 837-8548 – 8am – 5pm EST
Emergency phone number	
CHEMTREC, United States	1-800-424-9300 – 24-hour service
CHEMTREC, International	+1 703-741-5970 – 24-hour service

SECTION 2: Hazard(s) Identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Eye damage/irritation	Category 1
	Skin corrosion/irritation	Category 1C

Environmental hazards Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements

Hazard pictograms

Signal word	Danger
Hazard statements	Causes severe skin burns and serious eye damage. May be corrosive to metals.
Precautionary statements	
Prevention	Do not breathe mist or vapor. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur. Keep only in original container.
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a physician or poison control center. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (OR HAIR): Immediately take off all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a physician or poison control center. Absorb spillage to prevent material damage.
Storage	Store locked up. Store in corrosive-resistant container with corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified Not applicable

Supplemental information Do not use if solution is dark pink.

SECTION 3: Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	% w/w
Water	Dihydrogen oxide	7732-18-5	80-100
Confidential	Not applicable	Not applicable	5–10

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First-Aid Measures

If inhaled

Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical attention if irritation develops. Chemical burns must be treated by a physician.

In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

If swallowed

Immediately call a physician or poison control center. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

Most important symptoms and effects, both acute and delayed

Direct skin or eye contact may cause corrosive burns. Symptoms may include pain, redness or swelling. Scarring or permanent damage, including blindness, could result. Inhalation may cause severe respiratory irritation, such as coughing and wheezing. Inhalation could result in pulmonary edema, symptoms—chest pain, shortness of breath—may be delayed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, and bleeding.

Refer to section 11 of the SDS for delayed and immediate effects and chronic effects from short- and long-term exposure.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.

General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting Measures

Extinguishing media

Suitable extinguishing media	Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture

Fire hazard	Not flammable
Explosion hazard	Not explosive
Reactivity	May be corrosive to metals.
Hazardous combustion products	Carbon oxides, nitrogen oxides, phosphorous oxides, sulfur oxides.

Advice for firefighters

Precautionary measures	Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions	Use water spray or fog for cooling exposed containers.
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up

Ventilate the area. Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water to remove residual contamination. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of large spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections

For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and Storage

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in corrosive-resistant container with corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure Controls/Personal Protection

Occupational exposure limits

No occupational exposure limits noted for the ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.
Personal protective equipment	
Eye/face protection	Wear appropriate chemical safety goggles or safety glasses with side shields.
Skin protection	Wear appropriate chemical-resistant gloves and clothing.
Body protection	Wear appropriate protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Liquid
Form	Liquid
Color	Clear, colorless to faint pink
Odor	Odorless
Odor threshold	No data available
pH	1
Evaporation rate	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	Not applicable
Specific gravity	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available

Flammability (solid, gas)	Not applicable
Upper Flammability Limit	No data available
Lower Flammability Limit	No data available
Vapor pressure	No data available
Relative vapor density	No data available
Solubility	Soluble in all proportions
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

SECTION 10: Stability and Reactivity

Reactivity	May be corrosive to metals.
Chemical stability	Stable under recommended handling and storage conditions (refer to section 7 of the SDS).
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Strong bases, strong oxidizing agents. Metals. Metal nitrates.
Hazardous decomposition products	No hazardous decomposition products known.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Inhalation	Avoid inhalation of this product. Use in a well-ventilated area.
Skin contact	Protect exposed skin from contact. Use caution to avoid splashes.
Eye contact	Avoid close eye contact; Use caution to avoid splashes. Wear eye protection.
Ingestion	Avoid accidental ingestion by observing good hygiene practices. Wash hands thoroughly after handling this product.
Symptoms related to the physical, chemical, and toxicological characteristics	Corrosive skin/eye damage may occur. Refer to section 4 of the SDS for most important symptoms and effects.

Delayed and immediate effects and chronic effects from short- and long-term exposure

Acute toxicity	This product is not classified as an acute toxicity hazard.
Skin corrosion/irritation	Causes severe skin burns.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory sensitization	No data available
Skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available

IARC Monographs. Overall Evaluation of Carcinogenicity

Not classified

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

US National Toxicology Program (NTP) Report on Carcinogens

Not classified

Reproductive toxicity	No data available
Specific target organ toxicity (single exposure)	No data available
Specific target organ toxicity (repeated exposure)	No data available
Aspiration hazard	No data available

SECTION 12: Ecological Information

Ecotoxicity	This product is not classified as environmentally hazardous.
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal Considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations. RCRA waste code: D002

SECTION 14: Transport Information

DOT

UN number	UN3265
UN Proper shipping name	Corrosive liquid, acidic, organic, N.O.S (Phosphorous-based organic acid)
Reportable Quantity	None
Class (Subsidiary risk)	8
Label(s)	8
Packing group	III
Special provisions	386, IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging, non-bulk	203

IATA

UN number	UN3265
UN Proper shipping name	Corrosive liquid, acidic, organic, N.O.S (Phosphorous-based organic acid)
Class (Subsidiary risk)	8
Packing group	III
Special provisions	A3, A803

IMDG

UN number	UN3265
UN Proper shipping name	Corrosive liquid, acidic, organic, N.O.S (Phosphorous-based organic acid)
Class (Subsidiary risk)	8
Packing group	III
Environmental hazards	
Marine pollutant	No
Special provisions	223, 274
EmS	F-A, S-B

Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This substance/mixture is not intended to be transported in bulk.

DOT hazard pictograms

IATA; IMDG hazard pictograms

SECTION 15: Regulatory Information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

SARA 311/312 Hazardous Chemical

Refer to section 2 of the SDS for GHS Hazard Classifications applicable for this product.

SARA 313 (TRI reporting)

Not regulated

TSCA Section 8(b) Chemical Inventory

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)

Not regulated

Massachusetts Right-to-Know Act

Not regulated

New Jersey Worker and Community Right-to-Know Act

Not regulated

Pennsylvania Worker and Community Right-to-Know Act

Not regulated

Rhode Island Right-to-Know Act

Not regulated

SECTION 16: Other Information

NFPA Rating

Health hazard	3
Fire hazard	0
Reactivity	0
Specific	N/A

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Water Technologies LLC disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

Issue date:
May 2015

Revision date:
10/2/2023

Revision information:
This document embodies significant change(s) that may impact classification, safe handling, or health information for the associated product(s). The information contained herein should be reviewed in its entirety before handling material.

Identification: Manufacturer information
Disposal considerations: RCRA waste code

Supersedes revision dated 11/11/2021.

SAFETY DATA SHEET

According to 29 CFR 1910.1200 Hazard Communication Standard 2012 (HazCom 2012)

Revision: 05/14/2021

SECTION 1: Identification

Product identifier

Product name	DPD Reagent #3
Product number	R-0003; R-0003-PL
Recommended use and restrictions	Water analysis. To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer	Taylor Technologies, Inc. 31 Loveton Circle Sparks, MD 21152 Local: (410) 472-4340 – 8am – 5pm EST Toll-free: (800) 837-8548 – 8am – 5pm EST
Emergency phone number	
CHEMTREC, United States	1-800-424-9300 – 24-hour service
CHEMTREC, International	+1 703-741-5970 – 24-hour service

SECTION 2: Hazard(s) Identification

Physical hazards	Not applicable
Health hazards	Specific target organ toxicity, repeated exposure, oral Category 1 (thyroid)
Environmental hazards	Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements

Hazard pictograms

Signal word	Danger
Hazard statements	Causes damage to thyroid through prolonged or repeated exposure, oral route.
Precautionary statements	
Prevention	Do not breathe dust/fumes/gas/mists/vapors/spray. Wash skin thoroughly after handling. Do not eat, drink, or smoke when using this product.
Response	IF EXPOSED OR CONCERNED: Get medical advice/attention if you feel unwell.
Storage	Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazards not otherwise classified	Not applicable

SECTION 3: Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	% w/w
Water	Dihydrogen Oxide	7732-18-5	60-80
Potassium Iodide	Hydriodic Acid, Potassium Salt	7681-11-0	15-40

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First-Aid Measures

If inhaled

Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue

rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

If swallowed

Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Direct skin or eye contact may cause irritation. Symptoms may include redness or itching. Tearing of the eyes or blurred vision may occur. Inhalation may cause respiratory irritation, such as coughing. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Refer to section 11 of the SDS for delayed and immediate effects and chronic effects from short- and long-term exposure.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting Measures

Extinguishing media

Suitable extinguishing media	Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture

Fire hazard	Not flammable
Explosion hazard	Not explosive
Reactivity	Hazardous reactions will not occur under normal conditions.
Hazardous combustion products	Carbon oxides, hydrogen iodide, iodide fumes, iodine oxides, potassium oxide. During fire, gases hazardous to health may be formed.

Advice for firefighters

Precautionary measures	Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions	Use water spray or fog for cooling exposed containers.
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up

Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of large spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections

For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and Storage

Personal precautions, protective equipment, and emergency procedures

Do not breathe dust or mist. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure Controls/Personal Protection

Occupational exposure limits

US ACGIH Threshold Limit Values

Components	Type	Value
Potassium Iodide (CAS 7681-11-0)	TWA	0.01 ppm

US NIOSH: Pocket Guide to Chemical Hazards

Not regulated

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Not regulated

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Personal protective equipment	
Eye/face protection	Wear appropriate safety glasses with side shields (or goggles) if contact is likely to occur.
Skin protection	Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection	Wear appropriate protective clothing if contact is likely to occur
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Liquid
Form	Liquid
Color	Clear, colorless to slightly yellow
Odor	Odorless
Odor threshold	No data available
pH	10
Evaporation rate	No data available
Melting point	No data available
Freezing point	No data available
Initial boiling point (boiling range)	No data available
Flash point	Not applicable
Specific gravity	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Not applicable
Upper Flammability Limit	No data available
Lower Flammability Limit	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility	No data available
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Explosive properties	Not explosive

Oxidizing properties	Not oxidizing

SECTION 10: Stability and Reactivity

Reactivity	Hazardous reactions will not occur under normal conditions of use, storage and transport.
Chemical stability	Stable under recommended handling and storage conditions (refer to section 7 of the SDS).
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Strong acids. Strong oxidizing agents. Fluorine perchlorate, mercurous chloride, metals.
Hazardous decomposition products	No hazardous decomposition products known.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Inhalation	Avoid inhalation of this product. Use in a well-ventilated area.
Skin contact	Protect exposed skin from contact. Use caution to avoid splashes.
Eye contact	Avoid close eye contact; Use caution to avoid splashes. Wear eye protection.
Ingestion	Avoid accidental ingestion by observing good hygiene practices. Wash hands thoroughly after handling this product.
Symptoms related to the physical, chemical, and toxicological characteristics	Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms of exposure include skin rash, running nose, headache, and irritation of the mucous membrane. In severe cases, skin may show pimples, boils, hives, blisters, and black and blue spots. Refer to section 4 of the SDS for most important symptoms and effects.

Delayed and immediate effects and chronic effects from short- and long-term exposure

Acute toxicity	This product is not classified as an acute toxicity hazard.
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory sensitization	No data available
Skin sensitization	No data available
Germ cell mutagenicity	No data available

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not classified

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

US National Toxicology Program (NTP) Report on Carcinogens

Not classified

Reproductive toxicity	No data available
Specific target organ toxicity (single exposure)	No data available
Specific target organ toxicity (repeated exposure)	Causes damage to thyroid through prolonged or repeated exposure, oral route.
Aspiration hazard	No data available

SECTION 12: Ecological Information

Ecotoxicity	This product is not classified as environmentally hazardous.
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal Considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport Information

DOT	Not regulated as dangerous goods
IATA	Not regulated as dangerous goods
IMDG	Not regulated as dangerous goods

SECTION 15: Regulatory Information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

SARA 311/312 Hazardous Chemical

Chemical name	CAS number
Potassium Iodide	7681-11-0

SARA 313 (TRI reporting)

Not regulated

TSCA Section 8(b) Chemical Inventory

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

Clean Air Act (CAA) Section 112® Accidental Release Prevention (40 CFR 68.130)

Not regulated

Clean Water Act, Toxic and Priority Pollutants (40 CFR 401.15 and CFR 423, Appendix A)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)

Not regulated

Massachusetts Right-to-Know Act

Not regulated

New Jersey Worker and Community Right-to-Know Act

Not regulated

Pennsylvania Worker and Community Right-to-Know Act

Not regulated

Rhode Island Right-to-Know Act

Not regulated

SECTION 16: Other Information

NFPA Rating

Health hazard	2
Fire hazard	0

Reactivity	0
Specific	N/A

Disclaimer

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 The information contained in this sheet is based on lab experience and the most current data available.

Issue date:

May 2015

Revision date:

05/14/2021

Revision information:

This document embodies significant change(s) that may impact classification, safe handling, or health information for the associated product(s). The information contained herein should be reviewed in its entirety before handling material.

SAFETY DATA SHEET

1. Identification

Product identifier **pH Indicator Solution (Phenol Red)**

Product code R-0004

Recommended use Use as directed by manufacturer for purposes directly related to water testing.

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.

Address 31 Loveton Circle
Sparks, MD 21152
United States

Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.

Website www.taylortechnologies.com

E-mail Not available

Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Health hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Environmental hazards Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements None required

Signal word None required

Hazard statement None required

Precautionary statement

Prevention None required

Response None required

Storage None required

Disposal None required

Hazard(s) not otherwise classified None

Supplemental information None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Deionized water	Dihydrogen oxide	7732-18-5	90–99
Trade secret			0.1–5
Other components below reportable levels			0.1–5

4. First-aid measures

Inhalation Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.

Skin contact	Immediately wash skin with soap and water. If symptoms persist or in all cases of concern, seek medical advice.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.
Ingestion	Treat symptomatically. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If symptoms persist or in all cases of concern, seek medical advice.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted
Hazardous combustion products	Carbon oxides. Sulfur oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water. Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental precautions	Avoid discharge into drains, water courses, or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS). Protect against physical damage. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits

U.S. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Trade secret	PEL	22 mg/m^3 5 ppm	Not applicable

U.S. ACGIH Threshold Limit Values

Components	Type	Value	Form
Trade secret	TWA	20 mg/m^3	Inhalable fraction and vapor

Biological limit values No biological exposure limits noted for the ingredient(s)

Exposure guidelines

California OELs: Skin designation

Trade secret — Can be absorbed through skin

Minnesota Hazardous Substance: Skin designation

Trade secret — Skin designation applies

Tennessee OELs: Skin designation

Trade secret — Can be absorbed through skin

U.S. ACGIH Threshold Limit Values: Skin designation

Trade secret — Can be absorbed through skin

OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Trade secret — Can be absorbed through skin

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.

Skin protection

Hand protection Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

Other Wear appropriate chemical-resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

Thermal hazards When necessary, wear appropriate thermal protective clothing.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination. Avoid breathing mist or vapor.

9. Physical and chemical properties

Appearance

Physical state Liquid

Form Liquid

Color Clear red

Odor Phenolic

Odor threshold Not available

pH 7.7

Melting point/freezing point	Not available
Initial boiling point and boiling range	212°F (100°C)
Flash point	Not applicable (does not burn)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit, lower (%)	Not applicable
Flammability limit, upper (%)	Not applicable
Explosive limit, lower (%)	Not applicable
Explosive limit, upper (%)	Not applicable
Vapor pressure	17 mm Hg
Vapor density	0.6
Relative density	1.00 g/cm^3
Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	98%
Specific gravity	1.00

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Oxidizing agents
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system
Skin contact	May cause slight or mild transient irritation
Eye contact	May cause temporary irritation
Ingestion	May cause discomfort
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Acute toxicity This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Trade secret		
Acute		
Dermal		
LD_{50}	Rabbit	2050 mg/kg
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	242 mg/kg
Deionized water (CAS 7732-18-5)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation May cause slight or mild transient irritation

Serious eye damage/eye irritation May cause temporary irritation

Respiratory sensitization Not expected to be a respiratory sensitizer

Skin sensitization Not expected to be a skin sensitizer

Germ cell mutagenicity Not expected to be mutagenic

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, OSHA, U.S. ACGIH.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity, single exposure Not classified as a specific target organ toxicity – single exposure

Specific target organ toxicity, repeated exposure Not classified as a specific target organ toxicity – repeated exposure

Aspiration toxicity Not expected to be an aspiration hazard

Chronic effects Frequent or prolonged contact may dry the skin, leading to discomfort and dermatitis.

12. Ecological information

Ecotoxicity This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability Not available

Bioaccumulative potential Not available

Partition coefficient n-octanol / water (log K_{ow})

Trade secret 1.96

Mobility in soil High water solubility indicates a high mobility in soil.

Other adverse effects No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.

Waste from residues/unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

Not regulated as dangerous goods

IATA

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This mixture is not intended to be transported in bulk.

15. Regulatory information

U.S. federal regulations

This product is not known to be a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Trade secret

SARA 304 Emergency Release Notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard – yes
Delayed hazard – no
Fire hazard – no
Pressure hazard – no
Reactivity hazard – no

SARA 302 Extremely Hazardous Substance

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAP)

Trade secret

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed

Massachusetts Right-to-Know Act

Trade secret

New Jersey Worker and Community Right-to-Know Act

Trade secret

Pennsylvania Worker and Community Right-to-Know Act

Trade secret

Rhode Island Right-to-Know Act

Trade secret

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	no
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	no
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	no
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List

NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits
PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery Act
RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

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Issue date April 2015

Last revision April 2015

SAFETY DATA SHEET

1. Identification

Product identifier **Acid Demand Reagent (ADR)**

Product code R-0005

Recommended use Use as directed by manufacturer for purposes directly related to water testing.

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.

Address 31 Loveton Circle
Sparks, MD 21152
United States

Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.

Website www.taylortechnologies.com

E-mail Not available

Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Eye damage/irritation	Category 1
	Skin corrosion/irritation	Category 1C
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

Environmental hazards Not currently regulated by OSHA; refer to section 12 of the SDS for additional information.

Label elements

Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary statement

Prevention Keep only in original container. Do not breathe mist or vapor. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response Absorb spillage to prevent material damage.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water.

Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Immediately call a physician or poison control center.

Storage Store locked up. Store in a corrosive-resistant container with a corrosive-resistant liner.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified	May cause pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract.
Supplemental information	None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Deionized water	Dihydrogen oxide	7732-18-5	95–99
Sulfuric acid	Hydrogen sulfate; Oil of vitriol	7664-93-9	0.1–5

4. First-aid measures

Inhalation	Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.
Skin contact	Immediately flush skin with running water for at least 20 minutes. Immediately take off all contaminated clothing. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Not combustible; however, the product can react with metals to form flammable and explosive hydrogen gas.

Hazardous combustion products Sulfur oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water.

Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Dilute acid with water and neutralize with dilute base. If not recoverable, dilute with water or flush to holding area and neutralize. Contaminated absorbent material may pose the same hazards as the spilled product.

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental precautions Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage

Precautions for safe handling Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from metals and other incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities Store locked up. Store in corrosive-resistant container with a corrosive-resistant inner liner. Store in original tightly closed container. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Sulfuric acid (CAS 7664-93-9)	PEL	1 mg/m^3	Not applicable

U.S. ACGIH Threshold Limit Values

Components	Type	Value	Form
Sulfuric acid (CAS 7664-93-9)	TWA	0.2 mg/m^3	Thoracic fraction

U.S. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Sulfuric acid (CAS 7664-93-9)	TWA	1 mg/m^3	Not applicable

Biological limit values No biological exposure limits noted for the ingredient(s)

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.

Skin protection

Hand protection Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

Other Wear appropriate chemical-resistant clothing.

Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.
Thermal hazards	When necessary, wear appropriate thermal protective clothing.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination.

9. Physical and chemical properties

Appearance	
Physical state	Liquid
Form	Liquid
Color	Clear, colorless, or nearly colorless
Odor	Odorless
Odor threshold	Not available
pH	1.3
Melting point/freezing point	Not available
Initial boiling point and boiling range	212°F (100°C)
Flash point	Not applicable (does not burn)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit, lower (%)	Not applicable
Flammability limit, upper (%)	Not applicable
Explosive limit, lower (%)	Not applicable
Explosive limit, upper (%)	Not applicable
Vapor pressure	17 mm Hg
Vapor density	0.6
Relative density	1.00 g/cm^3
Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	100%
Specific gravity	1.00

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, transport.
Chemical stability	Material is stable under normal conditions. Decomposes at ~ 644°F (340°C) to form sulfur trioxide.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Direct sunlight. Do not use in areas without adequate ventilation.
Incompatible materials	Metal compounds. Nitromethane. Oxidizing agents. Sugars.
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system
Skin contact	Causes severe skin burns
Eye contact	Causes serious eye damage
Ingestion	Causes digestive tract burns

Most important symptoms/effects, acute and delayed

Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.

Acute toxicity

This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Sulfuric acid (CAS 7664-93-9)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	0.375 mg/L, 4 hours (mist)
Oral		
LD_{50}	Rat	2140 mg/kg
Deionized water (CAS 7732-18-5)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage
Serious eye damage/eye irritation	Causes serious eye damage
Respiratory sensitization	Not expected to be a respiratory sensitizer
Skin sensitization	Not expected to be a skin sensitizer
Germ cell mutagenicity	Not expected to be mutagenic

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, OSHA, or U.S. ACGIH. Occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans. The information located is insufficient to conclude that sulfuric acid itself is a carcinogen. IARC has concluded there is sufficient evidence that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans (Group 1). ACGIH has designated strong inorganic acid mists containing sulfuric acid as A2 (suspected human carcinogen). NTP has listed strong inorganic acid mists containing sulfuric acid as a known human carcinogen. These classifications are for inorganic acid mists containing sulfuric acid and do not apply to sulfuric acid or sulfuric acid solutions.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity, single exposure May cause respiratory irritation

Specific target organ toxicity, repeated exposure Not classified as a specific target organ toxicity – repeated exposure

Aspiration toxicity Not expected to be an aspiration hazard

Chronic effects Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

12. Ecological information

Ecotoxicity This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Sulfuric acid (CAS 7664-93-9) – Aquatic		
Acute		
Algae		
EC_{50}	Green algae *(Pseudokirchneriella subcapitata)*	>100 mg/L, 72 hours
Crustacea		
EC_{50}	Water flea *(Daphnia magna)*	29 mg/L, 24 hours
Fish		
LC_{50}	Bluegill *(Lepomis macrochirus)*	16–28 mg/L, 96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil High water solubility indicates a high mobility in soil.

Other adverse effects No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose of in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose of in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.

Waste from residues/unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

UN number UN3264

UN proper shipping name Corrosive liquid, acidic, inorganic, N.O.S. (Sulphuric acid)

Transport hazard class(es)

Class 8

Subsidiary risk	Not listed
Label(s)	8
Packing group	III
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging, non-bulk	203
Packaging, bulk	241

IATA

UN number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, N.O.S. (Sulphuric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	Not listed
Packing group	III
Environmental hazards	Not listed
ERG code	8L
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed
Cargo aircraft only	Allowed

IMDG

UN number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, N.O.S. (Sulphuric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	Not listed
Packing group	III
Environmental hazards	
Marine pollutant	Not listed
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This substance/mixture is not intended to be transported in bulk.

DOT

IATA; IMDG

15. Regulatory information

U.S. federal regulations

This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Sulfuric acid (CAS 7664-93-9)

SARA 304 Emergency Release Notification

Sulfuric acid (CAS 7664-93-9) 1000 lb.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard – yes
Delayed hazard – no
Fire hazard – no
Pressure hazard – no
Reactivity hazard – yes

SARA 302 Extremely Hazardous Substance

Chemical name	CAS number	Reportable quantity (lb.)	Threshold planning quantity (lb.)	Threshold planning quantity lower value	Threshold planning quantity upper value
Sulfuric acid	7664-93-9	1000	1000	Not applicable	Not applicable

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Chemical name	CAS number	% by weight
Sulfuric acid	7664-93-9	0.1–5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Sulfuric acid (CAS 7664-93-9)

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Sulfuric acid (CAS 7664-93-9) 6552

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Sulfuric acid (CAS 7664-93-9) 20% W/V

DEA Exempt Chemical Mixtures Code Number

Sulfuric acid (CAS 7664-93-9) 6552

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Sulfuric acid (CAS 7664-93-9)

New Jersey Worker and Community Right-to-Know Act

Sulfuric acid (CAS 7664-93-9)

Pennsylvania Worker and Community Right-to-Know Act

Sulfuric acid (CAS 7664-93-9)

Rhode Island Right-to-Know Act

Sulfuric acid (CAS 7664-93-9)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

California Proposition 65 - CRT: Listed date/carcinogenic substance

Sulfuric acid (CAS 7664-93-9) This product is not an inorganic acid mist containing sulfuric acid; therefore, the Proposition 65 statement does not apply.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	yes
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	yes
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits

PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery
Act RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

Issue date May 2015

Last revision May 2015

SAFETY DATA SHEET

1. Identification

Product identifier **Base Demand Reagent (BDR)**

Product code R-0006

Recommended use Use as directed by manufacturer for purposes directly related to water testing.

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.

Address 31 Loveton Circle
Sparks, MD 21152
United States

Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.

Website www.taylortechnologies.com

E-mail Not available

Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Health hazards Eye damage/irritation Category 2A

Environmental hazards Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements

Signal word Warning

Hazard statement Causes serious eye irritation

Precautionary statement

Prevention Wash skin thoroughly after handling. Wear eye protection/face protection.

Response IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Storage None required

Disposal None required

Hazard(s) not otherwise classified None

Supplemental information None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Deionized water	Dihydrogen oxide	7732-18-5	95–99
Sodium carbonate	Soda ash; Bisodium carbonate	497-19-8	0.1–5

4. First-aid measures

Inhalation	Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.
Skin contact	Immediately wash skin with soap and water. If symptoms persist or in all cases of concern, seek medical advice.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.
Ingestion	Treat symptomatically. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If symptoms persist or in all cases of concern, seek medical advice.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted
Hazardous combustion products	Carbon oxides. Sodium oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water. Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental precautions	Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in corrosive-resistant container with a corrosive-resistant inner liner. Store in original tightly closed container. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No occupational exposure limits noted for the ingredient(s)
Biological limit values	No biological exposure limits noted for the ingredient(s)
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.
Skin protection	
Hand protection	Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.
Other	Wear appropriate chemical-resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.
Thermal hazards	When necessary, wear appropriate thermal protective clothing.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination.

9. Physical and chemical properties

Appearance	
Physical state	Liquid
Form	Liquid
Color	Clear colorless or nearly colorless
Odor	Odorless
Odor threshold	Not available
pH	11.2
Melting point/freezing point	Not available
Initial boiling point and boiling range	212°F (100°C)
Flash point	Not applicable (does not burn)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit, lower (%)	Not applicable
Flammability limit, upper (%)	Not applicable
Explosive limit, lower (%)	Not applicable
Explosive limit, upper (%)	Not applicable

Vapor pressure	17 mm Hg
Vapor density	0.6
Relative density	1.00 g/cm^3
Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	99%
Specific gravity	1.00

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Aluminum. Ammonia. Fluorine. Lithium. Phosphorous pentoxide. Silver nitrate. Strong acids.
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system
Skin contact	May cause slight or mild transient irritation
Eye contact	May cause serious eye irritation
Ingestion	May cause irritation, nausea, vomiting, and diarrhea
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Acute toxicity	This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Sodium carbonate (CAS 497-19-8)		
Acute		
Dermal		
LD_{50}	Rabbit	>2000 mg/kg
Inhalation		
LC_{50}	Rat	2.3 mg/L, 4 hours (dust)
Oral		
LD_{50}	Rat	2800 mg/kg

Deionized water (CAS 7732-18-5)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation Causes skin irritation

Serious eye damage/eye irritation Causes severe eye irritation

Respiratory sensitization Not expected to be a respiratory sensitizer

Skin sensitization Not expected to be a skin sensitizer

Germ cell mutagenicity Not expected to be mutagenic

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, OSHA, or U.S. ACGIH.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity, single exposure Not classified as a specific target organ toxicity – single exposure

Specific target organ toxicity, repeated exposure Not classified as a specific target organ toxicity – repeated exposure

Aspiration toxicity Not expected to be an aspiration hazard

Chronic effects Frequent or prolonged contact may dry the skin, leading to discomfort and dermatitis.

12. Ecological information

Ecotoxicity This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Sodium carbonate (CAS 497-19-8)		
Acute		
Crustacea		
EC_{50}	Water flea *(Ceriodaphnia dubia)*	200 mg/L, 48 hours
Fish		
LC_{50}	Western mosquito fish *(Gambusia affinis)*	740 mg/L, 96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil Not available

Other adverse effects No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.

Waste from residues/unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

Not regulated as dangerous goods

IATA

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available

15. Regulatory information

U.S. federal regulations This product is known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Disodium phosphate (CAS 7558-79-4)

SARA 304 Emergency Release Notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate hazard – yes
Delayed hazard – no
Fire hazard – no
Pressure hazard – no
Reactivity hazard – no

SARA 302 Extremely Hazardous Substance

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAP)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Not regulated

New Jersey Worker and Community Right-to-Know Act

Not regulated

Pennsylvania Worker and Community Right-to-Know Act

Not regulated

Rhode Island Right-to-Know Act

Not regulated

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	yes
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	yes
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits

PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery Act
RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

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SAFETY DATA SHEET

1. Identification

Product identifier **Thiosulfate N/10**

Product code R-0007

Recommended use Use as directed by manufacturer for purposes directly related to water testing.

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.

Address 31 Loveton Circle
Sparks, MD 21152
United States

Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.

Website www.taylortechnologies.com

E-mail Not available

Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Health hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Environmental hazards Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements None required

Signal word None required

Hazard statement None required

Precautionary statement

Prevention None required

Response None required

Storage None required

Disposal None required

Hazard(s) not otherwise classified None

Supplemental information None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Deionized water	Dihydrogen oxide	7732-18-5	95–99
Sodium thiosulfate pentahydrate	Thiosulfuric acid, disodium salt, pentahydrate; Sodium thiosulfate	10102-17-7	0.1–5
Other components below reportable levels			0.01–0.1

4. First-aid measures

Inhalation Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.

Skin contact	Immediately wash skin with soap and water. If symptoms persist or in all cases of concern, seek medical advice.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.
Ingestion	Treat symptomatically. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If symptoms persist or in all cases of concern, seek medical advice.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted
Hazardous combustion products	Carbon oxides. Hydrogen sulfide. Sulfur oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water. Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental precautions	Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS). Protect against physical damage. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits	No occupational exposure limits noted for the ingredient(s)
Biological limit values	No biological exposure limits noted for the ingredient(s)
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.
Skin protection	
Hand protection	Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.
Other	Wear appropriate chemical-resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.
Thermal hazards	When necessary, wear appropriate thermal protective clothing.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination. Avoid breathing mist or vapor.

9. Physical and chemical properties

Appearance	
Physical state	Liquid
Form	Liquid
Color	Clear colorless or nearly colorless
Odor	Odorless
Odor threshold	Not available
pH	9.6
Melting point/freezing point	Not available
Initial boiling point and boiling range	212°F (110°C)
Flash point	Not applicable (does not burn)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit, lower (%)	Not applicable
Flammability limit, upper (%)	Not applicable
Explosive limit, lower (%)	Not applicable
Explosive limit, upper (%)	Not applicable
Vapor pressure	17 mm Hg
Vapor density	0.6
Relative density	1.00 g/cm^3

Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	97%
Specific gravity	1.00

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Oxidizing agents. Strong acids.
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system
Skin contact	May cause slight or mild transient irritation
Eye contact	May cause temporary irritation
Ingestion	May cause discomfort
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Acute toxicity	This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Product	Species	Test Results
Sodium thiosulfate pentahydrate (CAS 10102-17-7)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>5000 mg/kg
Deionized water (CAS 7732-18-5)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation	May cause slight or mild transient irritation
Serious eye damage/eye irritation	May cause temporary irritation
Respiratory sensitization	Not expected to be a respiratory sensitizer
Skin sensitization	Not expected to be a skin sensitizer
Germ cell mutagenicity	Not expected to be mutagenic
Carcinogenicity	This product is not considered to be a carcinogen by IARC, NTP, OSHA, or U.S. ACGIH.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity, single exposure	Not classified as a specific target organ toxicity – single exposure
Specific target organ toxicity, repeated exposure	Not classified as a specific target organ toxicity – repeated exposure
Aspiration toxicity	Not expected to be an aspiration hazard
Chronic effects	Frequent or prolonged contact may dry the skin, leading to discomfort and dermatitis.

12. Ecological information

Ecotoxicity	This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	Not available
Bioaccumulative potential	Not available
Mobility in soil	Not available
Other adverse effects	No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.
Waste from residues/unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

Not regulated as dangerous goods

IATA

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This mixture is not intended to be transported in bulk.

15. Regulatory information

U.S. federal regulations	This product is not known to be a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
	All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard – no
Delayed hazard – no
Fire hazard – no
Pressure hazard – no
Reactivity hazard – no

SARA 302 Extremely Hazardous Substance

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAP)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Not regulated

New Jersey Worker and Community Right-to-Know Act

Not listed

Pennsylvania Worker and Community Right-to-Know Act

Not listed

Rhode Island Right-to-Know Act

Not regulated

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	yes
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	yes
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits

PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery
Act RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

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Issue date May 2015

Last revision May 2015

SAFETY DATA SHEET

1. Identification

Product identifier **Total Alkalinity Indicator**

Product code R-0008

Recommended use Use as directed by manufacturer for purposes directly related to water testing.

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.

Address 31 Loveton Circle
Sparks, MD 21152
United States

Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.

Website www.taylortechnologies.com

E-mail Not available

Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Health hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Environmental hazards Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements None required

Signal word None required

Hazard statement None required

Precautionary statement

Prevention None required

Response None required

Storage None required

Disposal None required

Hazard(s) not otherwise classified None

Supplemental information None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Deionized water	Dihydrogen oxide	7732-18-5	95–99
Other components below reportable levels			0.1–5

4. First-aid measures

Inhalation Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.

Skin contact Immediately wash skin with soap and water. If symptoms persist or in all cases of concern, seek medical advice.

Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.
Ingestion	Treat symptomatically. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If symptoms persist or in all cases of concern, seek medical advice.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted
Hazardous combustion products	Carbon oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water. Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental precautions	Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS). Protect against physical damage. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits	No occupational exposure limits noted for the ingredient(s)
Biological limit values	No biological exposure limits noted for the ingredient(s)
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.
Skin protection	
Hand protection	Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.
Other	Wear appropriate chemical-resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.
Thermal hazards	When necessary, wear appropriate thermal protective clothing.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination. Avoid breathing mist or vapor.

9. Physical and chemical properties

Appearance	
Physical state	Liquid
Form	Liquid
Color	Dark green
Odor	Odorless
Odor threshold	Not available
pH	8.5
Melting point/freezing point	Not available
Initial boiling point and boiling range	212°F (110°C)
Flash point	Not applicable (does not burn)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit, lower (%)	Not applicable
Flammability limit, upper (%)	Not applicable
Explosive limit, lower (%)	Not applicable
Explosive limit, upper (%)	Not applicable
Vapor pressure	17 mm Hg
Vapor density	0.6
Relative density	1.00 g/cm^3

Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	99%
Specific gravity	1.00

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Oxidizing agents
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system
Skin contact	May cause slight or mild transient irritation
Eye contact	May cause temporary irritation
Ingestion	May cause discomfort
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Acute toxicity	This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	**Species**	**Test Results**
Deionized water (CAS 7732-18-5)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation	May cause slight or mild transient irritation
Serious eye damage/eye irritation	May cause temporary irritation
Respiratory sensitization	Not expected to be a respiratory sensitizer
Skin sensitization	Not expected to be a skin sensitizer
Germ cell mutagenicity	Not expected to be mutagenic

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, OSHA, or U.S. ACGIH.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity, single exposure Not classified as a specific target organ toxicity – single exposure

Specific target organ toxicity, repeated exposure Not classified as a specific target organ toxicity – repeated exposure

Aspiration toxicity Not expected to be an aspiration hazard

Chronic effects Frequent or prolonged contact may dry the skin, leading to discomfort and dermatitis.

12. Ecological information

Ecotoxicity This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil High water solubility indicates a high mobility in soil.

Other adverse effects No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.

Waste from residues/unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

Not regulated as dangerous goods

IATA

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This mixture is not intended to be transported in bulk.

15. Regulatory information

U.S. federal regulations This product is not known to be a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard – no
Delayed hazard – no
Fire hazard – no
Pressure hazard – no
Reactivity hazard – no

SARA 302 Extremely Hazardous Substance

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAP)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Not regulated

New Jersey Worker and Community Right-to-Know Act

Not regulated

Pennsylvania Worker and Community Right-to-Know Act

Not regulated

Rhode Island Right-to-Know Act

Not regulated

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	yes
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	no
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits
PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery
Act RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

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Issue date	April 2015
Last revision	April 2015

SAFETY DATA SHEET

1. Identification

Product identifier **Sulfuric Acid .12N**

Product code R-0009

Recommended use Use as directed by manufacturer for purposes directly related to water testing.

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.

Address 31 Loveton Circle
Sparks, MD 21152
United States

Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.

Website www.taylortechnologies.com

E-mail Not available

Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Eye damage/irritation	Category 1
	Skin corrosion/irritation	Category 1C
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

Environmental hazards Not currently regulated by OSHA; refer to section 12 of the SDS for additional information.

Label elements

Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary statement

Prevention Keep only in original container. Do not breathe mist or vapor. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response Absorb spillage to prevent material damage.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water.

Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Immediately call a physician or poison control center.

Storage Store locked up. Store in a corrosive-resistant container with a corrosive resistant liner.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified	May cause pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract.
Supplemental information	None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Deionized water	Dihydrogen oxide	7732-18-5	95–99
Sulfuric acid	Hydrogen sulfate; Oil of vitriol	7664-93-9	0.1–5

4. First-aid measures

Inhalation	Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.
Skin contact	Immediately flush skin with running water for at least 20 minutes. Immediately take off all contaminated clothing. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Not combustible; however, the product can react with metals to form flammable and explosive hydrogen gas.

Hazardous combustion products Sulfur oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water.

Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Dilute acid with water and neutralize with dilute base. If not recoverable, dilute with water or flush to holding area and neutralize. Contaminated absorbent material may pose the same hazards as the spilled product.

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental precautions Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage

Precautions for safe handling Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from metals and other incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities Store locked up. Store in corrosive-resistant container with a corrosive-resistant inner liner. Store in original tightly closed container. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Sulfuric acid (CAS 7664-93-9)	PEL	1 mg/m^3	Not applicable

U.S. ACGIH Threshold Limit Values

Components	Type	Value	Form
Sulfuric acid (CAS 7664-93-9)	TWA	0.2 mg/m^3	Thoracic fraction

U.S. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Sulfuric acid (CAS 7664-93-9)	TWA	1 mg/m^3	Not applicable

Biological limit values No biological exposure limits noted for the ingredient(s)

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.

Skin protection

Hand protection Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

Other Wear appropriate chemical-resistant clothing.

Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.
Thermal hazards	When necessary, wear appropriate thermal protective clothing.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination.

9. Physical and chemical properties

Appearance	
Physical state	Liquid
Form	Liquid
Color	Clear colorless or nearly colorless
Odor	Odorless
Odor threshold	Not available
pH	1.3
Melting point/freezing point	Not available
Initial boiling point and boiling range	212°F (100°C)
Flash point	Not applicable (does not burn)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit, lower (%)	Not applicable
Flammability limit, upper (%)	Not applicable
Explosive limit, lower (%)	Not applicable
Explosive limit, upper (%)	Not applicable
Vapor pressure	17 mm Hg
Vapor density	0.6
Relative density	1.00 g/cm^3
Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	100%
Specific gravity	1.00

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, transport.
Chemical stability	Material is stable under normal conditions. Decomposes at ~ 644°F (340°C) to form sulfur trioxide.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Direct sunlight. Do not use in areas without adequate ventilation.
Incompatible materials	Metal compounds. Nitromethane. Oxidizing agents. Sugars.
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system
Skin contact	Causes severe skin burns
Eye contact	Causes serious eye damage
Ingestion	Causes digestive tract burns

Most important symptoms/effects, acute and delayed

Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.

Acute toxicity

This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Sulfuric acid (CAS 7664-93-9)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	0.375 mg/L, 4 hours (mist)
Oral		
LD_{50}	Rat	2140 mg/kg
Deionized water (CAS 7732-18-5)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage
Serious eye damage/eye irritation	Causes serious eye damage
Respiratory sensitization	Not expected to be a respiratory sensitizer
Skin sensitization	Not expected to be a skin sensitizer
Germ cell mutagenicity	Not expected to be mutagenic

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, OSHA, or U.S. ACGIH. Occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans. The information located is insufficient to conclude that sulfuric acid itself is a carcinogen. IARC has concluded there is sufficient evidence that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans (Group 1). ACGIH has designated strong inorganic acid mists containing sulfuric acid as A2 (suspected human carcinogen). US NTP has listed strong inorganic acid mists containing sulfuric acid as a known human carcinogen. These classifications are for inorganic acid mists containing sulfuric acid and do not apply to sulfuric acid or sulfuric acid solutions.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity, single exposure May cause respiratory irritation

Specific target organ toxicity, repeated exposure Not classified as a specific target organ toxicity – repeated exposure

Aspiration toxicity Not expected to be an aspiration hazard

Chronic effects Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

12. Ecological information

Ecotoxicity This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Sulfuric acid (CAS 7664-93-9) – Aquatic		
Acute		
Algae		
EC_{50}	Green algae *(Pseudokirchneriella subcapitata)*	>100 mg/L, 72 hours
Crustacea		
EC_{50}	Water flea *(Daphnia magna)*	29 mg/L, 24 hours
Fish		
LC_{50}	Bluegill *(Lepomis macrochirus)*	16–28 mg/L, 96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil High water solubility indicates a high mobility in soil.

Other adverse effects No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose of in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose of in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.

Waste from residues/unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

UN number UN3264

UN proper shipping name Corrosive liquid, acidic, inorganic, N.O.S. (Sulphuric acid)

Transport hazard class(es)

Class 8

Subsidiary risk Not listed

Label(s)	8
Packing group	III
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging, non-bulk	203
Packaging, bulk	241

IATA

UN number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, N.O.S. (Sulphuric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	Not listed
Packing group	III
Environmental hazards	Not listed
ERG code	8L
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed
Cargo aircraft only	Allowed

IMDG

UN number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, N.O.S. (Sulphuric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	Not listed
Packing group	III
Environmental hazards	
Marine pollutant	Not listed
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This substance/mixture is not intended to be transported in bulk.

DOT

IATA; IMDG

15. Regulatory information

U.S. federal regulations

This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Sulfuric acid (CAS 7664-93-9)

SARA 304 Emergency Release Notification

Sulfuric acid (CAS 7664-93-9) 1000 lb.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard – yes
Delayed hazard – no
Fire hazard – no
Pressure hazard – no
Reactivity hazard – yes

SARA 302 Extremely Hazardous Substance

Chemical name	CAS number	Reportable quantity (lb.)	Threshold planning quantity (lb.)	Threshold planning quantity lower value	Threshold planning quantity upper value
Sulfuric acid	7664-93-9	1000	1000	Not applicable	Not applicable

SARA 311/312 Hazardous Chemical

Not listed

SARA 313 (TRI reporting)

Chemical name	CAS number	% by weight
Sulfuric acid	7664-93-9	0.1–5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Sulfuric acid (CAS 7664-93-9)

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Sulfuric acid (CAS 7664-93-9) 6552

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Sulfuric acid (CAS 7664-93-9) 20% W/V

DEA Exempt Chemical Mixtures Code Number

Sulfuric acid (CAS 7664-93-9) 6552

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Sulfuric acid (CAS 7664-93-9)

New Jersey Worker and Community Right-to-Know Act

Sulfuric acid (CAS 7664-93-9)

Pennsylvania Worker and Community Right-to-Know Act

Sulfuric acid (CAS 7664-93-9)

Rhode Island Right-to-Know Act

Sulfuric acid (CAS 7664-93-9)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

California Proposition 65 - CRT: Listed date/carcinogenic substance

Sulfuric acid (CAS 7664-93-9) This product is not an inorganic acid mist containing sulfuric acid; therefore, the Proposition 65 statement does not apply.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	yes
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	yes
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits

PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery
Act RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

 The information contained in this sheet is based on lab experience and the most current data available.

Issue date April 2015

Last revision April 2015

SAFETY DATA SHEET

1. Identification

Product identifier **Calcium Buffer**

Product code R-0010

Recommended use Use as directed by manufacturer for purposes directly related to water testing.

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.

Address 31 Loveton Circle
Sparks, MD 21152
United States

Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.

Website www.taylortechnologies.com

E-mail Not available

Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Eye damage/irritation	Category 1
	Skin corrosion/irritation	Category 1B

Environmental hazards Not currently regulated by OSHA; refer to section 12 of the SDS for additional information.

Label elements

Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage.

Precautionary statement

Prevention Keep only in original container. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe mist or vapor. Wash thoroughly after handling.

Response Absorb spillage to prevent damage.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water.

Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Immediately call a physician or poison control center.

Storage Store locked up.

Disposal None

Hazard(s) not otherwise classified None

Supplemental information None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Deionized water	Dihydrogen oxide	7732-18-5	95–99
Sodium hydroxide	Caustic soda; Lye; Soda lye; Caustic soda solution; Soda lye solution	1310-73-2	0.1–5

4. First-aid measures

Inhalation

Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.

Skin contact

Immediately flush skin with running water for at least 20 minutes. Immediately take off all contaminated clothing. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

Most important symptoms/effects, acute and delayed

Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.

General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Firefighting equipment/instructions

Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

Not combustible; however, the product can react with metals to form flammable and explosive hydrogen gas.

Hazardous combustion products

Sodium oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Methods and materials for containment and cleaning up

This product is miscible in water.

Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Dilute base with water and neutralize with dilute acid. If not recoverable, dilute with water or flush to holding area and neutralize. Contaminated absorbent material may pose the same hazards as the spilled product.

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from metals and other incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in corrosive-resistant container with a corrosive-resistant inner liner. Store in original tightly closed container. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m^3	Not applicable

U.S. ACGIH Threshold Limit Values

Components	Type	Value	Form
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m^3	Not applicable

U.S. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Sodium hydroxide (CA 1310-73-2)	Ceiling	2 mg/m^3	Not applicable

Biological limit values

No biological exposure limits noted for the ingredient(s)

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.

Skin protection

Hand protection

Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

Other

Wear appropriate chemical-resistant clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

Thermal hazards	When necessary, wear appropriate thermal protective clothing.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination.

9. Physical and chemical properties

Appearance	
Physical state	Liquid
Form	Liquid
Color	Clear colorless or nearly colorless
Odor	Odorless
Odor threshold	Not available
pH	13.1
Melting point/freezing point	Not available
Initial boiling point and boiling range	230°F (110°C)
Flash point	Not applicable (does not burn)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit, lower (%)	Not applicable
Flammability limit, upper (%)	Not applicable
Explosive limit, lower (%)	Not applicable
Explosive limit, upper (%)	Not applicable
Vapor pressure	17 mm Hg
Vapor density	0.6
Relative density	1.20 g/cm^3
Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	98%
Specific gravity	1.20

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. This product may react with oxidizing agents.
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Metal compounds. Nitromethane. Oxidizing agents. Strong acids. Sugars.

Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system
Skin contact	Causes severe skin burns
Eye contact	Causes serious eye damage
Ingestion	Causes digestive tract burns
Most important symptoms/effects, acute and delayed	Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.
Acute toxicity	This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Sodium hydroxide (CAS 1310-73-2)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	140–340 mg/kg
Deionized water (CAS 7732-18-5)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage
Serious eye damage/eye irritation	Causes serious eye damage
Respiratory sensitization	Not expected to be a respiratory sensitizer
Skin sensitization	Not expected to be a skin sensitizer
Germ cell mutagenicity	Not expected to be mutagenic
Carcinogenicity	This product is not considered to be a carcinogen by IARC, NTP, OSHA or U.S. ACGIH.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity, single exposure	Not classified as a specific target organ toxicity – single exposure
Specific target organ toxicity, repeated exposure	Not classified as a specific target organ toxicity – repeated exposure
Aspiration toxicity	Not expected to be an aspiration hazard
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

12. Ecological information

Ecotoxicity This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Sodium hydroxide (CAS 1310-73-2) – Aquatic		
Acute		
Crustacea		
EC_{50}	Water flea *(Daphnia magna)*	40 mg/L, 48 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil Not available

Other adverse effects No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose of in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose of in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.

Waste from residues/unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

UN number	UN1824
UN proper shipping name	Sodium hydroxide solution
Transport hazard class(es)	
Class	8
Subsidiary risk	Not listed
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Special provisions	A6, T14, TP2, TP27
Packaging exceptions	Not listed
Packaging, non-bulk	201
Packaging, bulk	243

IATA

UN number	UN1824
UN proper shipping name	Sodium hydroxide solution
Transport hazard class(es)	
Class	8
Subsidiary risk	Not listed
Packing group	II
Environmental hazards	Not listed
ERG code	8L
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed
Cargo aircraft only	Allowed

IMDG

UN number	UN1824
UN proper shipping name	Sodium hydroxide solution
Transport hazard class(es)	
Class	8
Subsidiary risk	Not listed
Packing group	II

Environmental hazards

Marine pollutant Not listed

EmS F-A, S-B

Special precautions for user Read safety instructions, SDS, and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

DOT

IATA; IMDG

15. Regulatory information

U.S. federal regulations This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2)

SARA 304 Emergency Release Notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard – yes
Delayed hazard – no
Fire hazard – no
Pressure hazard – no
Reactivity hazard – yes

SARA 302 Extremely Hazardous Substance

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Sodium hydroxide (CAS 1310-73-2)

New Jersey Worker and Community Right-to-Know Act

Sodium hydroxide (CAS 1310-73-2)

Pennsylvania Worker and Community Right-to-Know Act

Sodium hydroxide (CAS 1310-73-2)

Rhode Island Right-to-Know Act

Sodium hydroxide (CAS 1310-73-2)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	yes
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	yes
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous

Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits
PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery
Act RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

 The information contained in this sheet is based on lab experience and the most current data available.

Issue date May 2015

Last revision May 2015

SAFETY DATA SHEET

1. Identification

Product identifier	**Calcium Indicator Liquid**
Product code	R-0011L
Recommended use	Use as directed by manufacturer for purposes directly related to water testing.
Recommended restrictions	None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Taylor Technologies, Inc.	
Address	31 Loveton Circle Sparks, MD 21152 United States	
Telephone	(410) 472-4340	Monday–Friday, 8:00 a.m.–4:30 p.m.
Website	www.taylortechnologies.com	
E-mail	Not available	
Emergency phone number	(800) 837-8548	

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Eye damage/irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

Environmental hazards Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements

Signal word Danger

Hazard statement Highly flammable liquid and vapor. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention Keep away from heat/sparks/open flames.-No smoking. Keep container tightly closed. Ground or bond container and receiving equipment. Use explosion-proof electrical/ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/eye protection/face protection. Wash skin thoroughly after handling. Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area.

Response IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

IF EYE IRRITATION PERSISTS: Get medical advice/attention.

Call a physician or poison control center if you feel unwell.

IN CASE OF FIRE: Use alcohol-resistant foam. Water fog. Carbon dioxide. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Storage Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified	None
Supplemental information	None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Triethanolamine	2,2′,2″-Nitrilotriethanol; Tris(2-hydroxyethyl)amine	102-71-6	75–80
Isopropanol	Dimethyl carbinol; 2-Propanol; Isopropyl alcohol	67-63-0	20–25
Calcon	1-(2-Hydroxy-1-napthylazo)-2-napthol-4-sulfonic acid sodium salt; Mordant black 17	2538-85-4	0.1–5

4. First-aid measures

Inhalation	Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention if you feel unwell.
Skin contact	Immediately flush skin with running water for at least 20 minutes. Immediately take off all contaminated clothing. Get medical attention if you feel unwell. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. May cause drowsiness or dizziness. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness, and other central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting, diarrhea, as well as depression of the central nervous system.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. This product is a CNS depressant.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Alcohol-resistant foam. Water fog. Carbon dioxide. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can be electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential static discharge, use proper bonding and grounding procedures. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Flammable liquid and vapor. This material may be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment). Vapors are heavier than air and may spread along floors. Vapors may travel considerable distance to a source of ignition and flash back.
Hazardous combustion products	Carbon oxides. Nitrogen oxides. Peroxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.
Methods and materials for containment and cleaning up	Ventilate the contaminated area. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water. Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental precautions	Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage

Precautions for safe handling	Vapors may form explosive mixtures with air. Keep away from sources of ignition. NO SMOKING. Do not handle, store, or open near an open flame, sources of heat or sources of ignition. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in vented containers. Keep away from heat, sparks, and open flames. This material can accumulate static charge which may cause a spark and become an ignition source. Prevent electrostatic charge buildup by using common bonding and grounding techniques. Store in a well-ventilated place. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Isopropanol (CAS 67-63-0)	PEL	980 mg/m^3	Not applicable
		400 ppm	Not applicable

U.S. ACGIH Threshold Limit Values

Components	Type	Value	Form
Isopropanol (CAS 67-63-0)	STEL	400 ppm	Not applicable
	TWA	200 ppm	Not applicable
Triethanolamine (CAS 102-71-6)	TWA	5 mg/m^3	Not applicable

U.S. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m^3	Not applicable
		500 ppm	Not applicable
	TWA	980 mg/m^3	Not applicable
		400 ppm	Not applicable

Biological limit values

U.S. ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropanol (CAS 67-63-0)	40 mg/L	Acetone	Urine	Not available

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.

Skin protection

Hand protection
Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

Other
Wear appropriate chemical-resistant clothing.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

Thermal hazards
When necessary, wear appropriate thermal protective clothing.

General hygiene considerations
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination. Avoid breathing mist or vapor.

9. Physical and chemical properties

Appearance

Physical state
Liquid

Form
Liquid

Color
Dark purple to dark blue

Odor
Alcohol-like

Odor threshold
Not available

pH
10.3

Melting point/freezing point
Not available

Initial boiling point and boiling range
500-600°F (260-315.56°C)

Flash point
64.0°F (17.8°C) Closed Cup

Evaporation rate
Not available

Flammability (solid, gas)
Flammable

Upper/lower flammability or explosive limits

Flammability limit, lower (%)
2%

Flammability limit, upper (%)
12%

Explosive limit, lower (%)
Not available

Explosive limit, upper (%)
Not available

Vapor pressure
Not available

Vapor density
2

Relative density	1.02 g/cm^3
Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	99%
Specific gravity	1.02

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Heat, sparks, open flames, and other ignition sources. Temperatures exceeding the flash point. Direct sunlight. Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Alkali metals. Aluminum. Oxidizing agents. Potassium t-butoxide. Some plastics. Strong acids.
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. May cause irritation to the respiratory system.
Skin contact	May cause slight or mild transient irritation
Eye contact	May cause severe irritation
Ingestion	May cause irritation, nausea, vomiting, and diarrhea
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. May cause drowsiness or dizziness. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness, and other central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting, diarrhea, as well as depression of the central nervous system.
Acute toxicity	This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Isopropanol (CAS 67-63-0)		
Acute		
Dermal		
LD_{50}	Rabbit	12890 mg/kg
Inhalation		
LC_{50}	Rat	Not available
		Not available
Oral		
LD_{50}	Rat	5045 mg/kg

Triethanolamine (CAS 102-71-6)

Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Mouse	5846 mg/kg
	Rabbit	2200 mg/kg

Deionized water (CAS 7732-18-5)

Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation Causes skin irritation

Serious eye damage/eye irritation Causes severe eye irritation

Respiratory sensitization Not expected to be a respiratory sensitizer

Skin sensitization Not expected to be a skin sensitizer

Germ cell mutagenicity Not expected to be mutagenic

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, OSHA, or U.S. ACGIH.

IARC Monographs. Overall Evaluation of Carcinogenicity

Triethanolamine (CAS 102-71-6) 3 Not classifiable as to carcinogenicity to humans

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity, single exposure May cause drowsiness or dizziness. May cause respiratory irritation.

Specific target organ toxicity, repeated exposure Not classified as a specific target organ toxicity – repeated exposure

Aspiration toxicity Not expected to be an aspiration hazard

Chronic effects Frequent or prolonged contact may dry the skin, leading to discomfort and dermatitis. Frequent or prolonged inhalation of fumes or vapors may cause chronic lung conditions such as bronchitis. Frequent or prolonged overexposure may affect the kidneys.

12. Ecological information

Ecotoxicity This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Isopropanol (CAS 67-63-0) – Aquatic		
Acute		
Crustacea		
EC_{50}	Water flea *(Daphnia magna)*	1400 mg/L, 48 hours
LC_{50}	Fathead minnow *(Pimephales promelas)*	9640 mg/L, 96 hours
Chronic		
Crustacea		
NOEC	Water flea *(Daphnia magna)*	30 mg/L, 21 days

Triethanolamine (CAS 102-71-6) – Aquatic

Acute		
Algae		
EC_{50}	Green algae *(Desmodesmus subspicatus)*	512 mg/L, 72 hours
Crustacea		
EC_{50}	Water flea *(Ceriodaphnia affnis)*	609.88 mg/L, 48 hours
Chronic		
Crustacea		
NOEC	Water flea *(Daphnia magna)*	16 mg/L, 21 days

Persistence and degradability Not available

Bioaccumulative potential

Partition coefficient n-octanol / water (log K_{ow})

Isopropanol	0.05
Triethanolamine	-1

Bioconcentration factor (BCF)

Isopropanol	1

Mobility in soil High water solubility indicates a high mobility in soil.

Other adverse effects No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.

Waste from residues/unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

UN number	UN1993
UN proper shipping name	Flammable liquids, N.O.S. (Isopropanol RQ = 100 lbs.)
Transport hazard class(es)	
Class	3
Subsidiary risk	Not listed
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Special provisions	IB2, T7, TP8, TP28
Packaging exceptions	150
Packaging, non-bulk	202
Packaging, bulk	242

IATA

UN number	UN1993
UN proper shipping name	Flammable liquids, N.O.S. (Isopropanol)
Transport hazard class(es)	
Class	3
Subsidiary risk	Not listed
Packing group	II
Environmental hazards	Not listed
ERG code	3H
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed

Cargo aircraft only	Allowed

IMDG

UN number	UN1993
UN proper shipping name	Flammable liquids, N.O.S. (Isopropanol)
Transport hazard class(es)	
Class	3
Subsidiary risk	Not listed
Packing group	II
Environmental hazards	
Marine pollutant	No
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: This substance/mixture is not intended to be transported in bulk.

DOT

IATA; IMDG

15. Regulatory information

U.S. federal regulations: All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Isopropanol (CAS 67-63-0)

SARA 304 Emergency Release Notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories: Immediate hazard – yes
Delayed hazard – no
Fire hazard – yes
Pressure hazard – no
Reactivity hazard – no

SARA 302 Extremely Hazardous Substance

Not regulated

SARA 311/312 Hazardous Chemical

Regulated

SARA 313 (TRI reporting)

Chemical name	CAS number	% by weight
Isopropanol	67-63-0	23

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAP)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Isopropanol (CAS 67-63-0)
Triethanolamine (CAS 102-71-6)

New Jersey Worker and Community Right-to-Know Act

Isopropanol (CAS 67-63-0)
Triethanolamine (CAS 102-71-6)

Pennsylvania Worker and Community Right-to-Know Act

Isopropanol (CAS 67-63-0)
Triethanolamine (CAS 102-71-6)

Rhode Island Right-to-Know Act

Isopropanol (CAS 67-63-0)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material contains a chemical known to cause cancer.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	yes
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	yes
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemical (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
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CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits
PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery Act
RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

Disclaimer

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Issue date May 2015

Last revision May 2015

SAFETY DATA SHEET

1. Identification

Product identifier **Hardness Reagent**

Product code R-0012

Recommended use Use as directed by manufacturer for purposes directly related to water testing.

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.

Address 31 Loveton Circle
Sparks, MD 21152
United States

Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.

Website www.taylortechnologies.com

E-mail Not available

Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Health hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Environmental hazards Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements None required

Signal word None required

Hazard statement None required

Precautionary statement

Prevention None required

Response None required

Storage None required

Disposal None required

Hazard(s) not otherwise classified None

Supplemental information None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Deionized water	Dihydrogen oxide	7732-18-5	95–99
Edetic acid	EDTA; Ethylenediaminetetraacetic acid	60-00-4	0.1–5
Other components below reportable levels			0.01–0.1

4. First-aid measures

Inhalation Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.

Skin contact	Immediately wash skin with soap and water. If symptoms persist or in all cases of concern, seek medical advice.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.
Ingestion	Treat symptomatically. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If symptoms persist or in all cases of concern, seek medical advice.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted
Hazardous combustion products	Nitrogen oxides. Sodium oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water. Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental precautions	Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS). Protect against physical damage. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits	No occupational exposure limits noted for the ingredient(s)
Biological limit values	No biological exposure limits noted for the ingredient(s)
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.
Skin protection	
Hand protection	Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.
Other	Wear appropriate chemical-resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.
Thermal hazards	When necessary, wear appropriate thermal protective clothing.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination. Avoid breathing mist or vapor.

9. Physical and chemical properties

Appearance	
Physical state	Liquid
Form	Liquid
Color	Clear colorless or nearly colorless
Odor	Odorless
Odor threshold	Not available
pH	8.1
Melting point/freezing point	Not available
Initial boiling point and boiling range	212°F (100°C)
Flash point	Not applicable (does not burn)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit, lower (%)	Not applicable
Flammability limit, upper (%)	Not applicable
Explosive limit, lower (%)	Not applicable
Explosive limit, upper (%)	Not applicable
Vapor pressure	17 mm Hg
Vapor density	0.6
Relative density	1.00 g/cm^3
Solubility(ies)	

Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	99%
Specific gravity	1.00

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Oxidizing agents
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system
Skin contact	May cause slight or mild transient irritation
Eye contact	May cause temporary irritation
Ingestion	May cause discomfort
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Acute toxicity	This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Edetic acid (CAS 60-00-4)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>2000 mg/kg
Deionized water (CAS 7732-18-5)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available
Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation	May cause slight or mild transient irritation

Serious eye damage/eye irritation	May cause temporary irritation
Respiratory sensitization	Not expected to be a respiratory sensitizer
Skin sensitization	Not expected to be a skin sensitizer
Germ cell mutagenicity	Not expected to be mutagenic
Carcinogenicity	This product is not considered to be a carcinogen by IARC, NTP, OSHA, or U.S. ACGIH.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity, single exposure	Not classified as a specific target organ toxicity – single exposure
Specific target organ toxicity, repeated exposure	Not classified as a specific target organ toxicity – repeated exposure
Aspiration toxicity	Not expected to be an aspiration hazard
Chronic effects	Frequent or prolonged contact may dry the skin, leading to discomfort and dermatitis.

12. Ecological information

Ecotoxicity This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Edetic acid (CAS 60-00-4) – Aquatic		
Acute		
Algae		
EC_{50}	Green algae *(Pseudokirchneriella subcapitata)*	>100 mg/L, 72 hours
Crustacea		
EC_{50}	Water flea *(Daphnia magna)*	140 mg/L, 48 hours
Fish		
LC_{50}	Bluegill *(Lepomis macrochirus)*	41 mg/L, 96 hours
Chronic		
Algae		
NOEC	Green algae *(Pseudokirchneriella subcapitata)*	>100 mg/L, 72 hours
Crustacea		
NOEC	Water flea *(Daphnia magna)*	25 mg/L, 21 hours

Persistence and degradability	Not available
Bioaccumulative potential	Not available
Mobility in soil	High water solubility indicates a high mobility in soil.
Other adverse effects	No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.
Waste from residues/unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

Not regulated as dangerous goods

IATA

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This mixture is not intended to be transported in bulk.

15. Regulatory information

U.S. federal regulations

This product is not known to be a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Edetic acid (CAS 60-00-4)

SARA 304 Emergency Release Notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard – no
Delayed hazard – no
Fire hazard – no
Pressure hazard – no
Reactivity hazard – no

SARA 302 Extremely Hazardous Substance

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAP)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Edetic acid (CAS 60-00-4)

New Jersey Worker and Community Right-to-Know Act

Edetic acid (CAS 60-00-4)

Pennsylvania Worker and Community Right-to-Know Act

Edetic acid (CAS 60-00-4)

Rhode Island Right-to-Know Act

Edetic acid (CAS 60-00-4)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	yes
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	yes
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits

PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery
Act RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

 The information contained in this sheet is based on lab experience and the most current data available.

Issue date April 2015

Last revision April 2015

SAFETY DATA SHEET

1. Identification

Product identifier **Cyanuric Acid Reagent**

Product code R-0013

Recommended use Use as directed by manufacturer for purposes directly related to water testing.

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.

Address 31 Loveton Circle
Sparks, MD 21152
United States

Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.

Website www.taylortechnologies.com

E-mail Not available

Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Health hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Environmental hazards Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements None required

Signal word None required

Hazard statement None required

Precautionary statement

Prevention None required

Response None required

Storage None required

Disposal None required

Hazard(s) not otherwise classified None

Supplemental information None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Deionized water	Dihydrogen oxide	7732-18-5	90–99
Melamine	2,4,6-Triamino-1,3,5-triazine; Cyanurotriamide	108-78-1	0.1–5
Other components below reportable levels			0.1–5

4. First-aid measures

Inhalation Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.

Skin contact Immediately wash skin with soap and water. If symptoms persist or in all cases of concern, seek

	medical advice.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.
Ingestion	Treat symptomatically. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If symptoms persist or in all cases of concern, seek medical advice.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted
Hazardous combustion products	Carbon oxides. Sulfur oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water. Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental precautions	Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS). Protect against physical damage. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits

U.S. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Melamine (CAS 108-78-1)	TWA	5 mg/m^3	Respirable particles
		10 mg/m^3	Inhalable particles

Biological limit values No biological exposure limits noted for the ingredient(s)

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.

Skin protection

Hand protection Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

Other Wear appropriate chemical-resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

Thermal hazards When necessary, wear appropriate thermal protective clothing.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination. Avoid breathing mist or vapor.

9. Physical and chemical properties

Appearance

Physical state Liquid

Form Liquid

Color Clear colorless or nearly colorless

Odor Odorless

Odor threshold Not available

pH 5.8

Melting point/freezing point Not available

Initial boiling point and boiling range 212°F (100°C)

Flash point Not applicable (does not burn)

Evaporation rate Not available

Flammability (solid, gas) Not applicable

Upper/lower flammability or explosive limits

Flammability limit, lower (%) Not applicable

Flammability limit, upper (%) Not applicable

Explosive limit, lower (%) Not applicable

Explosive limit, upper (%) Not applicable

Vapor pressure	17 mm Hg
Vapor density	0.6
Relative density	1.00 g/cm^3
Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	99%
Specific gravity	1.00

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Oxidizing agents
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system
Skin contact	May cause slight or mild transient irritation
Eye contact	May cause temporary irritation
Ingestion	May cause discomfort
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, and cracking of the skin. Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging and tearing. Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Acute toxicity	This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Melamine (CAS 108-78-1)		
Acute		
Dermal		
LD_{50}	Rabbit	>1000 mg/kg
Inhalation		
LC_{50}	Rat	>5.19 mg/L, 4 hours
Oral		
LD_{50}	Rat	3161 mg/kg
Deionized water (CAS 7732-18-5)		
Acute		
Dermal		
LD_{50}	Rabbit	Not available

Inhalation		
LC_{50}	Rat	Not available
Oral		
LD_{50}	Rat	>89840 mg/kg

Skin corrosion/irritation May cause slight or mild transient irritation

Serious eye damage/eye irritation May cause temporary irritation

Respiratory sensitization Not expected to be a respiratory sensitizer

Skin sensitization Not expected to be a skin sensitizer

Germ cell mutagenicity Not expected to be mutagenic

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, OSHA, or U.S. ACGIH.

IARC Monographs. Overall Evaluation of Carcinogenicity.

Melamine (CAS 108-78-1) Group 3–Not classifiable as to carcinogenicity to humans

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity, single exposure Not classified as a specific target organ toxicity – single exposure

Specific target organ toxicity, repeated exposure Not classified as a specific target organ toxicity – repeated exposure

Aspiration toxicity Not expected to be an aspiration hazard

Chronic effects Frequent or prolonged contact may dry the skin, leading to discomfort and dermatitis.

12. Ecological information

Ecotoxicity This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil High water solubility indicates a high mobility in soil.

Other adverse effects No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.

Waste from residues/unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transportation information

DOT

Not regulated as dangerous goods

IATA

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This mixture is not intended to be transported in bulk.

15. Regulatory information

U.S. federal regulations

This product is not known to be a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard – no
Delayed hazard – no
Fire hazard – no
Pressure hazard – no
Reactivity hazard – no

SARA 302 Extremely Hazardous Substance

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAP)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Melamine (CAS 108-78-1)

New Jersey Worker and Community Right-to-Know Act

Not regulated

Pennsylvania Worker and Community Right-to-Know Act

Melamine (CAS 108-78-1)

Rhode Island Right-to-Know Act

Not regulated

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International inventories

Country(ies) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	yes
Canada	Domestic Substances List (DSL)	yes
Canada	Non-Domestic Substances List (NDSL)	no
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no

Country(ies) or region	Inventory name	On inventory (yes/no)*
Japan	Existing and New Chemical Substances (ENCS)	yes
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A “yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A “no” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits
PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery
Act RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit

TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

 The information contained in this sheet is based on lab experience and the most current data available.

Issue date April 2015

Last revision April 2015

SAFETY DATA SHEET

According to 29 CFR 1910.1200 Hazard Communication Standard 2012 (HazCom 2012)

Revision: 9/21/2023

SECTION 1: Identification

Product identifier

Product name	pH Indicator Solution (Phenol Red)
Product number	R-0014
Recommended use and restrictions	Water analysis. To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer	Taylor Water Technologies LLC 31 Loveton Circle Sparks, MD 21152 Local: (410) 472-4340 – 8am – 5pm EST Toll-free: (800) 837-8548 – 8am – 5pm EST
Emergency phone number	
CHEMTREC, United States	1-800-424-9300 – 24-hour service
CHEMTREC, International	+1 703-741-5970 – 24-hour service

SECTION 2: Hazard(s) Identification

Physical hazards	Not classified
Health hazards	Not classified
Environmental hazards	Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.
Label elements	
Hazard pictograms	Not applicable
Signal word	Not applicable
Hazard statements	Not applicable
Precautionary statements	
Prevention	Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.
Response	This reagent is not defined as a hazardous chemical per OSHA's Hazard Communication Standard 2012; however, use care when handling.
Storage	Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazards not otherwise classified	Not applicable

SECTION 3: Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	% w/w
Water	Dihydrogen oxide	7732-18-5	80-100
Nonhazardous and other components below reportable levels	Not applicable	Not applicable	0.1-1

SECTION 4: First-Aid Measures

If inhaled

Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

If swallowed

Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Direct skin or eye contact may cause irritation. Symptoms may include redness or itching. Tearing of the eyes or blurred vision may occur. Inhalation may cause respiratory irritation, such as coughing. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Refer to section 11 of the SDS for delayed and immediate effects and chronic effects from short- and long-term exposure.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting Measures

Extinguishing media

Suitable extinguishing media	Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture

Fire hazard	Not flammable
Explosion hazard	Not explosive
Reactivity	Hazardous reactions will not occur under normal conditions.
Hazardous combustion products	Carbon oxides, nitrogen oxides, sodium oxides, sulfur oxides.

Advice for firefighters

Precautionary measures	Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions	Use water spray or fog for cooling exposed containers.
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up

Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections

For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and Storage

Personal precautions, protective equipment, and emergency procedures

Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure Controls/Personal Protection

Occupational exposure limits

US ACGIH Threshold Limit Values

Not regulated

US NIOSH: Pocket Guide to Chemical Hazards

Not regulated

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Not regulated

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.
Personal protective equipment	
Eye/face protection	Wear appropriate safety glasses with side shields (or goggles) if contact is likely to occur.
Skin protection	Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection	Wear appropriate protective clothing if contact is likely to occur.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Liquid
Form	Liquid
Color	Clear, red
Odor	Slight phenolic
Odor threshold	No data available
pH	7.6
Evaporation rate	No data available
Melting point	No data available
Freezing point	No data available
Initial boiling point (boiling range)	No data available
Flash point	No data available
Specific gravity	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Upper Flammability Limit	No data available
Lower Flammability Limit	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility	Soluble in all proportions
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

SECTION 10: Stability and Reactivity

Reactivity	Hazardous reactions will not occur under normal conditions of use, storage, and transport.
Chemical stability	Stable under recommended handling and storage conditions (refer to section 7 of the SDS).
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Acids, bases, iodides, lead, mercury salts, metals, oxidizing agents, silver salts, sodium nitrate.
Hazardous decomposition products	No hazardous decomposition products known.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical, and toxicological characteristics	Refer to section 4 of the SDS for most important symptoms and effects.

Delayed and immediate effects and chronic effects from short- and long-term exposure

Acute toxicity	This product is not classified as an acute toxicity hazard.
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory sensitization	No data available
Skin sensitization	No data available
Germ cell mutagenicity	No data available

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not classified

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

US National Toxicology Program (NTP) Report on Carcinogens

Not classified

Reproductive toxicity	No data available
Specific target organ toxicity (single exposure)	No data available
Specific target organ toxicity (repeated exposure)	No data available
Aspiration hazard	No data available

SECTION 12: Ecological Information

Ecotoxicity	This product is not classified as environmentally hazardous.
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal Considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations. RCRA waste code: D024

SECTION 14: Transport Information

DOT	Not regulated as dangerous goods
IATA	Not regulated as dangerous goods
IMDG	Not regulated as dangerous goods

SECTION 15: Regulatory Information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

TSCA Section 8(b) Chemical Inventory

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Clean Water Act, Toxic and Priority Pollutants (40 CFR 401.15 and CFR 423, Appendix A)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)

Not regulated

Massachusetts Right-to-Know Act

Not regulated

New Jersey Worker and Community Right-to-Know Act

Not regulated

Pennsylvania Worker and Community Right-to-Know Act

Not regulated

Rhode Island Right-to-Know Act

Not regulated

SECTION 16: Other Information

NFPA Rating

Health hazard	0
Fire hazard	0
Reactivity	0
Specific	N/A

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 The information contained in this sheet is based on lab experience and the most current data available.

Issue date:
May 2015

Revision date:
9/21/2023

Revision information:
Identification: Manufacturer information
Disposal considerations: RCRA waste code

Supersedes revision dated 5/27/2021.

Safety Data Sheet

Document group:	16-6314-5	**Version number:**	4.00
Issue Date:	11/04/2022	**Supersedes date:**	30/03/2020

This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier
Scotch® Super 33+™ Vinyl Electrical Tape and Scotch® Premium Vinyl Electrical Tape Super 88

Product Identification Numbers
80-0140-0102-0 80-6101-3892-9 80-6108-3380-0 80-6112-0701-2

1.2. Recommended use and restrictions on use

Recommended use
Electrical

For Industrial or Professional use only.

1.3. Supplier's details
Address: 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone: 136 136
E Mail: productinfo.au@mmm.com
Website: www.3m.com.au

1.4. Emergency telephone number
EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is NOT classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

This product is an article and is not regulated by the Model Work Health and Safety Regulations (2011) because, it is not classified as hazardous. When used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
This product is exempt from hazard classification according to the Model Work Health and Safety Regulations, 2011, in

accordance with applicable State and Territory legislation.

2.2. Label elements

Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable

2.3. Other assigned/identified product hazards
None known.

2.4. Other hazards which do not result in classification
None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Vinyl Tape with Rubber-Based Adhesive	Mixture	90 - 100
Antimony Trioxide	1309-64-4	1 - 1.5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
No need for first aid is anticipated.

Skin contact
No need for first aid is anticipated.

Eye contact
No need for first aid is anticipated.

If swallowed
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Irritant vapours or gases.	During combustion.
Oxides of antimony.	During combustion.
Oxides of zinc.	During combustion.

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Not applicable. Observe precautions from other sections.

6.2. Environmental precautions
Not applicable. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Not applicable. Collect as much of the spilled material as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities
Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Antimony Trioxide	1309-64-4	ACGIH	TWA(inhalable fraction):0.02 mg/m3	A2: Suspected human carcin.
Antimony Trioxide	1309-64-4	Australia OELs	TWA(as Sb)(8 hours):0.5 mg/m3	
Vinyl Tape with Rubber-Based Adhesive	Mixture	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
Sen: Sensitiser

Sk: Absorption through the skin may be a significant source of exposure.

8.2. Exposure controls

8.2.1. Engineering controls
No engineering controls required.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Roll of Tape.
Colour	Black
Odour	Slight Odour
Odour threshold	*Not applicable.*
pH	*Not applicable.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	*Not applicable.*
Flash point	*Not applicable.*
Evaporation rate	*Not applicable.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*Not applicable.*
Vapor Density and/or Relative Vapor Density	*Not applicable.*
Density	1.22 g/cm3
Relative density	1.22 [*Details:*Ref Std: Water = 1]
Water solubility	Nil
Solubility- non-water	*Not applicable.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*Not applicable.*
Viscosity/Kinematic Viscosity	*Not applicable.*
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*Not applicable.*
VOC less H2O & exempt solvents	*No data available.*
Average particle size	*No data available.*
Bulk density	*No data available.*
Molecular weight	*No data available.*

Softening point	*No data available.*

Nanoparticles
This material contains nanoparticles.

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3. Conditions to avoid
None known.

10.4. Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.5 Incompatible materials
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	Condition
Hydrocarbons.	At elevated temperatures.

Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
No health effects are expected.

Skin contact
No health effects are expected. Contact with the skin during product use is not expected to result in significant irritation.

Eye contact
No health effects are expected. Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion
No health effects are expected.

Additional information:
This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Vinyl Tape with Rubber-Based Adhesive	Dermal		LD50 estimated to be > 5,000 mg/kg
Vinyl Tape with Rubber-Based Adhesive	Ingestion		LD50 estimated to be > 5,000 mg/kg
Antimony Trioxide	Dermal	Rabbit	LD50 > 6,685 mg/kg
Antimony Trioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.76 mg/l
Antimony Trioxide	Ingestion	Rat	LD50 > 34,600 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Vinyl Tape with Rubber-Based Adhesive	Professional judgement	No significant irritation
Antimony Trioxide	Human and animal	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Antimony Trioxide	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Antimony Trioxide	Human	Not classified

Respiratory Sensitisation
For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Vinyl Tape with Rubber-Based Adhesive	In Vitro	Not mutagenic
Antimony Trioxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Antimony Trioxide	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Vinyl Tape with Rubber-Based Adhesive	Not specified.	Rat	Some positive data exist, but the data are not sufficient for classification

Antimony Trioxide	Inhalation	Multiple animal species	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Vinyl Tape with Rubber-Based Adhesive	Not specified.	Not classified for development	Mouse	NOAEL Not available	during gestation
Antimony Trioxide	Inhalation	Not classified for female reproduction	Rat	LOAEL 0.25 mg/l	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Antimony Trioxide	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Vinyl Tape with Rubber-Based Adhesive	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 0.013 mg/l	22 months
Antimony Trioxide	Dermal	skin	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Antimony Trioxide	Inhalation	pulmonary fibrosis	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.002 mg/l	1 years
Antimony Trioxide	Inhalation	liver	Not classified	Rat	NOAEL 0.043 mg/l	1 years
Antimony Trioxide	Inhalation	blood	Not classified	Rat	NOAEL 0.004 mg/l	not available
Antimony Trioxide	Inhalation	pneumoconiosis	Not classified	Human	LOAEL 0.01 mg/l	occupational exposure
Antimony Trioxide	Inhalation	heart	Not classified	Rat	NOAEL 0.02 mg/l	1 years
Antimony Trioxide	Ingestion	blood | liver	Not classified	Rat	NOAEL 418 mg/kg/day	not available
Antimony Trioxide	Ingestion	heart	Not classified	Rat	NOAEL Not available	not available

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Exposure Levels
Refer Section **8.1 Control Parameters** of this Safety Data Sheet.

Interactive Effects
Not determined.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Vinyl Tape with Rubber-Based Adhesive	Mixture		Data not available or insufficient for classification			N/A
Antimony Trioxide	1309-64-4	Green Algae	Endpoint not reached	72 hours	EC50	>100 mg/l
Antimony Trioxide	1309-64-4		Estimated	96 hours	EC50	2.12 mg/l
Antimony Trioxide	1309-64-4	Fathead minnow	Estimated	96 hours	LC50	17.2 mg/l
Antimony Trioxide	1309-64-4	Fish other	Estimated	96 hours	LC50	8.3 mg/l
Antimony Trioxide	1309-64-4	Activated sludge	Experimental	4 hours	NOEC	6.1 mg/l
Antimony Trioxide	1309-64-4	Rainbow trout	Estimated	28 days	LC10	0.188 mg/l
Antimony Trioxide	1309-64-4	Water flea	Estimated	21 days	NOEC	2.08 mg/l
Antimony Trioxide	1309-64-4	Green Algae	Experimental	72	NOEC	2.53 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Vinyl Tape with Rubber-Based Adhesive	Mixture	Data not available-insufficient	N/A	N/A	N/A	N/A
Antimony Trioxide	1309-64-4	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Vinyl Tape with Rubber-Based Adhesive	Mixture	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Antimony Trioxide	1309-64-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

Hazchem Code: Not applicable
IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG)- Marine Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory Status:
This product is defined as an article under the Industrial Chemicals (Notification and Assessment) Act 1989, as amended, and is exempt from inventory requirements under the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

Poison Schedule: This product is an article therefore the Standard for the Uniform Scheduling of Medicines and Poisons Schedule is not applicable.

SECTION 16: Other information

Revision information:
Complete document review.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.
Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au

Safety Data Sheet

SECTION 1 CHEMICAL IDENTIFIER AND COMPANY IDENTIFICATION

Chevron and Texaco Unleaded Gasolines (All Grades)

Recommended Use of the Chemical and Restrictions on Use: Fuel
Synonyms: Automotive; Calco Mid-Grade Unleaded Gasoline; Calco Premium Gasoline; Calco Regular Unleaded Gasoline; CHEVRON and TEXACO MID-GRADE UNLEADED GASOLINES; CHEVRON and TEXACO PREMIUM UNLEADED GASOLINES; CHEVRON and TEXACO REGULAR UNLEADED GASOLINES; Chevron Mid-Grade Unleaded Gasoline; Chevron Plus Unleaded Gasoline; Chevron Premium Unleaded Gasoline; Chevron Regular Unleaded Gasoline; Chevron Supreme Plus Unleaded Gasoline; Chevron Supreme Unleaded Gasoline; Chevron UL/CQ Gasoline; GASOLINE (GENERIC); Gasolines; Texaco Power Plus Gasoline; Texaco Power Premium Unleaded Gasoline; Texaco Unleaded Gasoline; UNLEADED GASOLINE FOR EXPORT
Company Identification
Chevron Products Company
5001 Executive Parkway, Suite 200
San Ramon, CA 94583
United States of America

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency & Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
Product Information: (800) 582-3835
SDS Requests: lubemsds@chevron.com

SPECIAL NOTES: This SDS applies to: all motor gasoline.

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION:
- Flammable liquid: Category 1.
- Aspiration toxicant: Category 1.
- Carcinogen: Category 1B.
- Eye irritation: Category 2A.
- Germ Cell Mutagen: Category 1B.
- Reproductive toxicant (developmental): Category 2.
- Skin irritation: Category 2.
- Target organ toxicant (central nervous system): Category 3.
- Target organ toxicant (repeated exposure): Category 2.
- Acute aquatic toxicant: Category 2.
- Chronic aquatic toxicant: Category 2.

Signal Word: Danger
Physical Hazards:
- Extremely flammable liquid and vapour (H224).

Health Hazards:
- May be fatal if swallowed and enters airways (H304).
- Causes skin irritation (H315).
- Causes serious eye irritation (H319).
- May cause drowsiness or dizziness (H336).
- May cause genetic defects (H340).
- May cause cancer (H350).
- Suspected of damaging the unborn child (H361D).
- May cause damage to organs (Blood/Blood Forming Organs) through prolonged or repeated exposure (H373).

Environmental Hazards:
- Toxic to aquatic life with long lasting effects (H411).

PRECAUTIONARY STATEMENTS:
General:
- Keep out of reach of children (P102).
- Read label before use (P103).

Prevention:
- Obtain special instructions before use (P201).
- Do not handle until all safety precautions have been read and understood (P202).
- Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking (P210).
- Keep container tightly closed (P233).
- Keep cool (P235).
- Ground and bond container and receiving equipment (P240).
- Use explosion-proof electrical/ventilating/lighting/equipment (P241).
- Use non-sparking tools (P242).
- Take action to prevent static discharge (P243).
- Do not breathe dust/fume/gas/mist/vapours/spray (P260).
- Wash thoroughly after handling (P264).
- Use only outdoors or in a well-ventilated area (P271).
- Avoid release to the environment (P273).
- Wear protective gloves/protective clothing/eye protection/face protection (P280).

Response:
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician (P301+P310).
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower (P303+P361+P353).
- IF INHALED: Remove person to fresh air and keep comfortable for breathing (P304+P340).
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338).
- IF exposed or concerned: Get medical advice/attention (P308+P313).
- Specific treatment (see Notes to Physician on this label) (P321).
- Do NOT induce vomiting (P331).
- If skin irritation occurs: Get medical advice/attention (P332+P313).

- If eye irritation persists: Get medical advice/attention (P337+P313).
- Wash contaminated clothing before reuse (P363).
- In case of fire: Use media specified in the SDS to extinguish (P370+P378).
- Collect spillage (P391).

Storage:
- Store in a well-ventilated place. Keep container tightly closed (P403+P233).
- Store locked up (P405).

Disposal:
- Dispose of contents/container in accordance with applicable local/regional/national/international regulations (P501).

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

This material is a mixture.

COMPONENTS	CAS NUMBER	AMOUNT
Gasoline	86290-81-5	100 %volume
Toluene	108-88-3	1 - 35 %volume
Pentane, 2,2,4-trimethyl-	540-84-1	10 - 15 %volume
Xylene	1330-20-7	1 - 15 %volume
Trimethylbenzene (3 isomers: 1,2,3-; 1,2,4-; 1,3,5-isomer)	25551-13-7	5 - 10 %volume
Pentane isomers (pentanes)	Mixture	1 - 13 %volume
Butane	106-97-8	1 - 12 %volume
Ethanol	64-17-5	0 - 10 %volume
Hexane	110-54-3	1 - 5 %volume
Benzene	71-43-2	0.1 - 5 %volume
Heptane	142-82-5	1 - 4 %volume
Cyclohexane	110-82-7	1 - 3 %volume
Ethylbenzene	100-41-4	0.1 - 3 %volume
Methylcyclohexane	108-87-2	1 - 2 %volume
Naphthalene	91-20-3	0.1 - 2 %volume

Motor gasoline is considered a mixture by EPA under the Toxic Substances Control Act (TSCA). The refinery streams used to blend motor gasoline are all on the TSCA Chemical Substances Inventory. The appropriate CAS number for refinery blended motor gasoline is 86290-81-5. The product specifications of motor gasoline sold in your area will depend on applicable Federal and State regulations.

SECTION 4 FIRST AID MEASURES

Eye: Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.
Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.
Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry Chemical, CO2, Aqueous Film Forming Foam (AFFF) or alcohol resistant foam.
Unusual Fire Hazards: See Section 7 for proper handling and storage.
UNSUITABLE EXTINGUISHING MEDIA: No data available

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures:
Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.
Environmental Precautions:
Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater.
Methods and Material For Containment and Cleaning Up:
Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting:
Report spills to local authorities as appropriate or required.

SECTION 7 HANDLING AND STORAGE PRECAUTIONS

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Precautionary Measures: This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Never siphon gasoline by mouth.
Do not store in open or unlabeled containers. READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. Use only as a motor fuel. Do not use for cleaning, pressure appliance fuel, or any other such use. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.
Static Hazard: Improper filling of portable gasoline containers creates danger of fire. Only dispense gasoline into approved and properly labeled gasoline containers. Always place portable containers on the ground. Be sure pump nozzle is in contact with the container while filling. Do not use a nozzle's lock-open device. Do not fill portable containers that are inside a vehicle or truck/trailer bed.

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty

container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

ENGINEERING CONTROLS:
Use general ventilation, local exhaust ventilation, or a combination of both.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.
Skin Protection: Wear chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced. Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.7	7
Neoprene	0.61	7
Nitrile	0.8	60
Nitrile	0.23	2
Polyvinyl Chloride (PVC)	1.1	2
Viton Butyl	0.3	120

Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors. When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon

monoxide. If not, wear an approved positive-pressure air-supplying respirator.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Country/ Agency	Form	TWA	STEL	Ceiling	Notation
Gasoline	ACGIH	Vapor	300 ppm	500 ppm	--	A3
Gasoline	ACGIH	--	300 ppm	500 ppm	--	--
Toluene	ACGIH	--	20 ppm	--	--	--
Toluene	JSOH	--	188 mg/m3	--	--	Skin
Pentane, 2,2,4-trimethyl-	ACGIH	--	300 ppm	--	--	--
Pentane, 2,2,4-trimethyl-	JSOH	--	1400 mg/m3	--	--	--
Xylene	ACGIH	--	20 ppm	--	--	--
Xylene	JSOH	--	217 mg/m3	--	--	--
Trimethylbenzene (3 isomers: 1,2,3-; 1,2,4-; 1,3,5- isomer)	ACGIH	--	10 ppm	--	--	--
Butane	ACGIH	--	--	1000 ppm	--	--
Butane	JSOH	--	1200 mg/m3	--	--	--
Ethanol	ACGIH	--	1000 ppm	1000 ppm	--	A4
Hexane	ACGIH	--	50 ppm	--	--	Skin
Hexane	JSOH	--	140 mg/m3	--	--	Skin
Benzene	ACGIH	Vapor	0.50 ppm	2.50 ppm	--	--
Benzene	ACGIH	--	0.05 ppm	2.50 ppm	--	Skin
Benzene	CVX	Vapor	0.50 ppm	2.50 ppm	--	--
Heptane	ACGIH	--	400 ppm	500 ppm	--	--
Heptane	JSOH	--	820 mg/m3	--	--	--
Cyclohexane	ACGIH	--	100 ppm	--	--	--
Cyclohexane	JSOH	--	520 mg/m3	--	--	--
Ethylbenzene	ACGIH	Vapor	100 ppm	--	--	--
Ethylbenzene	ACGIH	--	20 ppm	--	--	--
Ethylbenzene	JSOH	--	87 mg/m3	--	--	Skin
Methylcyclohexane	ACGIH	--	400 ppm	--	--	--
Methylcyclohexane	JSOH	--	1600 mg/m3	--	--	--
Naphthalene	ACGIH	Vapor	10 ppm	15 ppm	--	A4 Skin
Naphthalene	ACGIH	--	10 ppm	--	--	Skin

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Colorless to yellow
Physical State: Liquid
Odor: Petroleum odor
Odor Threshold: No data available
pH: Not Applicable
Vapor Pressure: 5 psi - 15.50 psi (Typical) @ 37.8 °C (100 °F)
Relative Vapor Density: 3 - 4 (Typical)
Particle Characteristics: No data available
Boiling Point: 27.2°C (81°F) - 52.8°C (127°F) (Typical)

Solubility: Negligible
Freezing Point: Not Applicable
Melting Point: Not Applicable
Specific Gravity: 0.70 g/ml - 0.80 g/ml @ 15.6°C (60.1°F) (Typical)
Density: No data available
Viscosity: <1 SUS @ 37.8°C (100°F)
Evaporation Rate: No data available
n-Octanol/Water Partition Coefficient: 2 - 7
Combustion Characteristics (Solids/Gases): No data available
Decomposition Temperature: No data available
Boiling Range: No data available

FLAMMABLE PROPERTIES:
Flashpoint: (Tagliabue Closed Cup ASTM D56) < -45 °C (< -49 °F)

Autoignition: > 280 °C (> 536 °F)
Flammability (solid, gas): Not Applicable
Flammability (Explosive) Limits (% by volume in air): Lower: 1.4 Upper: 7.6

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: Not applicable
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 HAZARD INFORMATION

IMMEDIATE HEALTH EFFECTS
Eye: Contact with the eyes causes severe irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision.
Eye Irritation: This material causes serious eye irritation. The product has not been tested. The statement is based on evaluation of data for product components.

Skin: Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response.
Acute Dermal Toxicity: LD50: >3.75 g/kg (rabbit).
Skin Irritation: For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4.8/8.0.
Skin Sensitization: This material did not cause skin sensitization reactions in a Buehler guinea pig test.

Ingestion: Highly toxic; may be fatal if swallowed. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.
Acute Oral Toxicity: LD50: >5 ml/kg (rat).

Inhalation: Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of

consciousness, coma or death.
Acute Inhalation Toxicity: 4 hour(s) LD50: >20000 mg/m3 (rat).
Acute Toxicity Estimate: Not Determined

DELAYED OR OTHER HEALTH EFFECTS:
Reproductive Toxicity: Contains material that may cause harm to the unborn child if inhaled above the recommended exposure limit. This material is suspected of damaging the unborn child. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.
Carcinogenicity: Prolonged or repeated exposure to this material may cause cancer. Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).
Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).
This material may cause cancer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.
Germ Cell Mutagenicity: This material may cause genetic defects. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Target Organs: Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit: Blood/Blood Forming Organs
Specific Target Organ Toxicity - Single Exposure: This material may cause drowsiness or dizziness. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.
Specific Target Organ Toxicity - Repeated Exposure: This material may cause damage to organs through prolonged or repeated exposure. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.
Aspiration Hazard: This material is considered an aspiration hazard based on the kinematic viscosity of the material.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains naphthalene.
GENERAL TOXICITY: Exposure to naphthalene has been reported to cause methemoglobinemia and/or hemolytic anemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts.
REPRODUCTIVE TOXICITY AND BIRTH DEFECTS: Naphthalene did not cause birth defects when administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta. GENETIC TOXICITY: Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other in-vitro tests.CARCINOGENICITY: In a study conducted by the National Toxicology Program (NTP), mice exposed to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30,

and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

This product contains cyclohexane.
Cyclohexane primarily affects the central nervous systems of laboratory animals and humans. Acute or prolonged inhalation of cyclohexane at levels below the recommended exposure limits does not result in toxic effects while acute exposures to levels above these recommended limits can cause reversible central nervous system depression. Prolonged exposures of laboratory animals to high levels (up to low thousands of parts per million) have also caused reversible effects which included hyperactivity, diminished response to stimuli, and adaptive liver changes while very high levels (high thousands of parts per million) were fatal. No developmental effects were seen in rats or rabbits following exposures of up to 7000 ppm cyclohexane. No reproductive effects occurred in rats, although postnatal pup growth was reduced at 7000 ppm in a similar manner as observed in the parental animals. Cyclohexane has not been shown to be mutagenic in several in vitro and in vivo assays and has not produced tumors in several dermal application long-term bioassays. Based on these results and the lack of any mutagenic or genotoxic metabolites, cyclohexane is not expected to be mutagenic or genotoxic. Following dermal exposure, cyclohexane is rapidly absorbed, metabolized,and excreted.

This product contains butane.
An atmospheric concentration of 100,000 ppm (10%) butane is not noticeably irritating to the eyes, nose or respiratory tract, but will produce slight dizziness in a few minutes of exposure. No chronic systemic effect has been reported from occupational exposure.

This product contains benzene.
GENETIC TOXICITY/CANCER: Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.
REPRODUCTIVE/DEVELOPMENTAL TOXICITY: No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother. However, some evidence of fetal toxicity such as delayed physical development has been seen at such levels. The available information on the effects of benzene on human pregnancies is inadequate but it has been established that benzene can cross the human placenta.
OCCUPATIONAL: The OSHA Benzene Standard (29 CFR 1910.1028) contains detailed requirements for training, exposure monitoring, respiratory protection and medical surveillance triggered by the exposure level. Refer to the OSHA Standard before using this product.

This product contains n-hexane.
TARGET ORGAN TOXICITY: Prolonged or repeated ingestion, skin contact or breathing of vapors of n-hexane has been shown to cause peripheral neuropathy. Recovery ranges from no recovery to complete recovery depending upon the severity of the nerve damage. Exposure to 1000 ppm n-hexane for 18 hr/day for 61 days has been shown to cause testicular damage in rats. However, when rats were exposed to higher concentrations for shorter daily periods (10,000 ppm for 6 h/day, 5 days/wk for 13 weeks), no testicular lesions were seen.
CARCINOGENICITY: Chronic exposure to commercial hexane (52% n-hexane) at a concentration of 9000ppm was not carcinogenic to rats or to male mice, but did result in an increased incidence of liver tumors in female mice. No carcinogenic effects were observed in female mice exposed to 900 or 3000 ppm hexane or in male mice. The relevance for humans of these hexane-induced mouse liver tumors is questionable.
GENETIC TOXICITY: n-Hexane caused chromosome aberrations in bone marrow of rats, but was

negative in the AMES and mouse lymphoma tests.

This product contains ethanol (ethyl alcohol).
Chronic ingestion of ethanol can damage the liver, nervous system and heart. Chronic heavy consumption of alcoholic beverages has been associated with an increased risk of cancer. Ingestion of ethanol during pregnancy can cause human birth defects such as fetal alcohol syndrome.

Gasolines are highly volatile and can produce significant concentrations of vapor at ambient temperatures. Gasoline vapor is heavier than air and at high concentrations may accumulate in confined spaces to present both safety and health hazards. When vapor exposures are low, or short duration and infrequent, such as during refueling and tanker loading/unloading, neither total hydrocarbon nor components such as benzene are likely to result in any adverse health effects. In situations such as accidents or spills where exposure to gasoline vapor is potentially high, attention should be paid to potential toxic effects of specific components. Information about specific components in gasoline can be found in Sections 2/3, 8 and 15 of this SDS. More detailed information on the health hazards of specific gasoline components can be obtained calling the Chevron Emergency Information Center (see Section 1 for phone numbers).

Pathological misuse of solvents and gasoline, involving repeated and prolonged exposure to high concentrations of vapor is a significant exposure on which there are many reports in the medical literature. As with other solvents, persistent abuse involving repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments.

Lifetime inhalation of wholly vaporized unleaded gasoline at 2056 ppm has caused increased liver tumors in female mice and kidney cancer in male rats. In their 1988 review of carcinogenic risk from gasoline, The International Agency for Research on Cancer (IARC) noted that, because published epidemiology studies did not include any exposure data, only occupations where gasoline exposure may have occurred were reviewed. These included gasoline service station attendants and automobile mechanics. IARC also noted that there was no opportunity to separate effects of combustion products from those of gasoline itself. Although IARC allocated gasoline a final overall classification of Group 2B, i.e. possibly carcinogenic to humans, this was based on limited evidence in experimental animals plus supporting evidence including the presence in gasoline of benzene. The actual evidence for carcinogenicity in humans was considered inadequate.

MUTAGENICITY: Gasoline was not mutagenic, with or without activation, in the Ames assay (Salmonella typhimurium), Saccharamyces cerevisesae, or mouse lymphoma assays. In addition, point mutations were not induced in human lymphocytes. Gasoline was not mutagenic when tested in the mouse dominant lethal assay. Administration of gasoline to rats did not cause chomosomal aberrations in their bone marrow cells. EPIDEMIOLOGY: To explore the health effects of workers potentially exposed to gasoline vapors in the marketing and distribution sectors of the petroleum industry, the American Petroleum Institute sponsored a cohort mortality study (Publication 4555), a nested case-control study (Publication 4551), and an exposure assessment study (Publication 4552). Histories of exposure to gasoline were reconstructed for cohort of more than 18,000 employees from four companies for the time period between 1946 and 1985. The results of the cohort mortality study indicated that there was no increased mortality from either kidney cancer or leukemia among marketing and marine distribution employees who were exposed to gasoline in the petroleum industry, when compared to the general population. More importantly, based on internal comparisons, there was no association between mortality from kidney cancer or leukemia and various indices of gasoline exposure. In particular, neither duration of employment, duration of exposure, age at first exposure, year of first exposure, job category, cumulative exposure, frequency of peak exposure, nor average intensity of exposure had any effect on kidney cancer or leukemia mortality. The results of the nested case-control study confirmed the findings of the original cohort study. That is, exposure to gasoline at the levels experienced by this cohort of distribution workers is not a significant risk factor for leukemia (all cell types), acute myeloid leukemia, kidney cancer or multiple myeloma.

This product contains ethylbenzene.
BIRTH DEFECTS AND REPRODUCTION: Ethylbenzene is not expected to cause birth defects or other developmental effects based on well-conducted studies in rabbits and rats sponsored by NIOSH. Other studies in rats and mice which reported urinary tract malformations have many deficiencies and have limited usefulness in evaluating human risk. Reproductive effects are not expected based on a NIOSH study of fertility, and lack of effects observed for sperm counts and motility, estrous cycle and pathology of reproductive organs following repeated exposures. HEARING: Statistically significant losses in outer hair cells (OHCs) were observed in rats exposed to >=200 ppm ethylbenzene, 6 hours/day, 6 days/week for 13 weeks, after an 8-week recovery period. Following longer exposure, inner hair cells losses were also observed in rats exposed to >= 600 ppm ethylbenzene, but only occasionally in rats exposed to 400 ppm. The Lowest Observed Adverse Effect Level in rats (LOAEL) was 200 ppm for losses of OHCs. Guinea pigs exposed to ethylbenzene at 2,500 ppm, 6 hours/day for 5 days did not show auditory deficits or losses in OHCs. The concentration of ethylbenzene used in the JP-8 study was approximately 10 ppm. GENETIC TOXICITY: Ethylbenzene tested negative in the bacterial mutation test, Chinese Hamster Ovary (CHO) cell in vitro assay, sister chromatid exchange assay and an unscheduled DNA synthesis assay. Conflicting results have been reported for the mouse lymphoma cell assay. Increased micronuclei were reported in an in vitro Syrian hamster embryo cell assay; however, two in vivo micronuclei studies in mice were negative. In Syrian hamster embryo cells in vitro, cell transformation was observed at 7 days of incubation but not at 24 hours. Based on these results, ethylbenzene is not expected to be mutagenic or clastogenic. CARCINOGENICITY: In studies conducted by the National Toxicology Program, rats and mice were exposed to ethylbenzene at 25, 250 and 750 ppm for six hours per day, five days per week for 103 weeks. In rats exposed to 750 ppm, the incidence of kidney tubule hyperplasia and tumors was increased. Testicular tumors develop spontaneously in nearly all rats if allowed to complete their natural life span; in this study, the development of these tumors appeared to be enhanced in male rats exposed to 750 ppm. In mice, the incidences of lung tumors in males and liver tumors in females exposed to 750 ppm were increased as compared to control mice but were within the range of incidences observed historically in control mice. Other liver effects were observed in male mice exposed to 250 and 750 ppm. The incidences of hyperplasia were increased in the pituitary gland in female mice at 250 and 750 ppm and in the thyroid in male and female mice at 750 ppm.

This product contains toluene.
GENERAL TOXICITY: The primary effects of exposure to toluene in animals and humans are on the central nervous system. Solvent abusers, who typically inhale high concentrations (thousands of ppm) for brief periods of time, in addition to experiencing respiratory tract irritation, often suffer permanent central nervous system effects that include tremors, staggered gait, impaired speech, hearing and vision loss, and changes in brain tissue. Death in some solvent abusers has been attributed to cardiac arrhythmias, which appear to be have been triggered by epinephrine acting on solvent sensitized cardiac tissue. Although liver and kidney effects have been seen in some solvent abusers, results of animal testing with toluene do not support these as primary target organs.
HEARING: Humans who were occupationally exposed to concentrations of toluene as low as 100 ppm for long periods of time have experienced hearing deficits. Hearing loss, as demonstrated using behavioral and electrophysiological testing as well as by observation of structural damage to cochlear hair cells, occurred in experimental animals exposed to toluene. It also appears that toluene exposure and noise may interact to produce hearing deficits.
COLOR VISION: In a single study of workers exposed to toluene at levels under 50 ppm, small decreases in the ability to discriminate colors in the blue-yellow range have been reported for female workers. This effect, which should be investigated further, is very subtle and would not likely have been noticed by the people tested.
REPRODUCTIVE/DEVELOPMENTAL TOXICITY: Toluene may also cause mental and/or growth retardation in the children of female solvent abusers who directly inhale toluene (usually at thousands of ppm) when they are pregnant. Toluene caused growth retardation in rats and rabbits when administered at doses that were toxic to the mothers. In rats, concentrations of up to 5000 ppm did not cause birth defects. No effects were observed in the offspring at doses that did not intoxicate the pregnant animals. The exposure level at which no effects were seen (No Observed Effect Level, NOEL) is 750 ppm in the

rat and 500 ppm in the rabbit.

This product contains xylene.
ACUTE TOXICITY: The primary effects of exposure to xylene in animals and humans are on the central nervous system. In addition,in some individuals, xylene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation. DEVELOPMENTAL TOXICITY: Xylene has been reported to cause developmental toxicity in rats and mice exposed by inhalation during pregnancy. The effects noted consisted of delayed development and minor skeletal variations. In addition, when pregnant mice were exposed by ingestion to a level that killed nearly one-third of the test group, lethality (resorptions) and malformations (primarily cleft palate) occurred. Since xylene can cross the placenta, it may be appropriate to prevent exposure during pregnancy. GENETIC TOXICITY/CARCINOGENICITY: Xylene was not genotoxic in several mutagenicity testing assays including the Ames test. In a cancer study sponsored by the National Toxicology Program (NTP),technical grade xylene gave no evidence of carcinogenicity in rats or mice dosed daily for two years. HEARING: Mixed xylenes have been shown to cause measurable hearing loss in rats exposed to 800 ppm in the air for 14 hours per day for six weeks. Exposure to 1450 ppm xylene for 8 hours caused hearing loss while exposure to 1700 ppm for 4 hours did not. Although no information is available for lower concentrations, other chemicals that cause hearing loss in rats at relatively high concentrations do not cause hearing loss in rats at low concentrations. Worker exposure to xylenes at the permissible exposure limit (100 ppm, time-weighted average) is not expected to cause hearing loss.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
Gasoline studies have been conducted in the laboratory under a variety of test conditions with a range of fish and invertebrate species. An even more extensive database is available on the aquatic toxicity of individual aromatic constituents. The majority of published studies do not identify the type of gasoline evaluated, or even provide distinguishing characteristics such as aromatic content or presence of lead alkyls. As a result, comparison of results among studies using open and closed vessels, different ages and species of test animals and different gasoline types, is difficult.

The bulk of the available literature on gasoline relates to the environmental impact of monoaromatic (BTEX) and diaromatic (naphthalene, methylnaphthalenes) constituents. In general, non-oxygenated gasoline exhibits some short-term toxicity to freshwater and marine organisms, especially under closed vessel or flow-through exposure conditions in the laboratory. The components which are the most prominent in the water soluble fraction and cause aquatic toxicity, are also highly volatile and can be readily biodegraded by microorganisms.

This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

48 hour(s) LC50: 3.0 mg/l (Daphnia magna)
96 hour(s) LC50: 1.8 mg/l (Mysidopsis bahia)
96 hour(s) LC50: 8.3 mg/l (Cyprinodon variegatus)
96 hour(s) LC50: 2.7 mg/l (Oncorhynchus mykiss)

MOBILITY IN SOIL
No data available.

PERSISTENCE AND DEGRADABILITY
This material is expected to be readily biodegradable. Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the

weathering of spilled gasoline.

The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/l. Solubility data on individual gasoline constituents also available.

The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE
Bioconcentration Factor: No data available.
Octanol/Water Partition Coefficient: 2 - 7

ADVERSE EFFECTS FOR OZONE LAYER:
No data available.

SECTION 13 NOTES ON DISPOSAL

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

UN Shipping Description: UN1203, GASOLINE, 3, II

IMO/IMDG Shipping Description: UN1203, GASOLINE, 3, II, FLASH POINT SEE SECTION 9, MARINE POLLUTANT (GASOLINE)

ICAO/IATA Shipping Description: UN1203, GASOLINE, 3, II

Domestic Regulatory Information
Land Regulatory Information: subject to the provisions of the Fire Service Act
Maritime Regulatory Information: subject to the provisions of the Ship Safety Act
Aviation Regulatory Information: subject to the provisions of the Civil Aeronautics Act

SECTION 15 REGULATORY INFORMATION

REGULATORY LISTS SEARCHED:
01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B
02-1=PRTR (Pollutant Release and Transfer Register) Class 1
02-2=PRTR (Pollutant Release and Transfer Register) Class 2
03-1=Industrial Safety and Health Law (Harmful Substances, etc., Prohibited for Manufacture)
03-2=Industrial Safety and Health Law (Harmful Substances Subject to Obtaining Permission for Manufacturing)
03-3=Industrial Safety and Health Law (Harmful Substances Whose Names, etc., are to Be Indicated)
03-4=Industrial Safety and Health Law (Notifiable Substances)
04-1=Poisonous and Deleterious Substances Control Law (Poisonous substance)
04-2=Poisonous and Deleterious Substances Control Law (Deleterious substance)

The following components of this material are found on the regulatory lists indicated.

Gasoline	01-2B
Toluene	02-1, 03-3, 03-4, 04-2
Pentane, 2,2,4-trimethyl-	02-2, 03-3
Xylene	02-1, 03-3, 03-4, 04-2
Trimethylbenzene (3 isomers: 1,2,3-; 1,2,4-; 1,3,5-isomer)	02-1, 03-3, 03-4
Butane	03-3, 03-4
Ethanol	01-1, 03-3, 03-4
Hexane	02-1, 03-3, 03-4
Benzene	01-1, 02-1, 03-1, 03-3, 03-4
Heptane	02-1, 03-3, 03-4
Cyclohexane	02-1, 03-3, 03-4
Ethylbenzene	01-2B, 02-1, 03-3, 03-4
Methylcyclohexane	03-3, 03-4
Naphthalene	01-1, 01-2B, 02-1, 03-3, 03-4

JAPANESE FIRE LAW: Group 4, Class 1 Petroleum

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AIIC (Australia), DSL (Canada), EINECS (European Union), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan).

SECTION 16 OTHER INFORMATION

REVISION STATEMENT: SECTION 08 - Engineering Control Measures information was modified.
SECTION 08 - General Considerations information was modified.
SECTION 08 - Occupational Exposure Limit Table information was modified.
SECTION 08 - Personal Protective Equipment List information was deleted.
SECTION 08 - Personal Protective Equipment information was added.
SECTION 08 - Skin Protection information was modified.
SECTION 15 - Regulatory Information information was modified.

Revision Date: 2023/03/01

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	

Prepared according to JIS Z 7253:2019 / JIS Z 7252:2019 by Chevron Technical Center, 6001 Bollinger Canyon Road, San Ramon, CA 94583.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is

furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

SAFETY DATA SHEET

Lucas SAE 80W-90 Gear Oil

Section 1. Identification

GHS product identifier : Lucas SAE 80W-90 Gear Oil

Other means of identification : Not available.

Product number : 10043, 10046, 10066, 10067, 10069

Relevant identified uses of the substance or mixture and uses advised against

Lubricating oil.

Supplier's details : Lucas Oil Products, Inc
302 North Sheridan Street
Corona, California 92880-2067
Toll Free: (800) 342-2512
Tel: (951) 270-0154
Fax: (951) 270-1902
Website: www.LucasOil.com

Emergency telephone number (with hours of operation) : (951) 493-1149
(951) 847-5949
Markn@lucasoil.com

7:00A.M. to 5:00P.M. Monday thru Friday

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : Not available.

Ingredient name	%	CAS number
Lubricating oils, petroleum, c>25, hydrotreated bright stock-based Dec-1-ene, oligomers, hydrogenated	30 - 60 10 - 30	72623-83-7 68037-01-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	None known.
Specific hazards arising from the chemical	:	No specific fire or explosion hazard.
Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
Special protective actions for fire-fighters	:	No special precaution is required.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill	:	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Lubricating oils, petroleum, c>25, hydrotreated bright stock-based	ACGIH TLV (United States, 3/2012). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 6/2009). TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist OSHA PEL (United States, 6/2010). TWA: 5 mg/m³ 8 hours.

Appropriate engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	:	Liquid. [Clear.]
Color	:	Amber.
Odor	:	Petroleum. Sulfur.
Odor threshold	:	Not available.
pH	:	Not available.
Melting point	:	Not available.
Boiling point	:	>260°C (>500°F)
Flash point	:	Closed cup: 212.77°C (415°F)
Burning time	:	Not applicable.
Burning rate	:	Not applicable.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	0.9042
Solubility	:	Negligible at 25°C
Solubility in water	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Kinematic (100°C (212°F)): 0.15 cm^2/s (15 cSt)

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

Skin	:	There is no data available.

Section 11. Toxicological information

Eyes : There is no data available.

Respiratory : There is no data available.

Sensitization

Skin : There is no data available.

Respiratory : There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available. Specific target organ toxicity (repeated exposure) There is no data available.

Aspiration hazard

Name	Result
Lubricating oils, petroleum, c>25, hydrotreated bright stock-based Dec-1-ene, oligomers, hydrogenated	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Section 11. Toxicological information

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : There is no data available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-

Section 14. Transport information

Environmental hazards	No.	No.	No.
Additional information	-	-	-

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: Antimony, dialkyl dithiocarbamate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Antimony, dialkyl dithiocarbamate	15890-25-2	1 - 5
Supplier notification	Antimony, dialkyl dithiocarbamate	15890-25-2	1 - 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

Section 15. Regulatory information

New Jersey : The following components are listed: Lubricating oils, petroleum, c>25, hydrotreated bright stock-based; Distillates (petroleum), hydrotreated heavy paraffinic; Distillates (petroleum), hydrotreated heavy naphthenic; Antimony, dialkyl dithiocarbamate

Pennsylvania : The following components are listed: Antimony, dialkyl dithiocarbamate

California Prop. 65

No products were found.

International regulations

International lists : Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 0 Flammability : 1 Physical hazards : 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 0 Flammability : 1 Instability : 0

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History

Date of issue mm/dd/yyyy : 12/30/2012

Version : 1

Revised Section(s) : Not applicable.

Prepared by : KMK Regulatory Services Inc.

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Red "N" Tacky Grease NLGI # 2

Section 1. Identification

GHS product identifier : Red "N" Tacky Grease NLGI # 2

Other means of identification : Not available.

Product number : 10005, 10027, 10028, 10029, 10574

Recommended use:

Grease. Uses per label recommendations.

Supplier's details : Lucas Oil Products, Inc
3199 Harrison Way NW
Corydon, Indiana 92878-4067 USA
Toll Free: (800) 342-2512
Tel: (951) 270-0154
Fax: (951) 270-1902
Website: www.LucasOil.com

Emergency telephone number (with hours of operation) : ChemTel 24 hrs/day, 365 days/yea
1-800-255-3924 (USA, Canada, Puerto Rico, US V.I.)
1-813-248-0585 (International)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Causes serious eye damage.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear eye or face protection. Avoid release to the environment. Wash hands thoroughly after handling.

Section 2. Hazards identification

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number: : Not applicable.

Ingredient name	%	CAS number
Zinc Alkyldithiophosphate	1 - 5	68649-42-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Skin contact : No known significant effects or critical hazards.

Ingestion : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : No specific data.

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : No special precaution is required.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Semi-solid. [Grease.]

Color : Red.

Odor : Mild. Petroleum oil.

Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : Not available.

Section 9. Physical and chemical properties

Flash point	:	Not available.
Burning time	:	Not available.
Burning rate	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	0.9
Solubility	:	Negligible at 25°C
Solubility in water	:	0 g/l
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Excessive heat.
Incompatible materials	:	Reactive or incompatible with the following materials: strong oxidizers.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Zinc Alkyldithiophosphate	Eyes - Irritant	Rabbit	-	-	-

Sensitization

Skin	:	There is no data available.
Respiratory	:	There is no data available.

Section 11. Toxicological information

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Skin contact : No known significant effects or critical hazards.

Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Zinc Alkyldithiophosphate	Acute EC50 1 to 5 mg/L Acute EC50 1 to 1.5 mg/L Chronic LC50 1 to 5 mg/L	Algae Crustaceans Fish	96 hours 48 hours 96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : There is no data available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

Special precautions for user : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :
TSCA 8(a) PAIR: Zinc Alkyldithiophosphate
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 307: Zinc Alkyldithiophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

Section 15. Regulatory information

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Zinc Alkyldithiophosphate	1 - 5	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Zinc Alkyldithiophosphate	68649-42-3	1 - 5
Supplier notification	Zinc Alkyldithiophosphate	68649-42-3	1 - 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: Distillates (petroleum), hydrotreated heavy naphthenic; Distillates (petroleum), solvent-dewaxed heavy paraffinic; Zinc Alkyldithiophosphate

Pennsylvania : The following components are listed: Zinc Alkyldithiophosphate

California Prop. 65

Not applicable.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability :** 0 **Physical hazards :** 0

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The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability :** 0 **Instability :** 0

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue mm/dd/yyyy : 06/12/2023

Version : 1.1

Prepared by : KMK Regulatory Services Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MATERIAL SAFETY DATA SHEET
McCormick and Company, Inc

773302 - RED FOOD COLOR

DATE PRINTED : 02/04/2010

Section 1 - Product and Company Information

PRODUCT NAME : RED FOOD COLOR
FORMULA # : 773302

SUPPLIER : McCormick and Company, Inc
18 Loveton Circle
Sparks, Maryland 21152
(410) 771-7500 8:30AM - 5:00PM EST

CHEMTREC - 24 HOUR EMERGENCY : 800-424-9300

Section 2 - Hazards Identification

EMERGENCY OVERVIEW

APPEARANCE: Dark red liquid
ODOR : Odorless
NFPA HAZARD CLASSIFICATIONS : Health : 1 **Flammability :** 1 **Reactivity :** 1

POTENTIAL HEALTH EFFECTS

All ingredients contained in this product are approved for use in a regulation of the Food and Drug Administration or on the FEMA GRAS List. Based on health hazard determination of ingredients contained at a concentration of one percent or greater, this mixture may exhibit the following health hazards:

ACUTE EFFECTS
Inhalation: Inhalation may cause respiratory irritation.
Eye: May be irritating to eyes.
Skin: May be irritating to skin.
Ingestion: Does not constitute a health hazard.
PRIMARY TARGET ORGANS: No known effect.
CHRONIC EFFECTS: Prolonged or repeated exposure may cause allergic reaction in certain sensitive individuals.

Section 3 - Composition/Information on Ingredients

With the exception of the items listed below, the identity of individual components of this mixture is proprietary information and is considered to be a trade secret.

PRINCIPAL HAZARDOUS COMPONENT(S)	CAS NUMBER
PROPYLENE GLYCOL	57-55-6
FD&C RED #40	25956-17-6

RELATED PACK CODES
900329677, 900329422, 900306712, 900306711, 900299388, 900141383, 900058093, 900058051, 900057990, 900036400, 900033170, 900033169, 900033144, 900033143, 900031461, 900024102, 900024100, 996784, 988835, 986015, 982096, 974411, 974410, 930651, 930650, 910045, 907107, 907091, 773302

Section 4 - First Aid Measures

EYE CONTACT : In the event of contact with eyes, irrigate with water for at least 15 minutes; obtain medical advice immediately.
SKIN CONTACT : Remove contaminated clothes. Wash affected area with water. If irritation persists, obtain medical advice.
INHALATION : Remove to fresh air and seek medical attention if necessary.
INGESTION : In the event of accidental ingestion, rinse mouth with water. Give up to one tumbler (half pint) of milk or water. Obtain medical advice immediately.

Section 5 - Fire-Fighting Measures

FLASH POINT : > 98 °C / > 210 °F
EXTINGUISHING MEDIA : Water, Foam, Carbon dioxide (CO2), Dry chemical
FIRE FIGHTING PROCEDURES : Use standard procedures and preferred extinguishing media above.
UNUSUAL FIRE AND EXPLOSION HAZARDS : None
HAZARDOUS COMBUSTION PRODUCTS (Released upon burning) : Carbon monoxide, Carbon dioxide, Smoke
SPECIAL PROTECTIVE EQUIPMENT : For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

Section 6 - Accidental Release Measures

LAND SPILL : Absorb spill with inert material (e.g., cloth, sand, sawdust) and then place in suitable containers for recycling or disposal. Consult an expert on disposal of recovered material and ensure conformity to local, state, and federal disposal regulations.
WATER SPILL : Prevent additional discharge of material, if possible to do so without hazard. Advise authorities if floating material enters a watercourse or sewer. If possible, try to contain floating material and skim from surface. Consult an expert on disposal of recovered material and ensure conformity to local, state, and federal disposal regulations.
PERSONAL PRECAUTIONS : Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Section 7 - Handling and Storage

HANDLING : Keep product away from heat and open flame. Keep container closed when not in use. See Section 8 for additional personal protection advice when handling this product.
STORAGE : Store in a cool, dry area with adequate ventilation.
EMPTY CONTAINER WARNING : Empty containers may retain residue (including vapors) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with government regulations.

RELATED PACK CODES
900329677, 900329422, 900306712, 900306711, 900299388, 900141383, 900058093, 900058051, 900057990, 900036400, 900033170, 900033169, 900033144, 900033143, 900031461, 900024102, 900024100, 996784, 988835, 986015, 982096, 974411, 974410, 930651, 930650, 910045, 907107, 907091, 773302

Section 8 - Exposure Controls/Personal Protection

ENGINEERING CONTROLS : Ventilation should be provided to control worker exposures and prevent health risk.
RESPIRATORY PROTECTION : Respiratory protection recommended when adequate ventilation is not available. Whenever workplace conditions warrant a respirator's use, seek professional guidance prior to respirator selection and follow OSHA respirator regulations (29 CFR 1910.134).

EYE PROTECTION : Safety glasses recommended.
SKIN PROTECTION : Where contact is likely, wear protective gloves or clothing.
OTHER PROTECTION : None required.

EXPOSURE GUIDELINES :

Component	OSHA PEL	ACGIH TLV	ACGIH STEL	Supplier
PROPYLENE GLYCOL	None	None	None	None
FD&C RED #40	None	None	None	None

GENERAL HYGIENE CONSIDERATIONS : Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

APPEARANCE : Dark red liquid
ODOR : Odorless
FLASH POINT : > 98 °C / > 210 °F
DENSITY : 8.57 LB/GAL
SOLUBILITY IN WATER : Soluble

Section 10 - Stability and Reactivity

STABILITY : Presents no significant reactivity hazard.
INCOMPATIBILITY (MATERIALS TO AVOID) : Avoid strong oxidizing agents.
POSSIBILITY OF HAZARDOUS REACTIONS : Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS : Product does not undergo explosive decomposition.
CONDITIONS TO AVOID : Extreme heat and high energy sources of ignition.

Section 11 - Toxicological Information

ACUTE EYE EFFECTS : Not established.
ACUTE DERMAL EFFECTS : Not established.
ACUTE INHALATION EFFECTS : Not established.

RELATED PACK CODES
900329677, 900329422, 900306712, 900306711, 900299388, 900141383, 900058093, 900058051, 900057990, 900036400, 900033170, 900033169, 900033144, 900033143, 900031461, 900024102, 900024100, 996784, 988835, 986015, 982096, 974411, 974410, 930651, 930650, 910045, 907107, 907091, 773302

ACUTE ORAL EFFECTS : Not established.

Section 12 - Ecological Information

No specific ecological data are available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

Section 13 - Disposal Considerations

Incineration or sanitary landfill in accordance with local, state, and federal regulations.

Section 14 - Transport Information

DEPARTMENT OF TRANSPORTATION (DOT) :
Not regulated by road. Consult your transportation compliance group for possible classifications pertaining to other modes of transport.

Section 15 - Regulatory Information

All ingredients contained in this product are approved for use in a regulation of the Food and Drug Administration or on the FEMA GRAS List.

Section 16 - Other Information

The information contained in this MSDS is based on data available to us at this time. Although reasonable care has been taken in the preparation of this MSDS, no warranty of merchantability, fitness for any particular purpose, or any other warranty is expressed or is to be implied regarding the accuracy or completeness of this information, the results to be obtained from the use of this information or the product, the safety of this product or the hazards related to its use.

****

PREPARED BY : McCormick and Company, Inc
REVISION DATE : 02/04/2010 **VERSION :** 1

****
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RELATED PACK CODES
900329677, 900329422, 900306712, 900306711, 900299388, 900141383, 900058093, 900058051, 900057990, 900036400, 900033170, 900033169, 900033144, 900033143, 900031461, 900024102, 900024100, 996784, 988835, 986015, 982096, 974411, 974410, 930651, 930650, 910045, 907107, 907091, 773302

LeakMaster Leak Locating Dye-Fluorescent Yellow

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 12/31/2015 Date of issue: 12/31/2015 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: LeakMaster Leak Locating Dye-Fluorescent Yellow

Product Code: #FT601, #FT606, #FT665, #FD601

1.2. Intended Use of the Product

Use of the substance/mixture: Swimming Pool Leak Location.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Anderson Manufacturing Co. Inc
2885 Country Drive #190
Saint Paul, MN 55117
T: 651-484-1316
www.leaktools.com

1.4. Emergency Telephone Number

Emergency Number : 651-484-1316

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US classification

Not classified

2.2. Label Elements

GHS-US Labeling

No labeling applicable

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5	97.46	Not classified
C.I. Acid Yellow 73	(CAS No) 518-47-8	2.54	Not classified

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle in accordance with standard industrial practices, and ensure appropriate usage.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Products: Strong acids, strong bases, strong oxidizers, water reactive materials.

7.3. Specific End Use(s)

Swimming Pool Leak Location.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

8.2. Exposure Controls

Appropriate Engineering Controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment : Gloves. Protective clothing. Protective goggles.

Materials for Protective Clothing : Chemically resistant materials and fabrics.

Hand Protection : Wear protective gloves.

Eye Protection : Chemical safety goggles.

Skin and Body Protection : Wear suitable protective clothing.

Respiratory Protection : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information : When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Fluorescent Yellow
Odor	: None
Odor Threshold	: No data available
pH	: ≈ 7.0
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20 °C	: No data available
Relative Density	: No data available
Solubility	: Water: Yes
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers, water reactive materials.

10.6. Hazardous Decomposition Products: Thermal decomposition generates : Carbon oxides (CO, CO_2).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

C.I. Acid Yellow 73 (518-47-8)	
LD50 Oral Rat	6721 mg/kg

Skin Corrosion/Irritation: Not classified

pH: ≈ 7.0

Serious Eye Damage/Irritation: Not classified

pH: ≈ 7.0

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

12.2. Persistence and Degradability

LeakMaster Leak Locating Dye-Fluorescent Yellow	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

LeakMaster Leak Locating Dye-Fluorescent Yellow	
Bioaccumulative Potential	Not established.

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

C.I. Acid Yellow 73 (518-47-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations

Neither this product nor its chemical components appear on any US state lists.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 12/31/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

HASACHLOR

Safety Data Sheet

12.5% Sodium Hypochlorite

Emergency 24 Hour Telephone: **CHEMTREC 800.424.9300**

Corporate Headquarters: Hasa Inc.
P.O. Box 802736
Santa Clarita, CA 91355
Telephone • 661.259.5848
Fax • 661.259.1538

SECTION 1: IDENTIFICATION			
1.1	**Product Identification:**		
	1.1.1	**Product Name:**	HASACHLOR
	1.1.2	**CAS #** (Chemical Abstracts Service)**:**	7681-52-9
	1.1.3	**RTECS** (Registry of Toxic Effects of Chemical Substances)**:**	NH3486300
	1.1.4	**EINECS** (European Inventory of Existing Commercial Substances)**:**	231-668-3
	1.1.5	**EC Number:**	231-668-3
	1.1.6	**Synonym:**	Bleach, Hypo, Hypochlorite, Liquid Chlorine Solution
	1.1.7	**Chemical Name:**	Sodium Hypochlorite
	1.1.8	**Chemical Formula:**	NaOCl
1.2	**Recommended Uses:**		Sanitizer of swimming pool and spa water.
1.3	**Company Identification:**		Hasa Inc. P. O. Box 802736 Santa Clarita, CA 91355
1.4	**Emergency Telephone Number:**		**CHEMTREC** 1-800-424-9300 (24 hour Emergency Telephone)
1.5	**Non-Emergency Assistance:**		661-259-5848 (8 AM – 5 PM PST / PDT)

SECTION 2: HAZARD(S) IDENTIFICATION

HEALTH HAZARD	Skin corrosion / irritation:	Category 1
	Serious Eye damage / Eye Irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 (respiratory tract irritation)
ENVIRONMENTAL HAZARD	Hazardous to the aquatic environment, acute hazard	Category 1
PHYSICAL HAZARD	Corrosive to metals.	Category 1
SYMBOLS	  	
SIGNAL WORD	**DANGER**	
HAZARD STATEMENT	May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. Very toxic to aquatic life.	
PRECAUTIONARY STATEMENT	**Prevention**	
	Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Keep only in original container. Avoid release to the environment.	
	Response	
	If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Collect spillage.	
	Storage and Disposal	
	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container. Dispose of container/contents in accordance with local, regional, national, international regulations as specified.	

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS

	Ingredient	Synonyms	CAS No.	Weight %
3.1	Sodium Hypochlorite	Bleach	7681-52-9	12.5%
3.2	Sodium Hydroxide	Caustic Soda	1310-73-2	0.2%

SECTION 4: FIRST AID MEASURES

4.1	**IF IN EYES**	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
4.2	**IF ON SKIN OR CLOTHING**	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
4.3	**IF INHALED**	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
4.4	**IF SWALLOWED**	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5: FIRE FIGHTING MEASURES

5.1	**Flash Point:**		Not applicable.
5.2	**Flammability:**		Nonflammable and noncombustible.
5.3	**Auto-Ignition Temperature:**		Not applicable.
5.4	**Products of Combustion:**		Not pertinent.
5.5	**Fire Hazards:**		May decompose, generating irritating chlorine gas.
5.6	**Explosion Hazards:**		Not explosive.
5.7	**Fire Fighting Media and Instructions:**		
	5.7.1	**Extinguishing Media:**	Water fog. Foam. Dry chemical powder. Carbon dioxide.
	5.7.2	**Small Fires:**	Use carbon dioxide, or water spray.
	5.7.3	**Large Fires:**	Use flooding quantities of water as fog.
5.8	**Special Remarks on Fire Hazards:**		Do not use Mono Ammonium Phosphate (MAP) fire extinguishers. Such use may cause explosion with release of toxic gases.

SECTION 6: ACCIDENTAL RELEASE MEASURES		
6.1	**Small Spill:**	Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
6.2	**Large Spill:**	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.
6.3	**Personal Precautions, Protective Equipment & Emergency Procedures:**	Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Absorb spillage to prevent material damage. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.
6.4	**Environmental Precautions:**	Do not discharge into drains, water courses or onto the ground. Environmental manager must be informed of all major releases.

SECTION 7: HANDLING AND STORAGE		
7.1	**Handling:**	• Avoid contact with skin or eyes. • Do not ingest. • Avoid inhalation of vapor or mist. • Wear protective equipment if necessary. • Mix only with water in accordance with label directions. • Mixing this product with ammonia, acids, detergents, etc or with organic materials, e.g. feces, urine, etc. will release chlorine gas, which is irritating to eyes, lungs, and mucous membranes.
7.2	**Hygiene Measures:**	• Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. • While handling this product, avoid eating, drinking or smoking.
7.3	**Storage:**	• Do not freeze. • Store in a cool, shaded outdoor area. • Inside storage should be in a cool, dry, well-ventilated area. • To maintain hypochlorite strength, do not store in direct or heated indoor areas. • Keep in original vented container. • Keep container closed when not in use. • Do not store adjacent to chemicals that may react if spillage occurs. • If closed containers become heated, vent to release decomposition products (mainly oxygen under normal decomposition).

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1	**Engineering Controls:**		Local exhaust ventilation to maintain levels below STEL (Short Term Exposure Limit) of 1 ppm as chlorine.	
8.2	**Personal Protection:**			
	8.2.1	**Eye / Face Protection:**	Wear safety glasses, goggles or face shield to prevent eye contact.	
	8.2.2	**Skin Protection:**	Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Butyl rubber, Neoprene, or Nitrile Gloves should be worn when handling this material. Wear chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing promptly and wash before reuse. Clean protective equipment before reuse.	
	8.2.3	**Respiratory Protection:**	Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and chemical goggles. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus.	
	8.2.4	**Other Safety Equipment:**	Eye wash facility and emergency shower should be in close proximity.	
8.3	**Exposure Limits:**		**Sodium Hypochlorite**	**Chlorine***
	8.3.1	**AIHA** (American Industrial Hygiene Association) / **WEEL** (Workplace Environmental Exposure Level guides) 2010	2 mg/m^3: 15 minute. (Short-term time weighted average)	Not established
	8.3.2	**ACGIH** (American Conference of Governmental Industrial Hygienists) **TWA** (Time Weighted Average)	Not established.	0.5 ppm
	8.3.3	**ACGIH STEL** (Short Term Exposure Limit)	Not established.	1 ppm
	8.3.4	**OSHA PEL** (Permisible Exposure Limit)	Not established.	0.5 ppm
	8.3.5	**ACGIH** Ceiling	Not established.	Not established
	8.3.6	**NIOSH** (National Institute for Occupational Safety & Health) **IDLH** (Immediate Danger to Life & Health)	Not established.	10 ppm
	8.3.7	**OSHA STEL** (Short Term Exposure Limit)	Not established.	1 ppm as Cl_2
	8.3.8	**NIOSH** (15 min. ceiling)	Not established.	0.5 ppm
	** Chlorine is unlikely to be present as a decomposition product, but may be present in incidents of accidental mixing with other chemicals.*			

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES		
9.1	**Appearance:**	Greenish yellow liquid.
9.2	**Odor:**	Pungent.
9.3	**Odor Threshold:**	0.9 mg/m^3.
9.4	**pH:**	11.2 – 11.4 (1% solution)
9.5	**Melting Point:**	Not pertinent.
9.6	**Freezing point:**	-23.3°C (-10°F)
9.7	**Boiling Point & Boiling Range:**	Decomposes @ 110°C (230°F)
9.8	**Flash Point:**	No information available.
9.9	**Evaporation Rate:**	No information available.
9.10	**Flammability (solid, gas):**	Not flammable.
9.11	**Upper / Lower Flammability or Explosive Limits:**	No information available.
9.12	**Vapor Pressure:**	12.1 mm Hg @ 20°C (68°F)
9.13	**Vapor Density:**	2.61 (air=1)
9.14	**Relative Density (Specific Gravity):**	1.2 g/mL or 10 lb/gallon @ 20°C (68°F)
9.15	**Solubility in Water:**	Mixes infinitely with water.
9.16	**Partition Coefficient: (n-octanol / water):**	No information available.
9.17	**Auto-ignition Temperature:**	No information available.
9.18	**Decomposition Temperature:**	Decomposes @ 110°C (230°F)
9.19	**Molecular Weight:**	74.5 g/mole
9.20	**Viscosity:**	1.75 - 2.50 centipoises (varies with temperature)

SECTION 10: STABILITY AND REACTIVITY		
10.1	**Stability:**	Stable under normal conditions of storage, handling, and use.
10.2	**Instability / Decomposition Temperature:**	All bleach decomposition is dependant on temperature. For any given temperature, the higher the strength, the faster it decomposes. In summary, for every 10°C increase in storage temperature, the sodium hypochlorite will decompose at an increased rate factor of approximately 3.5.
10.3	**Conditions of Instability:**	High heat, ultraviolet light.
10.4	**Incompatibility with Various Substances:**	Oxidizing agents, acids, nitrogen containing organics, metals, iron, copper, nickel, cobalt, organic materials, and ammonia.
10.5	**Corrosivity:**	Corrosive to metals.
10.6	**Special Remarks on Reactivity:**	Rate of decomposition increases with heat. May develop chlorine if mixed with acidic solutions.
10.7	**Special Remarks on Corrosivity:**	None.
10.8	**Hazardous Polymerization:**	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	**Routes of Entry:**		Eyes, skin, ingestion, dermal absorption.
11.2	**Acute Toxicity:**		
	11.2.1	**Oral Toxicity** (LD_{50})**:**	3-5 g/kg (rat)
	11.2.2	**Dermal Toxicity** (LD_{50})**:**	>2 g/kg (rabbit)
	11.2.3	**Primary Eye Irritation:**	Corrosive
	11.2.4	**Primary Skin Irritation:**	Corrosive
	11.2.5	**Inhalation Toxicity** (LC_{50}):	No data available.
11.3	**Chronic Effects (Human Risk Assessment):**		Based on the toxicity profile and exposure scenarios for sodium hypochlorite, EPA concludes that the risks from chronic and subchronic exposure to low levels of these pesticides are minimal and without consequence to human health.
11.4	**Tolerance Requirement:**		Exempt (EPA document "Index to Pesticide Chemical Names, Part 180 Tolerance Information, and Food and Feed Commodities (by Commodity)" July 2010

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Ecotoxicity:**		Sodium hypochlorite is low in toxicity to avian wildlife, but it is highly toxic to freshwater fish and invertebrates.
	12.1.1	**Freshwater Fish Toxicity:**	Atlantic Herring (clupea harengus) LC_{50} = 0.033 - 0.097 mg//l/96 hr, flow through bioassay (pH: 8) Shiner Perch (cymatogaster aggregata) LC_{50} = 0.045 - 0.098 mg/l/96 hr, flow through bioassay (pH: 8) Three Spine Stickleback (gasterosteus aculeatus) LC_{50} = 0.141 - 0.193 mg/l/96 hr, flow through bioassay (pH: 8) Pink Salmon (oncorhynchus gorbuscha) LC_{50} = 0.023 - 0.052 mg/l/96 hr, flow through bioassay (pH: 8) Coho Salmon (oncorhynchus kisutch) LC_{50} = 0.026 - 0.038 mg/l/96 hr, flow through bioassay (pH: 8) English Sole (parophrys vetulus) LC_{50} = 0.044 - 0.144 mg/l/96 hr, flow through bioassay (pH: 8) Fat Head Minnow (pimephales promelas) LC_{50} = 0.22 - 0.62 mg/l/96 hr, flow through bioassay (pH: 7)
	12.1.2	**Invertebrate Toxicity:**	Water Flea (ceriodaphnia sp. 0) LC_{50} = 0.006 mg/l/24 hr Water Flea (daphnia magna) LC_{50} = 0.07 - 0.7 mg/l/24 hr Water Flea (daphnia magna) LC_{50} = 2.1 mg/l/96 hr Fresh Water Shrimp (gammarus fasciatus) LC_{50} = 0.4 mg/l/96 hr No common name (nitocra spinipes) LC_{50} = 0.40 mg/l/96 hr Grass Shrimp (palaemonetes pugio) LC_{50} = 0.52 mg/l/96 hr
12.2	**Persistence:**		No data available.
12.3	**Environmental Fate:**		In fresh water, sodium hypochlorite breaks down rapidly into non-toxic compounds when exposed to sunlight. In seawater, chlorine levels decline rapidly; however, hypobromite (which is acutely toxic to aquatic organisms) is formed. EPA believes that the risk of acute exposure to aquatic organisms is sufficiently mitigated by precautionary labeling and National Pollutant Discharge Elimination System (NPDES) permit requirements.
12.4	**Bioconcentration:**		This material is not expected to bioconcentrate in organisms.
12.5	**Biodegradation:**		This material is inorganic and not subject to biodegradation.

SECTION 13: DISPOSAL CONSIDERATIONS

Do not contaminate food or feed by storage, disposal, or cleaning of equipment. Product or rinsates that cannot be used should be diluted with water before disposal in a sanitary sewer. This product can be neutralized with sodium bisulfite, sodium thiosulfate, sodium sulfite. Do not confuse these products with sulfates or bisulfates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination system (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not contaminate water containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. Dispose of in accordance with all applicable local, County, State, and Federal regulations.

SECTION 14: TRANSPORT INFORMATION

		Inside containers (< 1.3 gallons)	**Container (>1.3 gallons)**
14.1	**UN Number**	Limited Quantity	UN 1791
14.2	**UN Proper Shipping Name**	--	Hypochlorite Solutions (Sodium Hypochlorite)
14.3	**Transport Hazard Class**	--	8
14.4	**Packing Group**	--	PG III
14.5	**Environmental Hazard (e.g. Marine Pollutant)**	Yes	Yes
14.6	**Reportable Quantity (RQ):**	100 lb (45.4 kg) or 80 gallons (based on 12.5% active ingredient)	100 lb (45.4 kg) or 80 gallons (based on 12.5% active ingredient)
14.7	**Materials of Trade (MOT) Exceptions.** Certain hazardous materials transported in small quantities as part of a business are subject to less regulation, because of the limited hazard they pose. These materials are known as Materials of Trade. The regulations that apply to MOTs are found in 49 CFR § 173.6.		

This information is not intended to convey all specific regulatory or operational requirements / information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

15.1	**U.S. Regulations:**		
	15.1.1	**OSHA HAZCOM** (Hazard Communication)	This material is considered hazardous under the HAZCOM Standard (29 CFR 1910.1200)
	15.1.2	**OSHA PSM** (Process Safety Management)	Not regulated under PSM Standard (29 CFR 1910.119)
	15.1.3	**EPA FIFRA** (Federal Insecticide, Fungicide and Rodenticide Act)	EPA Reg. No. :10897-26 (Registered pesticide under 40 CFR 152.10)
	15.1.4	**EPA TSCA** (Toxic Substance Control Act)	All components are listed or exempted. TSCA 12(b): This product is not subject to export notification.
	15.1.5	**EPA CERCLA** (Comprehensive Environmental Response, Compensation, and Liability Act)	Reportable Quantity (RQ): 45.4 kg (100 lbs) or 80 gallons (based on 12.5% active ingredient).
	15.1.6	**EPA RMP** (Risk Management Plan)	Not listed. (40 CFR 68.130)
15.2	**State of California Regulations:**		
	15.2.1	**Safe Drinking Water and Toxic Enforcement Act of 1986 [Proposition 65, California only]:** Small quantities – less than 100 ppm (parts per million) – of impurities, including bromates, may be found in all chlorinating products, including this product. Bromates are derived from bromides, which are present in sodium chloride (table salt) from which chlorine is manufactured. Additional small quantities of bromates may be generated during the disinfection process. Bromates are known by the State of California to cause cancer when administered by the oral (drinking or ingesting) route. Read and follow label directions and use care when handling or using this product. The US Environmental Protection Agency has established a maximum contaminant level (MCL) for bromates in drinking water at 10 ppb (parts per billion). Application of this product in accordance with label directions at use dilution will not exceed this level. This warning is provided pursuant to Proposition 65, Chapter 6.6 of the California Health and Safety Code, which requires the Governor of California to publish a list of chemicals "known to the State to cause cancer or reproductive toxicity." This list is compiled in accordance with the procedures established under the proposition, and can be obtained on the internet from California's Office of Environmental Health Hazard Assessment at http://www.oehha.ca.gov.	
	15.2.2	**CDPR** (California Department of Pesticide Regulation)	Registration No: 10897-26-ZB
	15.2.3	**CalARP** (California Accidental Release Prevention Program)	Not regulated.
15.3	**Canada Regulations:**		
	15.3.1	**WHMIS** (Workplace Hazardous Materials Information System)	• Classification: E (Corrosive Materials) • Health Effects Criteria Met by this Chemical: ▪ E - Corrosive to skin ▪ E - TDG class 8 - corrosive substance • Ingredient Disclosure List: Included for disclosure at 1% or greater.
	15.3.2	**DSL** (Domestic Substances List)	All components of this product are on the DSL.
15.4	**International Inventory:**		
	15.4.1	**AICS** (Australian Inventory of Chemical Substances)	On inventory or in compliance with inventory.
	15.4.2	**KECI** (Korean Existing Chemicals Inventory)	On inventory or in compliance with inventory.
	15.4.3	**PICCS** (Philippine Inventory of Chemicals and Chemical Substances)	On inventory or in compliance with inventory.
	15.4.4	**IECSC** (Inventory of Existing Chemical Substances in China)	On inventory or in compliance with inventory.
	15.4.5	**NZIoC** (New Zealand Inventory of Chemicals)	On inventory or in compliance with inventory.

SECTION 16: OTHER INFORMATION

16.1	**HMIS III** (Hazardous Materials Identification System):		
	16.1.1	**HEALTH**	**2**
	16.1.2	**FLAMMABILITY**	**0**
	16.1.3	**PHYSICAL HAZARD**	**1**
	16.1.4	**PERSONAL PROTECTION**	See Section 8.
16.2	**NFPA 704** (National Fire Protection Association):		
	16.2.1	**HEALTH**	**2**
	16.2.2	**FLAMMABILITY**	**0**
	16.2.3	**INSTABILITY**	**0**
	16.2.4	**SPECIAL**	**None**
16.3	**International Fire Code / International Building Code:**		Irritant.
16.4	**ANSI** (American National Standards Institute):		
	16.4.1	**Hazardous Industrial Chemicals -** SDS-Preparation:	Complies with **ANSI Z400.1 – 2004**.
	16.4.2	**Hazardous Industrial Chemicals -** Precautionary Labeling:	Complies with **ANSI Z129.1 – 2006**.

Note: The information contained herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge and belief. NO WARRANTY OR GUARANTEE, express or implied, is made regarding the product performance, product stability, or as to any other condition of use, handling, transportation, and storage. Customer use, handling, transportation, and storage may involve additional safety and/or performance considerations. Our technical personnel will be happy to respond to questions regarding safe handling, storage, transportation, and use procedures. The safe handling, storage, transportation, and use procedures remain the sole responsibility of the customer. No suggestions for handling, storage, transportation, or use are intended as or to be construed as recommendations which may infringe on any existing patents or violate any Federal, State, and/or local law and/or regulation, ordinance, standard, etc. This Safety Data Sheet has been prepared by HASA, Inc. staff from test reports and other information available in the public domain.

SAFETY DATA SHEET
Economy Liquid Chlorinator

Product Name: Economy Liquid Chlorinator
Date: 7/8/2022

SECTION 1 *IDENTIFICATION*

Supplier: Economy® Polymers & Chemicals
435 E. Anderson Road
Houston, TX 77047
1-800-231-2066
www.economypolymers.com

Emergency Telephone: CHEMTREC 1-800-424-9300 (US); 703-527-3887 (International, collect calls are accepted)

Product Name:	**Economy Liquid Chlorinator**
Synonyms:	Sodium hypochlorite solution; Antiformin; Bleach; Chloride of soda
Chemical Name:	Sodium Hypochlorite
Chemical Formula:	ClNaO
CAS Number:	7681-52-9
Product Use:	Oxidizes swimmer waste and raises chlorine levels in pool water.

SECTION 2 *HAZARDOUS COMPONENTS*

EMERGENCY OVERVIEW:
DANGER!
CORROSIVE

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

Hazard Statement(s)
H314: Causes severe skin burns and eye damage
H302: Harmful if swallowed
H332: Harmful if inhaled
H335: May cause respiratory irritation
H400: Very toxic to aquatic life

Precautionary Statement(s)
P264: Wash skin thoroughly after handling.
P273: Avoid release to the environment
P280: Wear protective gloves/protective clothing/eye protection/face protection
P310: Immediately call a POISON CENTER/doctor
P363: Wash contaminated clothing before reuse
P321: Specific treatment (see First Aid Measures on this label).
P403+P233: Store in a well-ventilated place. Keep container tightly closed
P501: Dispose of contents/container in accordance with national and international regulations

SECTION 2 ***HAZARDOUS COMPONENTS -- Continued***

HMIS Classification	
Health Hazard	3
Flammability	0
Physical Hazard	0

NFPA Rating	
Health Hazard	3
Fire	0
Reactivity Hazard	0

POTENTIAL HEALTH EFFECTS

Inhalation: May be harmful if inhaled. Causes severe irritation and burns. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Skin Contact: May be harmful if absorbed through skin. Causes severe irritation and skin burns.

Eye Contact: Causes severe irritation and eye burns.

Ingestion: May be harmful if swallowed. Causes severe irritation and burns. May cause damage to the mouth, esophagus and stomach.

Hazards not otherwise classified (HNOC) or not covered by GHS
Contact with acids liberates toxic gas.

SECTION 3 ***COMPOSITION/INFORMATION ON INGREDIENTS***

Component	**CASNumber**	**Percent**
Sodium Hypochlorite	7681-52-9	7-13 %

SECTION 4 ***FIRST--AID MEASURES***

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

Skin Contact: Take off contaminated clothing and shoes immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Consult a physician. Do not reuse clothing and shoes until cleaned.

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. GET MEDICAL ATTENTION IMMEDIATELY.

Ingestion: Do NOT induce vomiting. If fully conscious, rinse mouth with water. If unconscious, take immediately to a hospital or a physician. Never give anything by mouth to an unconscious person.

SECTION 5 *FIRE--FIGHTING MEASURES*

Conditions of Flammability: Not flammable or combustible.

Suitable Extinguishing Media: Dry Powder

Special hazards arising from the substance or mixture: Hydrogen chloride gas, Sodium oxides

Hazardous Combustion Products: Hazardous decomposition products formed under fire conditions. – Hydrogen chloride gas, Sodium oxides.
Firefighting Methods: Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors.

Advice For firefighters: Wear self contained breathing apparatus for firefighting if necessary.

SECTION 6 *ACCIDENTAL RELEASE MEASURES*

Personal precautions, protective equipment and emergency procedures: Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Do not flush with water. Keep in suitable, closed containers for disposal.

SECTION 7 *HANDLING AND STORAGE*

Handling: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death.

Storage: CORROSIVE MATERIAL. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Relieve pressure in containers weekly. Do not freeze. Avoid temperatures greater than 70 Deg. F. Product degrades more rapidly with increasing temperature.

SECTION 8 *EXPOSURE CONTROLS/PERSONAL PROTECTION*

Permissible Exposure Limits

Ingredient CAS No.	OSHA		WISHA		ACGIH (TLV)		USA Workplace Environmental Exposure Levels (WEEL)
	TWA	STEL	TWA	STEL	TWA	STEL	STEL

7681-52-9	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2 mg/m3

SECTION 8 ***EXPOSURE CONTROLS/PERSONAL PROTECTION -- Continued***

Appropriate Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal Protective Equipment

Eye/Face Protection: Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Other Protective Equipment: Eye-wash station, safety shower, rubber apron, chemical safety shoes, protective clothing.

General Hygiene Conditions: Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

SECTION 9 ***PHYSICAL AND CHEMICAL PROPERTIES***

Form:	Light yellow to green clear liquid
Odor:	Chlorine odor.
Odor Threshold:	0.9 ppm
pH:	12
Melting Point/Freezing Point:	-30 - -20˚C (-22 - -4˚F)
Initial Boiling Point and Boiling Range:	111˚C (232˚F)
Flash Point:	Not Applicable
Evaporation Rate:	Not Available
Flammability (solid, gas):	Not Available
Upper/Lower Flammability or Explosive Limits:	Not Available
Vapor Pressure:	(12.1 mmHg) Estimated
Vapor Density:	>1
Relative Density:	1.206 g/mL at 25˚C (77˚F)
Specific Gravity:	1.190 - 1.215 @ 25˚C
Solubility In Water:	100%
Partition coefficient (n-octanol/water):	Not Available
Auto-ignition Temperature:	Not Available

Decomposition Temperature:	Not Available
Viscosity:	Not Available
Explosive Properties:	Not Available
Oxidizing Properties:	Not Available

SECTION 10 ***STABILITY AND REACTIVITY***

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions.

Conditions to Avoid: Avoid exposure to light. Avoid temperatures greater than 70 Deg. F. Product degrades more rapidly with increasing temperature.

Incompatible Materials: Ammonia, Organic materials, Acids, Amines, Ammonium salts, Aziridine, Methanol, Reducing agents, Oxidizing agents, Iron, Copper, Bisulfates, Phenyl acetonitrile, Cellulose, Ethyleneimine, Oxidizable metals, Soaps.

Hazardous Decomposition Products: Chlorine-containing gases. Reacts with acids to release poisonous chlorine gas/Sodium oxide.

SECTION 11 ***TOXICOLOGICAL INFORMATION***

Acute Toxicity

Component	**Oral LD50**	**Dermal LD50**	**Inhalation LC50**
Sodium Hypochlorite	Rat: 8200 mg/kg	Rabbit: >10000 mg/kg	No Data

Skin Corrosion/Irritation: no data available
Serious Eye Damage/Eye Irritation: no data available
Respiratory or Skin Sensitisation: no data available
Germ Cell Mutagenicity: no data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity: no data available

Specific Target Organ Toxicity -- Single Exposure: no data available
Specific Target Organ Toxicity -- Repeated Exposure: no data available

Aspiration Hazard: no data available

Additional Information

RTECS: Not available

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

SECTION 12 *ECOLOGICAL INFORMATION*

Ecotoxicological Information: DATA PROVIDED ARE FOR SODIUM HYPOCHLORITE

Freshwater Fish Toxicity:
LC50 clupea harengus 0.033 - 0.097 mg//l/96 hr, flow through bioassay (pH: 8)
LC50 cymatogaster aggregata 0.045 - 0.098 mg/l/96 hr, flow through bioassay (pH: 8)
LC50 gasterosteus aculeatus 0.141 - 0.193 mg/l/96 hr, flow through bioassay (pH: 8)
LC50 oncorhynchus gorbuscha 0.023 - 0.052 mg/l/96 hr, flow through bioassay (pH: 8)
LC50 oncorhynchus kisutch 0.026 - 0.038 mg/l/96 hr, flow through bioassay (pH: 8)
LC50 oncorhynchus mykiss: 0.05-0.771 mg/L/96 hr, flow through
LC50 oncorhynchus mykiss: >0.03-<0.19 mg/L/96 hr, semi-static
LC50 oncorhynchus mykiss: 0.18-0.22 mg/L/96 hr, static
LC50 parophrys vetulus 0.044 - 0.144 mg/l/96 hr, flow through bioassay (pH: 8)
LC50 pimephales promelas 0.22 - 0.62 mg/l/96 hr, flow through bioassay (pH: 7)
LC50 pimephales promelas: 4.5-7.6 mg/L/96 hr, static
LC50 lepomis macrochirus: 0.4-0.8 mg/L/96 hr, static
LC50 lepomis macrochirus: 0.28-1 mg/L/96 hr, flow through

Invertebrate Toxicity:
EC50 ceriodaphnia sp. 0.006 mg/l/24 hr
EC50 daphnia magna 0.07 - 0.7 mg/l/24 hr
EC50 daphnia magna 2.1mg/l/96 hr
EC50 gammarus fasciatus 4 mg/l/96 hr
EC50 nitocra spinipes 40 mg/l/96 hr
EC50 palaemonetes pugio 52 mg/l/96 hr

Other Toxicity:
Algae:
ErC50 dunaliella sp. 0.6 mg/l/24 hr
ErC50 dunaliella tertiolecta 0.11 mg/l/24 hr
ErC50 skeletonema costatum 0.095 mg/l/24 hr

Chemical Fate Information:
BIODEGRADATION: This material is inorganic and not subject to biodegradation.
PERSISTENCE: This material is believed not to persist in the environment.
BIOCONCENTRATION: This material is not expected to bioconcentrate in organisms.

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other Adverse Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

SECTION 13 *DISPOSAL CONSIDERATIONS*

Waste Treatment Methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated Packaging: Dispose of as unused product.

SECTION 14 *TRANSPORTATION INFORMATION*

DOT:
UN Number: 1791
UN Proper Shipping Name: Hyperchlorite Solution
Transport Hazard Class: 8
Packing Group: III

TDG:
UN Number: 1791
UN Proper Shipping Name: Hypochorite Solution
Transport Hazard Class: 8
Packing Group: III
Marine Pollutant: Yes

MEX:
UN Number: 1791
UN Proper Shipping Name: Hypochorite Solution
Transport Hazard Class: 8
Packing Group: III
Marine Pollutant: Yes

IMDG:
UN Number: 1791
UN Proper Shipping Name: Hypochorite Solution
Transport Hazard Class: 8
Packing Group: III
EMS--No: F-A, S-B
Marine Pollutant: Yes

IATA:
UN Number: 1791
UN Proper Shipping Name: Hypochorite Solution
Transport Hazard Class: 8
Packing Group: III

SECTION 15 *REGULATORY INFORMATION*

TSCA Inventory Status: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA 302 Components: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA Immediate (Acute)

Delayed (Chronic):	No
Fire Hazard:	Yes
Pressure Release:	No
Reactive:	No

SECTION 15 ***REGULATORY INFORMATION -- Continued***

Regulated Components:

Component:	Sodium Hypochlorite
CAS Number:	7681-52-9
CERCLA RQ:	Yes
SARA EHS:	No
SARA 313:	No
U.S. HAP:	No
WI HAP:	No
Prop 65:	No

NSF/ANSI Standard 60 Maximum Use Level: 84 mg/L.

Massachusetts Right To Know Components:	CAS-No.	Revision Date
Sodium hypochlorite	7681-52-9	2007-03-01

Pennsylvania Right To Know Components:	CAS-No.	Revision Date
Sodium hypochlorite	7681-52-9	2007-03-01

New Jersey Right To Know Components:	CAS-No.	Revision Date
Sodium hypochlorite	7681-52-9	2007-03-01

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 ***OTHER INFORMATION***

No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 7/8/2022

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : STAR BRITE LIQUID ELECTRICAL TAPE - BLACK
Product code : 841-BLK

1.2. Relevant identified uses of the substance or mixture and uses advised against

Application : Professional use. For industrial or institutional use. Sealant.

1.3. Details of the supplier of the safety data sheet

Supplier : Star Brite
4041 SW 47th Avenue
33314 Fort Lauderdale, Florida, United States of America
Telephone : 001 800 3278583
Website : http://www.starbrite.com

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:
US - Telephone : 001 703 5273887 (During office hours only)

EMERGENCY TELEPHONE NUMBER (for DOCTORS only):
CHEMTREC 001 703 5273887 (24/7)

SECTION 2 HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

HPR classification : Flammable liquid, category 2. Skin irritation, category 2. Eye irritation, category 2. Specific target organ toxicity after single exposure, category 3.

Human health hazards : Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Physical/chemical hazards : Highly flammable. Keep away from sources of ignition — No smoking.

2.2. Label elements

Label elements (HPR)
Hazard pictograms :

Signal word : Danger

H- and P-phrases :

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P370+P378	In case of fire: Use carbondioxide, foam, dry chemical, water fog to extinguish.
P261 vapour	Avoid breathing vapours.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

P337+P313	If eye irritation persists: Get medical advice/attention.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to an official chemical waste depot.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P264	Wash hands thoroughly after handling.
P321	Specific treatment (see … on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Labelling of packagings where the contents do not exceed 100 ml:

Hazard pictograms :

Signal word : Danger

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w%)	CAS nr.	Additional CAS nr.	
Xylene (mixed isomers)	36 - 39	1330-20-7	-----	
2-Butanone	17 - 19	78-93-3	-----	
Oxydipropyl dibenzoate	6 - 7	27138-31-4	94-51-9	
Acetone	4 - 5	67-64-1	-----	
Talc	1 - 2	14807-96-6	-----	
Carbon Black	0,1 - 1	1333-86-4	-----	

Occupational exposure limit(s), if relevant, are listed in section 8.

SECTION 4 FIRST-AID MEASURES

4.1. Description of first aid measures

First aid measures

Inhalation : Move victim into fresh air. Consult a doctor.

Skin contact : Take off contaminated clothing. Wash off skin with plenty of water and soap before product dries up. Consult a doctor if irritation persists.

Eye contact : Wash out with (lukewarm) water for at least 15 minutes. Remove contact lenses. Consult a doctor.

Ingestion : Do not induce vomiting. Do rinse the mouth. Give one glass of water. Never give anything by mouth to an unconscious person. Consult a doctor if victim feels unwell.

4.2. Most important symptoms and effects, both acute and delayed

Effects and symptoms

Inhalation : Irritant. May cause sore throat and coughing. May cause headache, drowsiness, dizziness and a feeling of sickness.

Skin contact : Irritant. May cause redness.

Eye contact : Irritant. May cause redness and pain.

Ingestion : May cause a feeling of sickness, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians : None known.

SECTION 5 FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Suitable : Carbondioxide (CO_2). Foam. Dry chemical. Water fog.

Not suitable : Water jet.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards : None known.

Hazardous thermal decomposition products : Carbon monoxide may be evolved if incomplete combustion occurs.

5.3. Advice for firefighters

Special protective equipment for fire-fighters : Use adequate respiratory equipment in case of insufficient ventilation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Danger of slipping. Clean up spills immediately. Wear shoes with non-slip soles. Avoid contact with spilled or released material. Keep away from sources of ignition — No smoking. Vapours are heavier than air. Build up (of gasses) in low areas involves risk of suffocation.

6.2. Environmental precautions

Environmental precautions : Avoid release of product into sewers, surface water and/or ground water. In case of large spills: contain with dike.

Other information : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spilled material in containers. Absorb residues in sand or other inert material. Dispose at an authorised waste collection point. Wash away remainder with plenty of water and soap.

6.4. Reference to other sections

Reference to other sections : See also section 8.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling : Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Do not breathe vapour. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep frost-free, in a cool, dry and well-ventilated place (< 35 °C). Keep away from oxidizing agents. Protect from sunlight.

Recommended packaging : Keep only in the original container.

Non recommended packaging : PE and PP.

7.3. Specific end use(s)

Use : Use only as directed.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits : Occupational exposure limits have not been established for this product.

Workplace exposure limits (mg/m³):

Chemical name	Province	TWA 8 hour (mg/m3)	STEL 15 min (mg/m3)	Comments
Xylene (mixed isomers)	YT	435	650	-
Xylene (mixed isomers)	NB	435	655	-
Xylene (mixed isomers)	MB	435	655	-
Xylene (mixed isomers)	PE	435	655	-
Xylene (mixed isomers)	NT	435	655	-
Xylene (mixed isomers)	NU	435	655	-
Xylene (mixed isomers)	NS	435	655	-
Xylene (mixed isomers)	NL	435	655	-
Xylene (mixed isomers)	SK	434	650	-
Xylene (mixed isomers)	QC	434	651	-
Xylene (mixed isomers)	ON	434	650	-
Xylene (mixed isomers)	BC	434	650	-
Xylene (mixed isomers)	AB	434	651	-
Xylene (mixed isomers)	US	435	655	-
2-Butanone	YT	590	740	-
2-Butanone	PE	590	885	-
2-Butanone	NT	590	885	-
2-Butanone	NU	590	885	-
2-Butanone	NS	590	885	-
2-Butanone	NL	590	885	-
2-Butanone	NB	590	885	-
2-Butanone	MB	590	885	-
2-Butanone	SK	590	885	-
2-Butanone	QC	150	300	-
2-Butanone	ON	600	900	-
2-Butanone	BC	150	300	-
2-Butanone	AB	590	885	-
2-Butanone	US	590	885	-

Acetone	YT	2400	3000	-
Acetone	PE	594	1187	-
Acetone	NT	1187	1872	-
Acetone	NU	1187	1872	-
Acetone	NS	594	1187	-
Acetone	NL	594	1187	-
Acetone	NB	1188	1782	-
Acetone	MB	594	1187	-
Acetone	SK	1200	1800	-
Acetone	QC	1190	2380	-
Acetone	ON	1200	1800	-
Acetone	BC	600	1200	-
Acetone	AB	1500	1800	-
Acetone	US	594	1187	-
Talc	PE	2	-	Respirable fraction, containing no asbestos, < 1% crystalline silica
Talc	NT	2	-	Respirable fraction, containing no asbestos, < 1% crystalline silica
Talc	NU	2	-	Respirable fraction, containing no asbestos, < 1% crystalline silica
Talc	NS	2	-	Respirable fraction, containing no asbestos, < 1% crystalline silica
Talc	NL	2	-	Respirable fraction, containing no asbestos, < 1% crystalline silica
Talc	NB	2	-	Respirable fraction, containing no asbestos, < 1% crystalline silica
Talc	MB	2	-	Respirable fraction, containing no asbestos, < 1% crystalline silica
Talc	SK	2	-	Respirable fraction
Talc	QC	2	-	-
Talc	ON	2	-	Respirable aerosol, no asbestos and < 1 percent crystalline silica
Talc	BC	2	-	Containing no asbestos fibres, Respirable
Talc	AB	2	-	Respirable particulate
Talc	US	2	-	Respirable fraction, containing no asbestos, < 1% crystalline silica
Carbon Black	YT	3,5	7	-
Carbon Black	PE	3	-	Inhalable particulate matter
Carbon Black	NT	3,5	7	-
Carbon Black	NU	3,5	7	-
Carbon Black	NS	3	-	Inhalable particulate matter
Carbon Black	NL	3	-	Inhalable particulate matter
Carbon Black	NB	3,5	-	-
Carbon Black	MB	3	-	Inhalable particulate matter
Carbon Black	SK	3,5	7	-
Carbon Black	QC	3,5	-	-
Carbon Black	ON	3	-	Inhalable fraction
Carbon Black	BC	3	-	Inhalable
Carbon Black	AB	3,5	-	-
Carbon Black	US	3	-	Inhalable particulate matter

8.2. Exposure controls

Engineering measures : Use only in well-ventilated areas. Comply with standard precautionary measures for working with chemicals.

Hygienic measures : When using do not eat, drink or smoke.

Personal protective equipment:

The efficiency of personal protective equipment depends among other things on temperature and degree of ventilation. Always get professional advice for the particular local situation.

:

Body protection	:	Wear appropriate protective clothing, overalls or suit, and similar boots. Suitable material: PVA. Indication of permeation breakthrough time: 6 hours.
Respiratory protection	:	Take care of sufficient ventilation. Wear suitable respiratory protection in case of large scale exposure. Suitable: gas filter type A (brown), class I or higher on e.g. a facemask in accordance with CSA Z94.4.
Hand protection	:	Wear appropriate safety gloves. Suitable material: PVA. ± 0,5 mm. Indication of permeation breakthrough time: 1 hour.
Eye protection	:	Wear appropriate safety glasses when there is danger of possible eye contact.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	:	Liquid.	
Colour	:	Black.	
Odour	:	Aromatic.	
Odour threshold	:	Not known.	
pH	:	Not applicable.	Waterfree product.
Solubility in water	:	Not soluble.	
Partition coefficient (n-octanol/water)	:	Not known.	
Flash point	:	7 °C	
Flammability (solid, gas)	:	Not applicable.	Liquid. See flashpoint.
Auto ignition temperature	:	> 183 °C	
Boiling point/boiling range	:	56 °C	
Melting point/melting range	:	< 0 °C	
Explosive properties	:	None known.	Does not contain explosives.
Explosion limits (% in air)	:	Not known.	Lower explosion limit in air (%): 1 (Xylene (mixed isomers))
	:		Upper explosion limit in air (%): 13 Acetone
Oxidising properties	:	Not applicable.	Does not contain oxidizing substances.
Decomposition temperature	:	Not applicable.	
Viscosity (20°C)	:	> 20,5 mm2/sec	(1 mm2/sec = 1cSt)
Viscosity (40°C)	:	> 20,5 mm2/sec	
Vapour pressure (20°C)	:	12600 Pa	
Vapour density (20°C)	:	> 1	(air = 1)
Relative density (20°C)	:	0,96 g/ml	
Evaporation rate	:	< 1	(n-butyl acetate = 1)

SECTION 10 STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity : See sub-sections below.

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactivity : No other hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid : See section 7.

10.5. Incompatible materials

Materials to avoid : Keep away from oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products : Not known.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

- Acute toxicity : Calculated LC50: > 10 mg/l. Ingredients of unknown toxicity: 33 %. ATE: > 5 mg/l. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause damage to organs. Target organ(s): Respiratory system. Effect(s): May cause headache, drowsiness, dizziness and a feeling of sickness. May cause irritation to respiratory airways and coughing.
- Corrosion/irritation : May cause respiratory irritation.
- Sensitisation : Does not contain substances classified as respiratory sensitiser. Not classified - based on available data, the classification criteria are not met.
- Carcinogenicity : Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Skin contact

- Acute toxicity : Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.
- Corrosion/irritation : Irritant. May cause redness. Repeated exposure may cause skin dryness or cracking.
- Sensitisation : Does not contain skin sensitisers. Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Eye contact

- Corrosion/irritation : Irritant.

Ingestion

- Acute toxicity : Calculated LD50: > 2695 mg/kg.bw. Ingredients of unknown toxicity: 28 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.
- Aspiration : Highly viscous liquid. Not classified - based on available data, the classification criteria are not met. Contains a substance/substances with an aspiration hazard. After ingestion, at vomiting, risk of aspiration in the lungs.
- Corrosion/irritation : May cause a feeling of sickness, vomiting and diarrhoea.
- Carcinogenicity : Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
- Reprotoxicity : Development: Not expected to be reprotoxic. Development: Not classified - Based on available data, the classification criteria are not met. Fertility: not expected to be reprotoxic. Fertility: Not classified - based on available data, the classification criteria are not met.

Toxicological information:

Chemical name	Property		Method	Test animal

Xylene (mixed isomers)	LD50 (dermal) - estimate	1100 mg/kg bw		
	NOAEL (developmental toxicity, inh.)	2171 mg/m3	OECD 414	Rat
	NOAEL (fertility, inh.)	> 2171 mg/m3	-----	Rat
	NOEL (carcinogenicity, oral)	> 500 mg/kg bw/d	OECD 451	Rat
	Genotoxicity - in vivo	Not genotoxic		Rat
	Mutagenicity	Negative	OECD 471	
	Genotoxicity - in vitro	Not genotoxic	OECD 473	
	LD50 (oral)	4300 mg/kg bw	-----	Rat
	LD50 (dermal)	> 5000 mg/kg bw		Rabbit
	NOAEL (development, oral)	Not teratogenic		
	Eye irritation	Slightly irritant	OECD 405	Rabbit
	Skin irritation	Moderately irritant	OECD 404	Rabbit
	NOAEL (inhalation)	> 3515 mg/m3	-----	Rat
	NOAEL (oral)	150 mg/kg bw/d	OECD 408	Rat
2-Butanone	LD50 (oral)	2737 mg/kg bw	-----	Rat
	LD50 (dermal)	6400 mg/kg bw		Rabbit
	LC50 (inhalation)	> 5000 mg/m3		Rat
	NOAEL (oral)	2500 mg/kg bw/d		Rat
	Skin sensitisation	Not sensitizing		Guinea pig
	Skin irritation	Moderately irritant		Rabbit
	Eye irritation	Highly irritant		Rabbit
	Genotoxicity - in vitro	Not genotoxic	OECD 473	-----
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Genotoxicity - in vivo	Not genotoxic	OECD 474	Mouse
	NOAEL (developmental toxicity, inh.)	2955 mg/m3	OECD 414	Rat
	NOAEL (fertility) - estimate	1644 mg/kg.d		Rat
	NOAEL (inhalation)	14790 mg/m3	OECD 413	Rat
	Inhalation sensitisation - estimate	Not sensitizing	-----	Guinea pig
Acetone	LC50 (inhalation)	50100 mg/m3		Rat
	Skin sensitisation	Not sensitizing	OECD 406	Guinea pig
	NOAEL (oral)	> 273 mg/kg bw/d		Rat
	Skin irritation	Mildly irritant	OECD 404	Rabbit
	Eye irritation	Moderately irritant		Rabbit
	LD50 (dermal)	> 15688 mg/kg bw		Rabbit
	Mutagenicity	Not mutagenic	-----	-----
	NOAEL (fertility, inh.)	Not reprotoxic		Mouse
	LD50 (oral)	5800 mg/kg bw	-----	Rat
	NOEL (carcinogenicity, inh.)	Not carcinogenic		
	NOEL (carcinogenicity, oral)	Not carcinogenic		
	NOAEL (developmental toxicity, inh.)	26500 mg/m3	OECD 414	Rat
	NOAEL (development) - estimate	900 mg/kg.d	-----	Rat
	NOEL (carcinogenicity, dermal)	Not carcinogenic	-----	Mouse

SECTION 12 ECOLOGICAL INFORMATION

12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity : Calculated LC50 (fish): 45 mg/l. Calculated EC50 (waterflea): 198 mg/l. Contains 33 % of components with unknown hazards to the aquatic environment. May form an oil film on the water surface causing a decline in oxygen content with possible adverse effects for aquatic organisms.

12.2. Persistence and degradability

Persistence – degradability : No specific information known.

12.3. Bioaccumulative potential

Bioaccumulative potential : No specific information known.

12.4. Mobility in soil

Mobility : Adsorbs to soil and has low mobility.

12.6. Other adverse effects

Other information : Not applicable.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product residues : Do not dispose empty pack with waste produced by households. Containers may be recycled. Treat product residues and non-empty pack as hazardous waste.

Additional warning : Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.

Waste water discharge : Do not dispose into the environment, in drains or in water courses.

Local legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14 TRANSPORT INFORMATION

14.1. UN number

UN nr. : UN 1993

14.2. UN proper shipping name

Transport name : FLAMMABLE LIQUID, N.O.S. (2-Butanone ; Acetone)

Transport name (IMDG, IATA) : FLAMMABLE LIQUID, N.O.S. (2-Butanone ; Acetone)

14.3/14.4/14.5. Transport hazard class(es)/Packing group/Environmental hazards

TDG (land)

- Class : 3
- Classification code : F1
- Packaging group : II
- Danger label : 3

:

Other information : Not intended for carriage by tank-vessels on inland waterways.

IMDG (sea)
- Class : 3
- Packaging group : II
- EmS (fire / spill) : F - E / S - E
- Marine pollutant : No

IATA (air)
- Class : 3

14.6. Special precautions for user

Other information : Country specific variations may apply. It is possible that a "Limited Quantity" exemption applies to the transport of this product.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Marpol : Not intended to be carried in bulk according to International Maritime Organisation (IMO) instruments. Packaged liquids are not considered bulk.

SECTION 15 REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulations : Hazardous Products Regulation 2015 and other regulations.

Substances listed on Canadian Domestic Substances List (DSL)
: Xylene (mixed isomers) ; 2-Butanone ; Oxydipropyl dibenzoate ; Acetone ; Talc ; Carbon Black .

SECTION 16 OTHER INFORMATION

16.1. Other information

The information in this safety data sheet is compiled in compliance with the Hazardous Products Regulation 2015 and accurate to the best of our knowledge and experience at the date of issue specified. It is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product. This safety data sheet complements the technical information sheets but does not replace them and offers no warranty with regard to product properties.

Users are also forewarned for any hazards involved when the product is used for other purposes than those for which it is designed.

Changed or new information with regard to the previous release is indicated with an asterisk (*).

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:
- ATE : Acute Toxicity Estimate
- CMR : Carcinogenic, Mutagenic or toxic for Reproduction
- DSL : Domestic Substances List
- GHS : Globally Harmonized System of Classification and Labelling of Chemicals
- HPA : Hazardous Products Act
- HPR : Hazardous Products Regulations
- IATA : International Air Transport Association
- IBC code : International Bulk Chemical Code
- IMDG : International Maritime Dangerous Goods Code
- LD50/LC50 : Lethal Dose/Concentration for 50% of a population
- MARPOL : International Convention for the Prevention of Pollution From Ships
- NO(A)EL : No Observed (Adverse) Effect Level
- OECD : Organisation for Economic Co-operation and Development
- OSHA : United States Occupational Safety and Health Administration
- PBT : Persistent, Bioaccumulative and Toxic
- REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals

RID	:	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	:	Sewage Treatment Plant
TDG	:	Transportation of Dangerous Goods
TWA/STEL	:	Time-Weighted Average/Short Term Exposure Limit
UN	:	United Nations
VOC	:	Volatile Organic Compounds
vPvB	:	Very Persistent and Very Bioaccumulative
WHMIS	:	Workplace Hazardous Materials Information System
Number format	:	"," used as decimal separator.

End of safety data sheet.

PENNZOIL® FULL SYNTHETIC MOTOR OIL SAE 5W-30

Full Synthetic Motor Oil

TECHNICAL DATA SHEET

PENNZOIL® Full Synthetic motor oil is formulated for modern turbocharged engines. PENNZOIL® utilizes the advances of synthetic technology to provide enhanced wear protection in high and low temperatures and improved cleanliness over synthetic blend motor oils. It meets or exceeds the engine protection required by ILSAC GF-6. PENNZOIL® Full Synthetic offers 40% better performance than Pennzoil® Conventional motor oil.

PERFORMANCE, FEATURES & BENEFITS

- 40% better performance than conventional motor oil.[1]
- Fewer oil changes compared to conventional motor oil.
- Enhanced wear protection in high and low temperatures.
- Helps prevent sludge and deposit build up.
- Excellent resistance to oil breakdown in severe environments
- Suitable for use in new and old engines.

1 Compared to Pennzoil® Conventional motor oil

MAIN APPLICATIONS

PENNZOIL® Full Synthetic SAE 5W-30 motor oil is recommended for use in all vehicles requiring the use of SAE 5W-30 viscosity grade engine oils under all driving conditions. SAE 5W-30 viscosity grade oils are commonly recommended for use in many new vehicles with modern engine technology for maximum fuel economy and performance. PENNZOIL® Full Synthetic can be mixed with other synthetic and mineral oils and is recommended for use in all vehicle applications under all driving conditions. SAE 5W-30 may not be suitable for use in older engines, so always consult your owner's manual for the correct viscosity grade and performance recommendation required for your vehicle.

SPECIFICATIONS, APPROVALS & RECOMMENDATIONS

- Chrysler MS 6395
- Ford WSS-M2C947-A

Exceeds the requirements of the following industry specifications:

- API SP -Resource Conserving and all previous Categories
- ILSAC GF-6/A

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk

To find the right Pennzoil product for your vehicles and equipment, please consult www.pennzoil.com to look up the right motor oil recommendation using our oil selector.

PENNZOIL® FULL SYNTHETIC MOTOR OIL SAE 5W-30

Full Synthetic Motor Oil

TYPICAL PHYSICAL CHARACTERISTICS

Properties			Method	PENNZOIL® SAE 5W-30 Full Synthetic Motor Oil
Viscosity Grade			SAE J300	5W-30
Service Category				SP
ILSAC				GF-6A
Density		kg/m^3	ASTM D4052	835.2
Flash Point		^0C	ASTM D93	242
Pour Point		^0C	ASTM D97	-48
Kinematic Viscosity	@ 40^0C	cSt	ASTM D445	60.0
Kinematic Viscosity	@ 100^0C	cSt	ASTM D445	10.5
Viscosity Index			ASTM D2270	167
CCS Viscosity	@-35^0C	cP	ASTM D5293	7 060

These characteristics are typical of current production. While future production will conform to Pennzoil's® specification, variations in these characteristics may occur.

HEALTH, SAFETY & ENVIRONMENT

Health and Safety

This product is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from https://www.epc.shell.com

Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

ADDITIONAL INFORMATION

Advice

Advice on applications not covered here may be obtained from your Shell Lubricants distributor representative or Shell Technical Helpdesk.

To find the right Pennzoil® product for your vehicles and equipment, please consult www.pennzoil.com to look-up the right motor oil recommendation using our oil selector

Muriatic Acid

1. IDENTIFICATION

Product identifier
Product Name Economy Muriatic Acid

Other means of identification
Product Code 26458907373
UN/ID no. 1789

Recommended use of the chemical and restrictions on use
Recommended Use Swimming pool chemicals. Cleaning agent.
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address
Economy® Polymers & Chemicals
435 E. Anderson Road
Houston, TX 77047
1-800-231-2066
www.economypolymers.com

Emergency telephone number
Emergency Telephone Chemtrec (Transportation) 1-800 424-9300, 703-527-3887
Poison Control Center (Medical) : (877) 800-5553

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Corrosive to metals	Category 1

Label elements

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Keep only in original container

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.
Absorb spillage to prevent material damage

Precautionary Statements - Storage
Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant plastic container with a resistant inner liner.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No.	Weight-%
Hydrogen chloride	7647-01-0	25-35*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water. If symptoms persist, call a physician.

Inhalation Remove to fresh air.

Ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical
No information available.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material (e.g., sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Do not mix with other chemicals.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents, Bases, Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen chloride 7647-01-0	Ceiling: 2 ppm	(vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m³ Ceiling: 5 ppm Ceiling: 7 mg/m³	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m³

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid		
Appearance	clear	**Odor**	Pungent
Color	amber, colorless to light amber	**Odor threshold**	No information available

Property	Values	Remarks • Method
pH	< 1	
Melting point/freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	**1.16-1.18**	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Density	No information available	
Bulk density	No information available	

Oxidizing properties No information available

Other Information

Softening point No information available
Molecular weight No information available
VOC Content (%) No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available
Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
None under normal processing.
Conditions to avoid
Do not mix with other chemicals. Extremes of temperature and direct sunlight.
Incompatible materials
Strong oxidizing agents, Bases, Metals.
Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation May be harmful if inhaled. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. May cause irritation of respiratory tract.

Eye contact Avoid contact with eyes. Risk of serious damage to eyes. May cause burns.

Skin contact Avoid contact with skin. May cause burns.

Ingestion May be fatal if swallowed. Can burn mouth, throat, and stomach. Ingestion causes burns of the upper digestive and respiratory tracts.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrogen chloride 7647-01-0	238 - 277 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 1.68 mg/L (Rat) 1 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrogen chloride 7647-01-0	-	Group 3	-	-

IARC (International Agency for Research on Cancer)
Not classifiable as a human carcinogen

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Eyes, Respiratory system, Skin.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Hydrogen chloride 7647-01-0	-	282: 96 h Gambusia affinis mg/L LC50 static	-

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container. Refer to all federal, state and local regulations prior to disposal of container and unused contents by reuse, recycle or disposal.

14. TRANSPORT INFORMATION

DOT

UN/ID no.	1789
Proper shipping name	HYDROCHLORIC ACID SOLUTION
Hazard Class	8
Packing Group	II
Description	UN1789 HYDROCHLORIC ACID SOLUTION, 8, II

IATA

UN/ID no.	1789
Proper shipping name	HYDROCHLORIC ACID SOLUTION
Hazard Class	8
Packing Group	II
Description	UN1789 HYDROCHLORIC ACID SOLUTION, 8, II

IMDG

UN/ID no.	1789
Proper shipping name	HYDROCHLORIC ACID SOLUTION
Hazard Class	8
Packing Group	II
Description	UN1789 HYDROCHLORIC ACID SOLUTION, 8, II

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Hydrochloric Acid - 7647-01-0	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrogen chloride 7647-01-0	5000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrogen chloride 7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrogen chloride 7647-01-0	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number This product does not contain any substances regulated as pesticides

Difference between SDS and CPSC label

This product is regulated under Consumer Product Safety Commission and is subject to certain labeling requirements under the Federal Hazardous Substances Act (16 CFR Part 1500) . These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace product labels.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 3	**Flammability** 0	**Instability** 1	**Physical and Chemical Properties** -
HMIS	**Health hazards** 3	**Flammability** 0	**Physical hazards** 1	**Personal protection** B

Disclaimer

No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.
All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose Economy Polymers & Chemicals. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Economy assumes no responsibility for the completeness or accuracy of the information contained herein.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

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ISSUE Date: 08 JUL 22
Replaces: 06 JUN 22

End of Safety Data Sheet

HASA MURIATIC ACID

Safety Data Sheet

Emergency 24 Hour Telephone: **CHEMTREC 800.424.9300**

Corporate Headquarters:
Hasa Inc.
P. O. Box 802736
Santa Clarita, CA 91355
Telephone • 661.259.5848
Fax • 661.259.1538

SECTION 1: IDENTIFICATION		
1.1	**Product Identification:**	
1.1.1	**Product Name:**	HASA MURIATIC ACID
1.1.2	**CAS #** (Chemical Abstracts Service):	7647-01-0
1.1.3	**RTECS** (Registry of Toxic Effects of Chemical Substances):	MW4025000
1.1.4	**EINECS** (European Inventory of Existing Chemical Substances):	231-595-7
1.1.5	**Synonym:**	Hydrochloric Acid, Spirits of Salt
1.1.6	**Chemical Name:**	Hydrochloric Acid
1.1.7	**Chemical Formula:**	HCl
1.2	**Recommended Uses:**	Household cleaning, swimming pool water pH control and neutralization.
1.3	**Company Identification:**	Hasa Inc. P.O. Box 802736 Santa Clarita, CA 91355
1.4	**Emergency Telephone Number:**	**CHEMTREC:** 1-800-424-9300 (24 hour)
1.5	**Non-Emergency Assistance:**	661-259-5848 (8 AM – 5 PM PST / PDT)

SECTION 2: HAZARD(S) IDENTIFICATION

Health Hazard	Acute Toxicity (Oral):	Category 4
	Skin corrosion / irritation:	Category 1
	Serious eye damage / irritation	Category 1
	Specific Target Organ Toxicity (Single exposure)	Category 3 (respiratory tract irritation)
Physical Hazard	Corrosive to metals.	Category 1
Symbols		
Signal Word		**DANGER**
Hazard Statement	Causes severe skin burns & eye damage. Harmful if swallowed. May cause respiratory irritation. Maybe corrosive to metals.	
Precautionary Statement	**Prevention**	
	Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Keep only in original container.	
	Response	
	If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.	
	Storage	
	Store locked up. Store in a corrosive resistant container. Store in a well-ventilated place. Keep container tightly closed.	
	Disposal	
	Dispose of container/contents in accordance with local, regional, national, international regulations as specified.	

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

	Ingredient	CAS No.	Weight % (Approx.)
3.1	Hydrochloric Acid	7647-01-0	31.45%
3.2	Water	7732-18-5	68.55%

SECTION 4: FIRST-AID MEASURES

4.1. **IF IN EYES**	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
4.2. **IF ON SKIN OR CLOTHING**	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
4.3. **IF INHALED**	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
4.4. **IF SWALLOWED**	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5: FIRE-FIGHTING MEASURES

5.1	**Products of Combustion:**	Hydrogen and chlorine
5.2	**Fire Hazards in Presence of Various Substances:**	Reacts with many metals to liberate hydrogen gas which can form explosive mixtures with air.
5.3	**Explosion Hazards:**	Not sensitive.
5.4	**Fire Fighting Media and Instructions:**	
5.4.1	**Extinguishing Media:**	Use extinguishing measures appropriate to local circumstances and the surrounding environment.
5.4.2	**Small Fires:**	Use carbon dioxide, dry chemical, dry sand, alcohol-resistant foam or water spray.
5.4.3	**Large Fires:**	Water spray, fog or alcohol-resistant foam. Move containers from fire area if you can do it without risk. Use water spray or fog; do not use straight streams. Dike fire-control water for later disposal; do not scatter the material.
5.5	**Fire Involving Tank Cars / Trailer Loads:**	Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	**Small Spill:**	Gather up with a squeegee and place in pool and spa. If this is not possible, absorb with sand, diatomaceous earth or similar products and securely bag, and place in trash for collection.
6.2	**Large Spill:**	Steps to be taken in case material is released or spilled: Spills or discharges into the environment involving large quantities of Hydrochloric Acid should be controlled and cleaned-up according to a pre-determined, affirmative written Spill Prevention and Control Program. Refer to Section 15 for spill/release reporting information. Spills should be handled immediately by neutralization and dilution of the spilled product by the use of Soda Ash (Sodium Carbonate), Lime (Calcium Hydroxide), or Limestone (Calcium Carbonate) with large amounts of water. For an interior (inside a closed space) spill be aware that the use of Soda Ash, Lime and Limestone will evolve heat and carbon dioxide and that ample ventilation must be provided. If possible without personal risk, stop leak. Try to prevent the materials from entering drains, waterways, or sewers and dispose of in accordance with local regulations. Rinse exposed area with dilute sodium carbonate solution.

SECTION 7: HANDLING AND STORAGE

7.1	**Handling:**	Keep away from skins and eyes. Do not inhale or swallow. Do not mix with chlorine type bleaches or other household chemicals. Whenever handling muriatic acid, wear protective clothing (goggles, old clothing and rubber gloves). Remove protective clothing and wash before reuse.
7.2	**Storage and Disposal:**	Store muriatic acid in a clean, dry place in the upright position. Keep out of reach of children, pets and other animals. Rinse empty container thoroughly before discarding.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1	**Engineering Controls:**	Local exhaust to maintain levels below Permissible Exposure Limit (PEL).
8.2	**Personal Protection:**	When necessary, wear splash goggles or safety glasses and gloves.
8.3	**Personal Protection in case of a Large Spill:**	Wear splash goggles or safety glasses and gloves. If natural ventilation is insufficient, wear a NIOSH approved respirator.
8.4	**Exposure Guidelines:**	
8.4.1	**ACGIH** (American Conference of Governmental and Industrial Hygienists) **TLV** (Threshold Limit Value)	5 ppm (7 mg/m^3) Ceiling
8.4.2	**PEL** (OSHA Permissible Exposure Limit)	5 ppm (7 mg/m^3) Ceiling Limit
8.4.3	**IDLH** (NIOSH Immediate Danger to Life & Health)	50 ppm (75 mg/m^3)
8.4.4	**AIHA** (American Industrial Hygiene Association)	**ERPG – 1** (T*he maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor.)*: **3 ppm** **ERPG – 2** (*The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair an individual's ability to take protective action.)*: **20 ppm** **ERPG – 3** (*The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing life-threatening health effects.)*: **150 ppm**

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1	**Appearance:**	Colorless liquid.
9.2	**Odor:**	Irritating and pungent odor.
9.3	**Odor Threshold:**	4.7 ppm @ at 25 ℃
9.4	**pH:**	<1.0
9.5	**Melting Point:**	Not applicable.
9.6	**Freezing point:**	-46.9℃ (-52.5℉)
9.7	**Boiling Point & Boiling Range:**	85℃ (185℉)
9.8	**Flash Point:**	No information available.
9.9	**Evaporation Rate:**	No information available.
9.10	**Flammability (solid, gas):**	Nonflammable and noncombustible.
9.11	**Upper / Lower Flammability or Explosive Limits:**	Not applicable.
9.12	**Vapor Pressure:**	40 mm Hg @ 30°C (86℉)
9.13	**Vapor Density:**	No information available.
9.14	**Relative Density (Specific Gravity):**	1.16 @ 15.5℃ (60℉)
9.15	**Solubility in Water:**	Mixes with water in all concentrations.
9.16	**Partition Coefficient: (n-octanol / water):**	Not applicable.
9.17	**Auto-ignition Temperature:**	Not applicable.
9.18	**Decomposition Temperature:**	85°C. Rate of decomposition increases with heat.
9.19	**Molecular Weight:**	36.46 g/mole
9.20	**Viscosity:**	1.55 centipoises @ 30°C (86℉)

SECTION 10: STABILITY AND REACTIVITY

10.1	**Stability:**	Stable under normal conditions of storage, handling, and use.
10.2	**Instability Temperature:**	85°C. Rate of decomposition increases with heat.
10.3	**Conditions of Instability:**	High heat, ultraviolet light.
10.4	**Incompatibility with Various Substances:**	Oxidizing agents, acids, nitrogen containing organic, metals, iron, copper, nickel, cobalt, organic materials, and ammonia. Corrosive to most metals with evolution of hydrogen gas, which may form explosive mixtures with air.
10.5	**Special Remarks on Reactivity:**	Rate of decomposition increases with heat.
10.6	**Hazardous Polymerization:**	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	**Routes of Entry:**	Eyes, skin, ingestion.
11.2	**Eye damage & skin corrosion:**	Causes eye burns. Contact with this material will cause burns to the skin, eyes and mucous membranes. Permanent eye damage including blindness could result.
11.3	**Acute Oral Toxicity** (LD_{50})**:**	NIOSH: 900 mg/kg (rabbit)
11.4	**Acute Inhalation Toxicity** (LC_{50})**:**	3124 mg/l, 1 Hour (rat)
11.5	**Toxic Effects on Humans:**	Harmful if swallowed. Causes digestive tract burns. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.
11.6	**Carcinogenic [Cancer Potential] Information:**	
	NTP (National Toxicological Program 6th Annual Report on Carcinogens):	Not Listed.
	IARC (International Agency for Research on Cancer Monographs, V. 1-100):	Not Listed.
	Proposition 65, California only: (Safe Drinking Water and Toxic Enforcement Act of 1986)**:**	Not Listed.
11.7	**Mutagenic Effects:**	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
11.8	**Signs and Symptoms of Exposure:**	Exposure to hydrochloric acid may cause severe burns at the contact points.
11.9	**Medical Conditions Generally Aggravated by Exposure:**	Exposure to fumes may aggravate dermatitis and breathing disorders.
11.10	**Health Hazards (Acute and Chronic):**	Hydrogen Chloride, both as a gas and in a solution as Hydrochloric Acid, is a corrosive substance and can cause severe and painful burns on contact with any part of the body or if taken internally. The mucous membranes of the eyes and the upper respiratory tract are especially susceptible to the irritating effects of high atmospheric concentrations of Hydrogen Chloride. The gas or vapor is so penetrating and pungent that when high concentrations do occur, those exposed should immediately leave the contaminated area.

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Ecotoxicity General:**	This product is toxic to fish and aquatic organisms. Do not contaminate water containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.
12.2	**Ecotoxicological Information:**	**LC_{50}** Shrimp 100 to 330 ppm/48 hr (salt water) **LC_{50}** Mosquito Fish 282 mg/L (24 to 96 hours) **LC_{50}** Green crabs 100 mg/L (96 hr produced no stress effects) **LC_{50}** Gold fish 180 mg/L (96 hours) Aquatic Hazard Concern Level : moderate
12.3	**Persistence and Degradation:**	When hydrochloric acid is spilled onto soil, it will begin to infiltrate. The presence of water in the soil will influence the rate of chemical movement in the soil. During transport through the soil, hydrochloric acid will dissolve some of the soil material, in particular those of a carbonate base. The acid will be expected to remain for transport down toward the ground water table. Hydrogen chloride in water dissociates almost completely, with the hydrogen ion captured by the water molecules to form the hydronium ion.
12.4	**Products of Biodegradation:**	Not pertinent.

SECTION 13: DISPOSAL CONSIDERATIONS

Do not contaminate food or feed by storage, disposal, or cleaning of equipment. Product or rinsates that cannot be used should be diluted with water before disposal in a sanitary sewer. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination system (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Dispose of in accordance with all applicable local, county, State, and Federal regulations.

SECTION 14: TRANSPORT INFORMATION

14.1	**Shipping Name:**	Hydrochloric Acid
14.2	**Hazard Class / Division:**	8
14.3	**Identification No.:**	UN 1789
14.4	**Packing Group:**	PG II
14.5	**Reportable Quantity (RQ):**	5,000 lb (1643 gallons)
14.6	**Deposit Pails, Carboys and Drums:**	The shipping description for return of empty deposit pails, carboys, and drum is "RESIDUE: LAST CONTAINED UN1789, HYDROCHLORIC ACID, 8, PGII".
14.7	**Materials of Trade (MOT) Exceptions.** Certain hazardous materials transported in small quantities as part of a business are subject to less regulation, because of the limited hazard they pose. These materials are known as Materials of Trade. The regulations that apply to MOTs are found in 49 CFR § 173.6.	

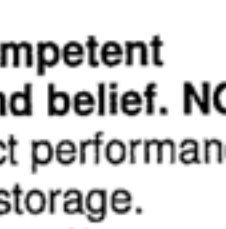
This information is not intended to convey all specific regulatory or operational requirements / information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

15.1 U.S. Regulations:		
15.1.1	**OSHA HAZCOM** (Hazard Communication)	This material is considered hazardous under the HAZCOM standard (29 CFR 1910.1200).
15.1.2	**OSHA PSM** (Process Safety Management):	Not regulated under PSM standard (29 CFR 1910.119).
15.1.3	**EPA EPCRA** (EPA Emergency Planning and Community Right-to-know Act):	Not listed on Extremely Hazardous Substances and Their Threshold Planning Quantities. (Appendix A to 40 CFR Part 355)
15.1.4	**EPA TSCA** (Toxic Substance Control Act):	All components are listed or exempted. TSCA 12(b): This product is not subject to export notification.
15.1.5	**EPA CERCLA** (Comprehensive Environmental Response, Compensation, and Liability Act):	Reportable Quantity (RQ) under CERCLA: 5000 lbs. (1643 gallons).
15.1.6	**EPA FIFRA** (Federal Insecticide, Fungicide, Fungicide, and Rodenticide Act):	Not regulated under FIFRA standard.
15.1.7	**EPA RMP** (Risk Management Plan):	Not regulated under RMP. (40 CFR 68.130)
15.2 State of California Regulations:		
15.2.1	**CDPR** (California Department of Pesticide Regulation):	Registration No: 10897-50008-AA (spray adjuvant)
15.2.2	**CalARP** (California Accidental Release Prevention):	Not regulated.
15.3 Canada Regulations:		
15.3.1	**WHMIS** (Workplace Hazardous Materials Information System):	WHMIS classification: D1A - Poisonous and infectious material - Immediate and serious effects - Very toxic E - Corrosive Materials
15.3.2	**DSL** (Domestic Substances List):	All components of this product are on the DSL.
15.4 International Inventory:		
15.4.1	**AICS** (Australian Inventory of Chemical Substances):	On inventory or in compliance with inventory.
15.4.2	**KECI** (Korean Existing Chemicals Inventory):	On inventory or in compliance with inventory.
15.4.3	**PICCS** (Philippine Inventory of Chemicals and Chemical Substances):	On inventory or in compliance with inventory.
15.4.4	**IECSC** (Inventory of Existing Chemical Substances in China):	On inventory or in compliance with inventory.
15.4.5	**NZIoC** (New Zealand Inventory of Chemicals):	On inventory or in compliance with inventory.

SECTION 16: OTHER INFORMATION

16.1	**HMIS III** (Hazardous Materials Identification System):		
	16.1.1 **HEALTH**	**3**	
	16.1.2 **FLAMMABILITY**	**0**	
	16.1.3 **PHYSICAL HAZARD**	**0**	
	16.1.4 **PERSONAL PROTECTION**	**See Section 8**	
16.2	**NFPA 704** (National Fire Protection Association):		
	16.2.1 **Health**	**3**	
	16.2.2 **Flammability**	**0**	
	16.2.3 **Instability**	**0**	
	16.2.4 **Special**	None	
16.3	**International Fire Code / International Building Code:**	Corrosive Liquid.	
16.4	**ANSI** (American National Standards Institute):		
	16.4.1 **Hazardous Industrial Chemicals -** MSDSs-Preparation:	Complies with **ANSI Z400.1 – 2004.**	
	16.4.2 **Hazardous Industrial Chemicals -** Precautionary Labeling:	Complies with **ANSI Z129.1 – 2006.**	



Note: To convert concentrations in air (at 25°C) from ppm to mg/m³:

mg/m³ = (ppm) × (molecular weight of the compound) / (24.45)
For hydrochloric acid: 1 ppm = 1.49 mg/m³.

Disclaimer of Liability:

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Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: November 28, 2017 Revision: November 28, 2017

1 Identification

· **Product identifier**

· **Trade name: ZeoSand Filter Media, ZAR-MIN Feed Additive, EcoSand Soil Amendment, Natural Zeolite**

· **Other means of identification:** No other identifiers

· **Recommended use and restriction on use**
· **Recommended use:** Product Component
· **Restrictions on use:** No relevant information available.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
ZEO, Inc.
2104 Augusta Street
McKinney, TX 75070
Phone: +1-972-542-0053
Fax: +1-972-542-0211

· **Emergency telephone number:** +1-972-542-0053

2 Hazard(s) identification

· **Classification of the substance or mixture**
The product is not classified as hazardous according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Not regulated.
· **Hazard pictograms:** Not regulated.
· **Signal word:** Not regulated.
· **Hazard statements:** Not regulated.
· **Precautionary statements:** Not regulated.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**		
12173-10-3	Clinoptilolite Zeolite/ Potassium, Calcium, Sodium Aluminosilicate	50-100%
7732-18-5	water	2.5-10%

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Clean with water and soap.
Seek medical treatment in case of complaints.
· **After eye contact:**
Remove contact lenses if worn.

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Trade name: ZeoSand Filter Media, ZAR-MIN Feed Additive, EcoSand Soil Amendment, Natural Zeolite

(Cont'd. of page 1)

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:** Gastric or intestinal disorders

· **Indication of any immediate medical attention and special treatment needed:**
No relevant information available.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**
The product is not flammable.
Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** None.

· **Special hazards arising from the substance or mixture** No relevant information available.

· **Advice for firefighters**

· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
For large spills, wear protective clothing.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

· **Environmental precautions** No special measures required.

· **Methods and material for containment and cleaning up**
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**

· **Precautions for safe handling:**
Open and handle receptacle with care.
Use only in well ventilated areas.
Avoid breathing dust.

· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

(Cont'd. on page 3)

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Trade name: ZeoSand Filter Media, ZAR-MIN Feed Additive, EcoSand Soil Amendment, Natural Zeolite

(Cont'd. of page 2)

· **Storage**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
12173-10-3 Clinoptilolite Zeolite/ Potassium, Calcium, Sodium Aluminosilicate	
OSHA PEL (USA)	Ceiling limit value: 15 mg/m³

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Avoid contact with the eyes.
Keep away from foodstuffs, beverages and feed.
· **Engineering controls:** Provide adequate ventilation.
· **Breathing equipment:**
Not necessary if room is well-ventilated.
Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.
For spills, respiratory protection may be advisable.
· **Protection of hands:**
Gloves not required under normal conditions of use.
When needed, wear gloves for protection against mechanical hazards.
· **Eye protection:** Follow relevant national guidelines concerning the use of protective eyewear.
· **Body protection:**
Not required under normal conditions of use.
Protection may be required for spills.
· **Limitation and supervision of exposure into the environment** No special requirements.
· **Risk management measures** No special requirements.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **Appearance:**

Form:	Powder to granulate
Color:	Light tan to green
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Melting point/Melting range:**	Not determined.

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Trade name: ZeoSand Filter Media, ZAR-MIN Feed Additive, EcoSand Soil Amendment, Natural Zeolite

(Cont'd. of page 3)

· **Boiling point/Boiling range:**	Not determined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not determined.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Non-oxidizing.
· **Vapor pressure:**	Not applicable.
· **Density:**	
Relative density:	2.3 g/cm³ (19.19 lbs/gal)
Vapor density:	Not applicable.
Evaporation rate:	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Insoluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Other information**	No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** Reacts with strong acids and alkali.
· **Conditions to avoid** Prevent formation of dust.
· **Incompatible materials** No relevant information available.
· **Hazardous decomposition products** No relevant information available.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **LD/LC50 values that are relevant for classification:** None.
· **Primary irritant effect:**

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(Cont'd. of page 4)

· **On the skin:** Based on available data, the classification criteria are not met.
· **On the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** No sensitizing effects known.

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Repeated dose toxicity:** Long term inhalation of product dust may be harmful.
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** No relevant information available.
· **Persistence and degradability**
Inorganic product, is not eliminable from water by means of biological cleaning processes.
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Additional ecological information**
· **General notes:** Not known to be hazardous to water.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Contact waste processors for recycling information.
Smaller quantities can be disposed of with household waste.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and

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(Cont'd. of page 5)

disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	Not regulated.
· **UN proper shipping name**	
· **DOT, ADR, IMDG, IATA**	Not regulated.
· **Transport hazard class(es)**	
· **DOT, ADR, IMDG, IATA**	
· **Class**	Not regulated.
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	Not regulated.
· **Environmental hazards**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 302 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act)**
All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

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· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**
None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**
None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL):**
All ingredients are listed or exempt.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** November 28, 2017 / -

· **Abbreviations and acronyms:**
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistant, Bio-accumulable, Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health Administration

· **Sources**
Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902

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Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: November 28, 2017 Revision: November 28, 2017

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Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Leslie's Swimming Pool Supplies Fresh 'N Clear®**

Other means of identification Not available

Recommended use Chlorine-free shock oxidizer

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name LPM Manufacturing, Inc.

Address 2005 E. Indian School Rd.
Phoenix, AZ 85016
United States

Telephone 602-366-3999

E-mail Not available.

Emergency phone number 800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement
May be corrosive to metals.
Harmful if swallowed.
Causes severe skin burns and eye damage.

Precautionary statement

Prevention
Keep only in original container.
Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
Do not breathe dust.
Wear protective gloves/protective clothing/eye protection/face protection.

Response
Absorb spillage to prevent material damage.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Specific treatment (see this label).

Storage
Store locked up.
Store in corrosive resistant container with a resistant inner liner.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 1.65% of the mixture consists of component(s) of unknown acute oral toxicity.

3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Pentapotassium Bis(peroxymonosulphate) Bis(sulphate)		70693-62-8	80-83
Sodium carbonate		497-19-8	13-16
Potassium persulfate		7727-21-1	3-6
Dihydroxypentamagnesium, tetrakis[carbonato(-2)]		7760-50-1	1-4

4. First Aid Measures

Inhalation
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

Skin contact
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Eye contact
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion
If swallowed: Rinse mouth. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed
Burning pain and severe corrosive skin damage. Causes serious eye damage. Dusts may irritate the respiratory tract, skin and eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

5. Fire Fighting Measures

Suitable extinguishing media
Water spray.

Unsuitable extinguishing media
Do not use carbon dioxide or other gas-filled fire extinguishers; they will have no effect on decomposing persulfates.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.
Will release oxygen when heated, intensifying a fire. Acidic mist may be present; self contained breathing apparatus should be used.

Special protective equipment and precautions for firefighters
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions
In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods
Cool containers exposed to flames with water until well after the fire is out.

General fire hazards
Improper storage of large masses of “OXONE” or blended “OXONE” can trap heat and lead to ignition of combustibles (see section on “Handling and Storage”). Grinding or intensive mixing may cause decomposition with liberation of heat and oxygen; ignition of oxidizable material if present may occur.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear a dust mask if dust is generated above exposure limits. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation.

Methods and materials for containment and cleaning up
Sweep up material and place in a disposal container without raising dust. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Prevent entry into waterways, sewers or confined areas.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take any precaution to avoid mixing with combustibles. Do not breathe dust. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Practice good housekeeping.

Conditions for safe storage, including any incompatibilities
Store locked up. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Do not store near combustible materials.

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Potassium persulfate (CAS 7727-21-1)	TWA	0.1 mg/m3

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls
Not normally required if good ventilation is maintained.

Individual protection measures, such as personal protective equipment

Eye/face protection
Face shield or chemical goggles.

Skin protection

Hand protection
Rubber gloves. Confirm with a reputable supplier first.

Other
Not available.

Respiratory protection
Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace. Wash hands after handling and before eating.

9. Physical and Chemical Properties

Appearance Granular solid

Physical state Solid.

Form Powder.

Color Clear

Odor Odorless

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Pour point Not available.

Specific gravity Not available.

Partition coefficient (n-octanol/water) Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	Do not mix with other chemicals.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Keep away from heat, sparks and open flame.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Sulfur oxides. Oxygen.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	Harmful if swallowed. Causes digestive tract burns.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Components	**Species**	**Test Results**
Dihydroxypentamagnesium, tetrakis[carbonato(-2)] (CAS 7760-50-1)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	> 5000 mg/kg
Potassium persulfate (CAS 7727-21-1)		
Acute		
Dermal		
LD50	Rabbit	> 10000 mg/kg
Inhalation		
LC50	Rat	> 5 mg/L
Oral		
LD50	Rat	802 mg/kg
Sodium carbonate (CAS 497-19-8)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Guinea pig	400 mg/m3
		0.8 mg/l, 2 Hours
	Mouse	1.2 mg/l, 2 Hours

Components	Species	Test Results
	Rat	2.3 mg/l, 2 Hours
Oral		
LD50	Rat	4090 mg/kg

Skin corrosion/irritation Causes severe skin burns and eye damage.

- **Exposure minutes** Not available.
- **Erythema value** Not available.
- **Oedema value** Not available.

Serious eye damage/eye irritation Causes serious eye damage.

- **Corneal opacity value** Not available.
- **Iris lesion value** Not available.
- **Conjunctival reddening value** Not available.
- **Conjunctival oedema value** Not available.
- **Recover days** Not available.

Respiratory or skin sensitization

- **Respiratory sensitization** Not classified.
- **Skin sensitization** Not available.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

Further information Not available.

12. Ecological Information

Ecotoxicity See below

Components		Species	Test Results
Sodium carbonate (CAS 497-19-8)			
Crustacea	EC50	Daphnia	265 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	156.6 - 298.9 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	300 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN3260
Proper shipping name	Corrosive solid, acidic, inorganic, n.o.s. (Monopersulfate compound)
Hazard class	8
Packing group	II
Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	154
Packaging non bulk	212
Packaging bulk	240

DOT

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.
US state regulations	CA Reg. No 11411-50017 California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - New Jersey RTK - Substances: Listed substance

Potassium persulfate (CAS 7727-21-1)	Listed.

US - Texas Effects Screening Levels: Listed substance

Potassium persulfate (CAS 7727-21-1)	Listed.
Sodium carbonate (CAS 497-19-8)	Listed.

US. Massachusetts RTK - Substance List

Potassium persulfate (CAS 7727-21-1)	Listed.

US. Pennsylvania RTK - Hazardous Substances

Potassium persulfate (CAS 7727-21-1)	Listed.

US. Rhode Island RTK

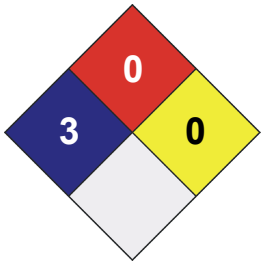
Not regulated.

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

09-January-2015

Further information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This chemical is a pesticide product registered by the the California Department of Pesticide Regulations (DPR) and is subject to certain labeling requirements under the California pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

PRECAUTIONARY STATEMENTS: DANGER
CORROSIVE
CAUSES SKIN AND EYE DAMAGE. May be harmful if swallowed. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Irritating to nose and throat. Avoid breathing dust. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, smoking tobacco or using the toilet. Remove and wash contaminated clothing after use.

PHYSICAL OR CHEMICAL HAZARD: STRONG OXIDIZING AGENT. Mix only into water, using clean, dry utensils. Never add water to product. Always add product to large quantities of water. Do not mix with other chemicals. Do not add this product to any dispensing device containing remnants of any other product. Such use or contamination with moisture, organic matter or other chemicals, may cause a violent reaction leading to fire or liberation of hazardous gases. In such case of contamination or decomposition, do not reseal container. If possible, isolate container in open air or well ventilated area. Flood with large amounts of water.

Prepared by

Dell Tech Laboratories Ltd. Phone: (519) 858-5021

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	Trade Grade Phosphate Remover
Other means of identification	Not available
Recommended use	Phosphate remover
Recommended restrictions	None known.
Manufacturer information	NC Brands 40 Richards Ave. Norwalk, CT 06854 US Phone: (800) 753-1233 Emergency Phone: CHEMTREC (800) 424-9300
Supplier	See above.

2. Hazards Identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	

Label elements

Signal word	Danger
Hazard statement	Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation.
Precautionary statement	
Prevention	Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area.
Response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Specific treatment (see information on this label). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Lanthanum Chloride (lacl3), Hydrate		20211-76-1	11
Zinc chloride		7646-85-7	9
Aluminum chlorhydrate		12042-91-0	8

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
Skin contact	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a POISON CENTER/doctor. Specific treatment (see information on this label).
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Dry chemical. Carbon dioxide. Water spray. Foam.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Hydrogen chloride. Oxides of sulfur. Oxides of aluminum.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Do not breathe mist or vapor. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Use care in handling/storage.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Aluminum chlorhydrate (CAS 12042-91-0)	TWA	2 mg/m3	
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Aluminum chlorhydrate (CAS 12042-91-0)	TWA	1 mg/m3	Respirable.
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Aluminum chlorhydrate (CAS 12042-91-0)	TWA	1 mg/m3	Respirable fraction.
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Aluminum chlorhydrate (CAS 12042-91-0)	TWA	1 mg/m3	Respirable fraction.
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Aluminum chlorhydrate (CAS 12042-91-0)	TWA	2 mg/m3	
Zinc chloride (CAS 7646-85-7)	TWA	1 mg/m3	Fume.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Zinc chloride (CAS 7646-85-7)	PEL	1 mg/m3	Fume.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum chlorhydrate (CAS 12042-91-0)	TWA	1 mg/m3	Respirable fraction.
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Aluminum chlorhydrate (CAS 12042-91-0)	TWA	2 mg/m3	
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety goggles or glasses.

Skin protection

Hand protection Impervious gloves. Confirm with reputable supplier first.

Other Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Not applicable.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Clear
Physical state	Liquid.
Form	Liquid.
Color	Colorless
Odor	Not available.
Odor threshold	Not available.
pH	2 - 4
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	1.1 - 1.3
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	8 - 11 lb/gal
Solubility(ies)	Complete
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	Reacts vigorously with alkaline material.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Caustics. Reducing agents.
Hazardous decomposition products	May include and are not limited to: Hydrogen chloride. Oxides of sulfur. Oxides of aluminum.

11. Toxicological Information

Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.

Information on likely routes of exposure

Ingestion	Causes digestive tract burns. Harmful if swallowed.
Inhalation	Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity	Harmful if swallowed. May cause respiratory irritation.

Components	Species	Test Results
Aluminum chlorhydrate (CAS 12042-91-0)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 21 Days, ECHA
		> 2000 mg/kg, 24 Hours, ECHA
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	> 2000 mg/kg, ECHA, male rat
		9187 mg/kg, ECHA, female rat
Lanthanum Chloride (lacl3), Hydrate (CAS 20211-76-1)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	4184 mg/kg, Sigma Aldrich
Zinc chloride (CAS 7646-85-7)		
Acute		
Dermal		
LD50	Not available	
	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Not available	
	Rat	20000 mg.min/m3, 10 Minutes
		2000 mg/m3, 10 Minutes
Oral		
LD50	Guinea pig	200 mg/kg
	Mouse	350 mg/kg

Components	Species	Test Results
	Rat	350 mg/kg

Skin corrosion/irritation: Causes severe skin burns and eye damage.

- Exposure minutes: Not available.
- Erythema value: Not available.
- Oedema value: Not available.

Serious eye damage/eye irritation: Causes serious eye damage.

- Corneal opacity value: Not available.
- Iris lesion value: Not available.
- Conjunctival reddening value: Not available.
- Conjunctival oedema value: Not available.
- Recover days: Not available.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

Aluminum chlorhydrate (CAS 12042-91-0)	Irritant
Zinc chloride (CAS 7646-85-7)	Irritant

- Respiratory sensitization: Not classified.
- Skin sensitization: This product is not expected to cause skin sensitization.

Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Canada - Manitoba OELs: carcinogenicity

ALUMINUM METAL AND INSOLUBLE COMPOUNDS, RESPIRABLE FRACTION (CAS 12042-91-0)	Not classifiable as a human carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.

Teratogenicity: Not classified.

Specific target organ toxicity - single exposure: Respiratory tract irritation.

Specific target organ toxicity - repeated exposure: Not classified.

Aspiration hazard: Not classified.

Chronic effects: Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity: See below

Ecotoxicological data

Components		Species	Test Results
Zinc chloride (CAS 7646-85-7)			
Aquatic			
Crustacea	EC50	American or virginia oyster (Crassostrea virginica)	0.151 - 0.278 mg/L, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.101 - 0.197 mg/L, 96 hours

Persistence and degradability: No data is available on the degradability of this product.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Mobility in general: Not available.

Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification	In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue.

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN3264
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s.
Technical name	Zinc chloride
Hazard class	8
Packing group Marine pollutant Special provisions Packaging exceptions Packaging non bulk Packaging bulk	III Yes IB3, T7, TP1, TP28 <5L - Limited Quantity 203 241

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN3264
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical name	Zinc chloride
Hazard class	8
Packing group Marine pollutant Special provisions Packaging exceptions	III Yes 16 <5L - Limited Quantity

IMDG (Marine Transport)

Basic shipping requirements:

UN number	UN3264
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical name	Zinc chloride
Hazard class	8
Packing group	III
Marine pollutant	Yes
EmS	F-A, S-B

DOT

IMDG; TDG

15. Regulatory Information

Canadian federal regulations — This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada CEPA Schedule I: Listed substance

Zinc chloride (CAS 7646-85-7) — Listed.

Canada Priority Substances List (Second List): Listed substance

Zinc chloride (CAS 7646-85-7) — Listed.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions — Not applicable

US federal regulations — This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Zinc chloride (CAS 7646-85-7) — Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories — Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance — No

SARA 311/312 Hazardous chemical — No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Zinc chloride	7646-85-7	9

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) — Hazardous substance

US state regulations

US - California Hazardous Substances (Director's): Listed substance

Aluminum chlorhydrate (CAS 12042-91-0) — Listed.
Zinc chloride (CAS 7646-85-7) — Listed.

US - Illinois Chemical Safety Act: Listed substance

Zinc chloride (CAS 7646-85-7)

US - Louisiana Spill Reporting: Listed substance

Zinc chloride (CAS 7646-85-7) Listed.

US - Michigan Critical Materials Register: Parameter number

Zinc chloride (CAS 7646-85-7) ZINC

US - Minnesota Haz Subs: Listed substance

Aluminum chlorhydrate (CAS 12042-91-0) Listed.

Zinc chloride (CAS 7646-85-7) Listed.

US - New Jersey RTK - Substances: Listed substance

Zinc chloride (CAS 7646-85-7)

US - Texas Effects Screening Levels: Listed substance

Aluminum chlorhydrate (CAS 12042-91-0) Listed.

Zinc chloride (CAS 7646-85-7) Listed.

US. Massachusetts RTK - Substance List

Zinc chloride (CAS 7646-85-7)

US. New Jersey Worker and Community Right-to-Know Act

Zinc chloride (CAS 7646-85-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Aluminum chlorhydrate (CAS 12042-91-0)

Zinc chloride (CAS 7646-85-7)

US. Rhode Island RTK

Zinc chloride (CAS 7646-85-7)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

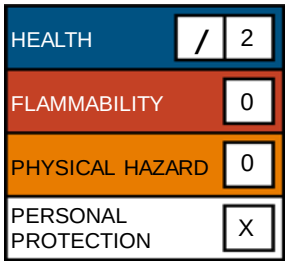
Inventory status

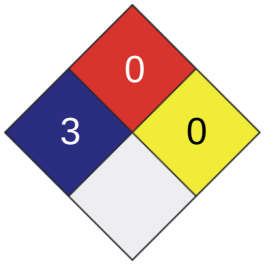
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0





Disclaimer

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Issue date 24-August-2017

Version # 02

Effective date 24-August-2017

Prepared by Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

Other information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

SAFETY DATA SHEET

Date Issued : 12/07/2022
SDS No. : Regal Super Phosphate Remover

Regal Pool Care System Super Phosphate Remover

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Regal Pool Care System Super Phosphate Remover
GENERAL USE: Phosphate Remover for Swimming Pools & Spas

DISTRIBUTOR

Alliance Trading, Inc.
109 North Park Blvd., 4th Floor
Covington, LA 70433

24 HR. EMERGENCY TELEPHONE NUMBERS

Chem-Tel 24-Hour Emergency # (800) 255-3924

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Corrosive to Metals, Category 1
Eye Damage, Category 1
Skin Sensitization, Category 1

GHS LABEL

The product is classified and labeled according to the Globally Harmonized System (GHS).


Corrosion


Exclamation mark

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H318: Causes serious eye damage.
H290: May be corrosive to metals.
H317: May cause an allergic skin reaction.

PRECAUTIONARY STATEMENT(S)

Prevention:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
P363: Wash contaminated clothing before reuse.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352: IF ON SKIN: Wash with plenty of water/...
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P310: Immediately call a POISON CENTER/doctor/...

Storage:

P234: Keep only in original packaging.
P406: Store in a corrosion resistant/...container with a resistant inner liner.

Disposal:

P390: Absorb spillage to prevent material damage.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS

SAFETY DATA SHEET

Date Issued : 12/07/2022
SDS No. : Regal Super Phosphate Remover

Regal Pool Care System Super Phosphate Remover

Lanthanum Chloride Heptahydrate	Proprietary	10025-84-0
Inert Ingredients	Proprietary	Proprietary

4. FIRST AID MEASURES

EYES: Protect unharmed eye. Remove contact lenses, if worn. Rinse opened eye for several minutes under running water, then consult a doctor.

SKIN: Immediately remove any clothing soiled by product. Immediately rinse with water. If skin irritation continues, consult a doctor. Seek immediate medical help for blistering or open wounds.

INGESTION: Rinse out mouth and then drink plenty of water. Do not induce vomiting; immediately call for medical help.

INHALATION: Supply fresh air; consult a doctor in case of complaints.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

ACUTE EFFECTS:
Allergic reaction.
Slight irritant effect on skin and mucous membranes.
Strong irritant with the danger of severe eye injury.
Nausea in case of ingestion.
Gastric or intestinal disorders when ingested.

NOTES TO PHYSICIAN:
Medical supervision for at least 48 hours.
Contains Lanthanum Chloride, Anhydrous. May produce an allgeric reaction.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: None Expected.

EXTINGUISHING MEDIA: Adapt extinguishing media to the environment.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

HAZARDOUS DECOMPOSITION PRODUCTS: During fire, gases hazardous to heath may be formed.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb liquid on vermiculite, floor absorbent or other absorbent material.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Avoid runoff to waterways and sewers. Releases should be reported, if required, to appropriate agencies.

GENERAL PROCEDURES: Ventilate area of leak or spill. Use appropriate safety equipment.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Keep respiratory protective device available. Store only in original container. Store away from foodstuffs. Do not store together with alkalis (caustic solutions).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: No additional information available.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Chemical goggles or safety glasses.

SKIN: Chemical-resistant gloves.

RESPIRATORY: No respirator is required under normal conditions of use.

WORK HYGIENIC PRACTICES: Keep away from foodstuffs, beverages and feed. Avoid contact with eyes and skin. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.

OTHER USE PRECAUTIONS: Good hygiene practices should be stricty followed. Before eating, drinking or smoking, wash face and hands

SAFETY DATA SHEET

thoroughly.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Characteristic

ODOR THRESHOLD: Not Determined.

COLOR: Yellow

pH: 2 to 3 20°C (68°F)

FLASHPOINT AND METHOD: Not Applicable

EXPLOSION LIMITS: Not Applicable

AUTOIGNITION TEMPERATURE: Not Determined

VAPOR PRESSURE: Not Determined

VAPOR DENSITY: Not Determined.

BOILING POINT: No data available

MELTING POINT: No data available

DECOMPOSITION TEMPERATURE: Not Determined.

SOLUBILITY IN WATER: Fully miscible.

EVAPORATION RATE: Not Determined.

DENSITY: 1.6 g/cm3

VISCOSITY: Not Determined

10. STABILITY AND REACTIVITY

REACTIVITY: No additional information available.

HAZARDOUS POLYMERIZATION: Will not occur under normal temperatures.

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: No further relevant information available.

POSSIBILITY OF HAZARDOUS REACTIONS: Reacts with Alkali (lyes). Reacts with reducing agents. Toxic fumes may be released if heated above the decomposition point.

HAZARDOUS DECOMPOSITION PRODUCTS:
Under fire conditions only:
Toxic metal oxide smoke
Chlorine

INCOMPATIBLE MATERIALS: Alkali (lyes)

11. TOXICOLOGICAL INFORMATION

SKIN CORROSION/IRRITATION: Slight irritant effect on skin and mucous membranes.

SERIOUS EYE DAMAGE/IRRITATION: Strong irritant with the danger of severe eye injury.

RESPIRATORY OR SKIN SENSITISATION: Sensitization possible through skin contact.

GERM CELL MUTAGENICITY: None Expected.

CARCINOGENICITY

IARC: None of the ingredients are listed.

NTP: None of the ingredients are listed.

OSHA: None of the ingredients are listed.

NOTES: None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as carcinogen.

REPRODUCTIVE TOXICITY: None Expected.

SAFETY DATA SHEET

STOT-SINGLE EXPOSURE: None Expected.

STOT-REPEATED EXPOSURE: None Expected

ASPIRATION HAZARD: None Expected.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Toxic to aquatic life with long lasting effects

ENVIRONMENTAL DATA: This product is toxic to fish and aquatic life.

COMMENTS: Do not allow product to reach ground water, water course or sewage system.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Must not be disposed of together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Lanthanum Chloride)

PRIMARY HAZARD CLASS/DIVISION: 8-Corrosive substances

UN/NA NUMBER: UN3264

PACKING GROUP: III

PLACARDS: CORROSIVE

MARINE POLLUTANT #1: Yes
Symbol - Fish and tree

OTHER SHIPPING INFORMATION: Listed on Inventory List.

SPECIAL SHIPPING NOTES: Limited Quantity for packages less than 30 kg and inner packagings less than 5 L.
Product is additionally classified as a MARINE POLLUTANT based on MARPOL and DOT rules. Labeling as a MARINE POLLUTANT is not required for non-bulk single package shipments by motor vehicle, rail car, or aircraft. Bulk packaging consists of a maximum capacity of greater than 450 L (119 gallons) for a liquid and a maximum net mass greater than 400 kg (882 pounds) for a solid.

ROAD AND RAIL (ADR/RID)

PROPER SHIPPING NAME: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Lanthanum Chloride) ENVIRONMENTALLY HAZARDOUS

UN NUMBER: UN3264

KEMLER NUMBER: 80

HAZARD CLASS: 8-Corrosive substances

PACKING GROUP: III

VESSEL (IMO/IMDG)

SHIPPING NAME: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Lanthanum Chloride), MARINE POLLUTANT

UN/NA NUMBER: UN3264

PRIMARY HAZARD CLASS/DIVISION: 8-Corrosive substances

PACKING GROUP: III

EmS: F-A, S-B

MARINE POLLUTANT #1: Yes
Symbol - Fish and tree

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SAFETY DATA SHEET

311/312 HEALTH HAZARDS: Not listed

313 REPORTABLE INGREDIENTS: Not listed

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Not listed

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: All components are listed on the TSCA Inventory.

CALIFORNIA PROPOSITION 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Date Prepared: 12/07/2022

MANUFACTURER DISCLAIMER: Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Pool & Spa Lube

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Not applicable.
CAS No.	Mixture
Trade Name	Leslie's Swimming Pool Supplies - Pool & Spa Lube
Product Code	G00352401

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Lubricant
Uses Advised Against	None
Manufacturer	Finish Line Technologies, Inc. 50 Wireless Blvd. Hauppauge, NY 11788
Telephone	(631) 666-7300
E-Mail (competent person)	SDSinfo@finishlineusa.com

Emergency telephone number

Emergency Phone No.	**Medical Emergency:** PROSAR 24 hr: 1-800-217-5157 / 1- 651-523-0304 **Transportation Emergency:** CHEMTREC 24 hr. 1-800-424- 9300 / 1 (703) 527-3887 (Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) / GHS Classification	Not classified as dangerous for supply/use.

Label elements

Hazard Symbol	None
Hazard Statement(s)	None
Precautionary Statement(s)	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Keep out of reach of children.
Other hazards	None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	% wt.	CAS No.
Silicone Oil	80 - 90	Trade Secret
Silica, amorphous*	10 - 15	112945-52-5
Polytetrafluoroethylene	0.5 – 1.5	9002-84-0

Additional Information - * Alternative CAS number 7631-86-9. Contains <0.1% crystalline silica

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation	Move person to fresh air. If breathing is laboured, administer oxygen. If symptoms develop, obtain medical attention.
Skin Contact	Wash affected skin with soap and water. If symptoms develop, obtain medical attention.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms occur obtain medical attention.
Ingestion	Do not induce vomiting. Wash out mouth with water. Do not give anything by mouth to an unconscious person. Seek medical treatment.

Most important symptoms and effects, both acute and delayed	None
Indication of any immediate medical attention and special treatment needed	None

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

-Suitable Extinguishing Media	Extinguish with carbon dioxide, dry chemical, foam or water spray.
-Unsuitable Extinguishing Media	Do not use water jet.

Special hazards arising from the substance or mixture	Thermal decomposition will evolve toxic and irritant vapours. Forms oxides of carbon, nitrogen, metals, silicon dioxide, and formaldehyde.
Advice for fire-fighters	A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear protective gloves/eye protection.
Environmental precautions	Not normally required.
Methods and material for containment and cleaning up	Cover spills with inert absorbent material.Transfer to a container for disposal or recovery.
Reference to other sections	None
Additional Information	None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

-Storage temperature	Store at room temperature.
-Incompatible materials	Strong oxidising agents.

Specific end use(s)	Lubricant

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		STEL		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
Unlikely to be hazardous by inhalation.	-----	-----	-----	-----	-----	-----

Recommended monitoring method None

Exposure controls

Appropriate engineering controls Provide adequate ventilation to ensure that the occupational exposure limit is not exceeded.

Personal protection equipment

Eye/face protection — Wear chemical resistant protective eye glasses.

Skin protection (Hand protection/ Other) — Not normally required

Respiratory protection — Normally no personal respiratory protection is necessary.

Thermal hazards — Not normally required.

Environmental Exposure Controls Not normally required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Jelly-like
Color.	Light/ Clear
Odor	Faint
Odor Threshold (ppm)	Not available
pH (Value)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available
Boiling point/boiling range (°C):	Not available
Flash Point (°C)	Not determined
Evaporation Rate	<1 (Butylacetate =1)
Flammability (solid, gas)	Not available
Explosive Limit Ranges	Not available
Vapour pressure (mmHg)	< 1 @ 20 °C
Vapour Density (Air=1)	Not available
Density (g/ml)	~ 0.9816 @15.6 °C
Solubility (Water)	Insoluble
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	Not available
Decomposition Temperature (°C)	Not available
Kinematic Viscosity	Not available
Explosive properties	Not explosive.

Oxidizing properties	Not oxidizing.
Other information	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	None anticipated.
Conditions to avoid	Avoid contact with heat and ignition sources.
Incompatible materials	Strong oxidising agents
Hazardous decomposition product(s)	None known

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation**,** Skin Contact**,** Eye Contact

Substances in preparations / mixtures

Silica (CAS#112945-52-5):

Acute toxicity	Oral: LD50 >5000 mg/kg-bw (rat) Dermal: LD50 >2000 mg/kg-bw (rabbit)
Irritation/Corrosivity	Not irritating to skin or eye.
Sensitization	It is not a skin sensitiser.
Repeated dose toxicity	Not to be expected
Carcinogenicity	Not to be expected

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity	Not available.
Toxicity for reproduction	Not available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Short term	Not to be expected
Long Term	Not to be expected

Persistence and degradability	Not available
Bioaccumulative potential	The product has low potential for bioaccumulation.
Mobility in soil	Not available
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods — Disposal should be in accordance with local, state or national legislation.Consult an accredited waste disposal contractor or the local authority for advice.

SECTION 14: TRANSPORT INFORMATION

	Land transport (U.S. DOT)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number			
Proper Shipping Name	**Not classified as dangerous for transport**		
Transport hazard class(es)			
Packing group			

Environmental hazards
Special precautions for user

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status**:** All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	----	----	----

SARA 311/312 - Hazard Categories: None

☐ Fire ☐ Sudden Release ☐ Reactivity ☐ Immediate (acute) ☐ Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None	----	----

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
None	----	----

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.
Date of preparation: June 30, 2015

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

MATERIAL SAFETY DATASHEET

U.S. DEPARTMENT OF LABOR, Occupational Safety and Health Administration Form Approved OMB No. 1218-0072, may be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200

SECTION I

PRODUCT IDENTITY : **SALT, AQUASALT, POOL SALT**
(As used on Label and List)

Emergency Telephone Number: (713) 877-2600

Telephone Number For Information: (713) 877-2600

SECTION II - HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Hazardous Components (Specify Identity; Common Name(s) OSHA PEL ACGIH TLV OTHER LIMITS RECOMMENDED % (Optional)

Sodium Chloride (NaCl) is not considered a hazardous chemical as USC interprets the OSHA Hazard Communication Standard 29 CFR 1910.1200. The information on this form has been prepared with reasonable care. USC extends no warranties, makes no representations and assumes no responsibilities as to the accuracy or suitability of such information for application to purchaser's intended purposes of or consequences of its use.

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point:	1413° C	**Specific Gravity (H_2O=1):**	2.165
Vapor Pressure (mm Hg.):	1 MM @ 855°	**Melting Point:**	800° C
Vapor Density (AIR=1):	N/A	**Evaporation Rate (Butyl Acetate=1):**	N/A
Solubility in Water:	Appreciable (26.43% by weight at 20 Deg Celsius		
Appearance and Odor:	Bluish White, Crystalline, Odorless Solid		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used) N/A

Flammable Limits : **LEL:** N/A **UEL:** N/A

Extinguishing Media : Material is non-flammable. Use Media appropriate for surrounding materials.

Special Fire Fighting Procedures : None

SECTION V - REACTIVITY DATA

Stability : Stable **Conditions to Avoid :** None

Incompatibility (Materials to Avoid): Bromine Trifluoride, Lithium

Hazardous Decomposition or Byproducts : When heated to decomposition (above 1413 degree celsius) may emit toxic fumes of Na2O and Cl2.

Hazardous Polymerization : May Not Occur **Conditions to Avoid :** None

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry :

Eye? Yes **Inhalation?** Yes **Skin?** Yes **Ingestion?** Yes

Health Hazards (Acute and Chronic) :

Carcinogenicity? No **NTP?** No **IARC Monographs?** No **OSHA Regulated?** No

Signs and Symptoms of Exposure : Listed Above

Medical Conditions Generally Aggravated by Exposure : No information

Emergency and First Aid Procedures : Ingestion: Drink large amounts of water; Inhalation: Remove to fresh air; Skin Contact: Wash with soap and water; Eye Contact: Flush with water for 15 minutes. Get Medical Attention.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled : No Special requirements - Check your state for reportable quantity requirements.

Waste Disposal Method : Dispose of in accordance to local state and federal regulations.

Precautions to be taken in Handling and Storing : Transport in dry equipment. Store in dry location.

Other Procedures : None.

SECTION VIII - CONTROL MEASURES

Respiratory Protection (Specify Type) : None Required - Nuisance dust mask for personal comfort.

Ventilation : Local Exhaust **Special :** None

Mechanical : Satisfactory **Other :** None

Protective Gloves : Work Gloves **Eye Protection :** Goggles

Other Protective Clothing or Equipment : None required

Work / Hygienic Practices : None

MORTON SALT, INC.

Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **Common Salt without Additives**

Synonyms

- All Purpose Natural Sea Salt
- All Purpose Purex Salt
- Bulk Culinox 999 NC
- Bulk Extra Coarse Solar Salt Undried NC
- Bulk KD Industrial Salt NC
- Bulk Purex Salt NC
- Bulk Rock Salt NOC 17F NC
- Bulk Rock WC Extra Coarse Southern NC
- Bulk Rock White Crystal Coarse Southern NC
- Bulk Solar Coarse Salt Undried NC
- Bulk Solar Industrial Crude Salt NC
- Bulk Solar Salt
- Bulk Solar WC Extra Coarse Salt NC
- Bulk Solar White Crystal Coarse Salt NC
- Bulk Solar White Crystal Medium Salt NC
- Bunny Spool (Plain Salt)
- California Pure Coarse Sea Salt
- California Pure Fine Sea Salt
- California Pure Medium Sea Salt
- Canning & Pickling Salt
- Coarse Sea Salt (F114100000x)
- Commercial Grade, Water Softening Pellets
- Culinox 999 Chemical Grade Salt
- Culinox 999 Fine Salt
- Culinox 999 Food Grade Salt;
- Evaporated Granulated Salt
- Evaporated Salt Pellets
- Extra Coarse Sea Salt
- Extra Fine 50 Sea Salt
- Extra Fine 70 Sea Salt
- Feed Mixing Salt
- Fine Mixing Salt
- Fine Solar Salt (w/o YPS)
- Hi-Purity Super Soft Salt Extra Coarse Crystals
- H.G. Blending Salt
- Hay & Stock Salt, F&R
- Industrial Crude Solar Salt
- ISCO Crystals, Bulk
- ISCO Medium, Bulk
- ISCO Water Conditioning, Bulk
- KD Crude Solar Salt
- KD Industrial Salt
- Kleer Fine Salt
- Kleer Granulated Salt
- Medium Sea Salt
- Mill Run Salt
- Natural Coarse Sea Salt
- Northern Fine +20 Rock Salt Plain Salt Block
- Northern Rock, F & R
- Plain Salt Brick
- Pool Salt
- Premium Salt Pellets
- Professional's Choice Pool Salt
- Professional Pool Salt
- Professional Water Softener Crystals
- Pure and Natural Water Softener Crystals
- PureSun Culinary Crystals
- PureSun Culinary Crystals Coarse
- Purex Salt
- Purex Select Salt
- Reagent Grade Sodium Chloride
- Refined Sea Salt
- Rock Pretzel Salt
- Rock Salt for Making Ice Cream
- Safe-T-Salt (bagged w/o YPS)
- Screened Bulk Solar Undried Salt NC
- Sea Salt, 50 lb. (F113100000x)
- Sea Salt, Tote (F113500000x)
- Sea Salt Grinder
- Sea Salt Grinder Refill
- Select Extra Coarse Rock Salt
- Select Sea Salt
- Service Pack Salt (all)
- Ship n' Shore Rock Salt
- Solar Salt Water Softening Crystals
- Stock Salt
- USP Sodium Chloride
- Valu-Soft Solar Salt
- Water Softening Salt (Undried) Coarse
- Water Softening Salt (Undried) Extra Coarse
- White Crystal Brine Block (50 lb.)
- White Crystal Rock Salt (all)
- White Crystal Solar Salt (all)
- White Crystal Water Softening Solar Salt (all)
- White Pretzel Salt (all)

CAS Number • 7647-14-5

Product Code • MSDS Code: 100

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Food, Chemical and Drug Processing; Pharmaceuticals; Water Conditioning; Ice Control; Chemical Feedstock – see product data sheets for more information

1.3 Details of the supplier of the safety data sheet

Manufacturer • Morton Salt, Inc.
444 W. Lake St.
Chicago, IL 60606
United States

saltinfo@mortonsalt.com

Telephone (General) • 312-807-2000

1.4 Emergency telephone number

Manufacturer • 312-807-2000

Section 2: Hazards Identification

EU/EEC

According to EU Directive 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP • Classification criteria not met

DSD/DPD • Classification criteria not met

2.2 Label Elements

CLP

Hazard statements • No label element(s) specifically required

DSD/DPD

Risk phrases • No label element(s) specifically required

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.

DSD/DPD • This product is not considered dangerous under the European Directive 67/548/EEC

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Classification criteria not met

2.2 Label elements

OSHA HCS 2012

Hazard statements • No label element(s) specifically required

2.3 Other hazards

OSHA HCS 2012 • This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS • Classification criteria not met

2.2 Label elements

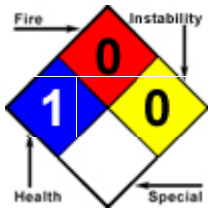
WHMIS • No label element(s) specifically required

2.3 Other hazards

WHMIS • In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information

NFPA



See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

Non-Hazardous Components					
Chemical Name	**Identifiers**	**%(weight)**	**LD50/LC50**	**Classifications According to Regulation/Directive**	**Comments**
Sodium chloride	**CAS:**7647-14-5 **EC Number:**231-598-3	> 99%	Ingestion/Oral-Rat LD50 • 3000 mg/kg	**EU DSD/DPD:** Not Classified - Criteria not met **EU CLP:** Not Classified - Criteria not met **OSHA HCS 2012:** Not Classified - Criteria not met	May contain small quantities of naturally occurring calcium and magnesium salts

3.2 Mixtures

- Material does not meet the criteria of a mixture in accordance with Regulation (EC) No 1272/2008.

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

Skin
- IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

Eye
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion
- If large quantities are swallowed, call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media
- Material is non-combustible. In case of fire use media as appropriate for surrounding fire.

Unsuitable Extinguishing Media
- No data available.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- No unusual fire or explosion hazards known.

Hazardous Combustion Products
- No data available

5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions
- Wear suitable protective clothing, gloves, and eye/face protection.

Emergency Procedures
- Stop leak if you can do it without risk. Keep unauthorized personnel away. Use normal clean up procedures.

6.2 Environmental precautions

- None expected to be necessary if material is used under ordinary conditions and as recommended.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures
- Carefully shovel or sweep up spilled material and place in suitable container.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use good safety and industrial hygiene practices. Wash thoroughly after handling. Keep out of reach of children.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Avoid storage with strong acids and strong oxidizing agents.

Incompatible Materials or Ignition Sources

- Strong oxidizing agents, strong acids.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines

- No applicable exposure limits available for product or components.

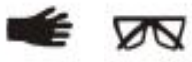
8.2 Exposure controls

Engineering Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Personal Protective Equipment

Pictograms

- 

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/Face

- Wear safety glasses.

Skin/Body

- Wear appropriate gloves.

General Industrial Hygiene Considerations

- Do not get in eyes or on skin or clothing. Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste.

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Colorless to white crystalline or compressed block/pellet.
Color	Colorless to White.	Odor	Odorless

Particulate Type	Dust Crystalline	Particulate Size	Variable
Odor Threshold	Data lacking		
General Properties			
Boiling Point	1413 to 1461 C(2575.4 to 2661.8 F)	Melting Point	801 C(1473.8 F)
Decomposition Temperature	Data lacking	pH	7 Approximately
Specific Gravity/Relative Density	2.165 Water=1	Bulk Density	Variable
Water Solubility	Soluble 0.36 g/cc @ 20 C(68 F)	Viscosity	Not relevant
Explosive Properties	Not relevant.	Oxidizing Properties:	Not relevant.
Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant		
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not flammable.		
Environmental			
Octanol/Water Partition coefficient	Not relevant		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Incompatible materials.

10.5 Incompatible materials

- Strong oxidizing agents, strong acids.

10.6 Hazardous decomposition products

- Will react with strong acids to generate hydrogen chloride and with strong oxidizing agents to generate chlorine gas.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
Sodium chloride (> 99%)	7647-14-5	**Acute Toxicity:** orl-rat LD50:3000 mg/kg

GHS Properties	Classification
Acute toxicity	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met

Aspiration Hazard	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met
Carcinogenicity	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met
Germ Cell Mutagenicity	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met
Skin corrosion/Irritation	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met
Skin sensitization	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met
STOT-RE	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met
STOT-SE	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met
Toxicity for Reproduction	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met
Respiratory sensitization	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met
Serious eye damage/Irritation	**EU/CLP**•Classification criteria not met **OSHA HCS 2012**•Classification criteria not met

Potential Health Effects

Inhalation

Acute (Immediate)
- Under normal conditions of use, no health effects are expected. Inhalation of dust may cause mild irritation to mucous membranes, nose and throat. Symptoms may include coughing, dryness and sore throat.

Chronic (Delayed)
- No data available.

Skin

Acute (Immediate)
- Under normal conditions of use, no health effects are expected.

Chronic (Delayed)
- No data available.

Eye

Acute (Immediate)
- Based upon practical use and experience using this product eye irritation is not expected to occur.

Chronic (Delayed)
- No data available.

Ingestion

Acute (Immediate)
- Ingestion may cause the following symptoms - diarrhea.

Chronic (Delayed)
- No data available.

Key to abbreviations
LD = Lethal Dose

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not regulated	NDA	NDA	NDA
TDG	NDA	Not regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not regulated	NDA	NDA	NDA

14.6 Special precautions for user • None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • Not relevant.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • None

State Right To Know				
Component	**CAS**	**MA**	**NJ**	**PA**
Sodium chloride	7647-14-5	No	No	No

Inventory

Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Sodium chloride	7647-14-5	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
Sodium chloride	7647-14-5	Yes	Yes	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

•Sodium chloride 7647-14-5 > 99% Uncontrolled product according to WHMIS classification criteria

Canada - WHMIS - Ingredient Disclosure List

•Sodium chloride 7647-14-5 > 99% Not Listed

Environment

Canada - CEPA - Priority Substances List

•Sodium chloride 7647-14-5 > 99% Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

•Sodium chloride 7647-14-5 > 99% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

•Sodium chloride 7647-14-5 > 99% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

•Sodium chloride 7647-14-5 > 99% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

•Sodium chloride 7647-14-5 > 99% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

•Sodium chloride 7647-14-5 > 99% Not Listed

Mexico

Other

Mexico - Hazard Classifications

•Sodium chloride 7647-14-5 > 99% Not Listed

Mexico - Regulated Substances

•Sodium chloride 7647-14-5 > 99% Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

•Sodium chloride 7647-14-5 > 99% Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

•Sodium chloride 7647-14-5 > 99% Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

•Sodium chloride 7647-14-5 > 99% Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

•Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

•Sodium chloride 7647-14-5 > 99% Not Listed

United States - Rhode Island

Labor

U.S. - Rhode Island - Hazardous Substance List

•Sodium chloride 7647-14-5 > 99% Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date	• 20/February/2020
Preparation Date	• 20/February/2020
Disclaimer/Statement of Liability	• The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations. Nothing contained herein is to be construed as a recommendation for use in violation of any patents or of applicable laws or regulations.

Key to abbreviations

NDA = No data available

SAFETY DATA SHEET

Valvoline™ POWER STEERING FLUID

Version	Revision Date:	SDS Number:	Date of last issue: 08/28/2018
3.0	09/06/2018	600000001504	Date of first issue: 08/27/2018

SECTION 1. IDENTIFICATION

Product name : VAL POWER STEERING FLUID 12/32 FOZ

Product code : 602241

Manufacturer or supplier's details

Company name of supplier : Niteo Products, LLC

Address : Dallas TX 75225

Email Address : EHS@niteoproducts.com

Telephone : 1-844-696-4836

Emergency telephone number : 1-800-424-9300 / 1-703-741-5970

Recommended use of the chemical and restrictions on use

Recommended use : POWER STEERING FLUID

Restrictions on use : Use only outdoors or in a well-ventilated area.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum)	64742-54-7	>= 50 - <= 75
Distillates (petroleum)	64742-65-0	>= 1 - <= 5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

General advice	:	No hazards which require special first aid measures.
If inhaled	:	If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on skin, rinse well with water.
In case of eye contact	:	Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.
If swallowed	:	Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray Carbon dioxide (CO2)
Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Avoid breathing dust. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Smoking, eating and drinking should be prohibited in the ap-

plication area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum)	64742-54-7	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m3	ACGIH
		TWA (Mist)	5 mg/m3	OSHA P0
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL
Distillates (petroleum)	64742-65-0	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m3	ACGIH
		TWA (Mist)	5 mg/m3	OSHA P0
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL

Hazardous components without workplace control parameters

Components	CAS-No.
Distillates (petroleum)	64742-54-7

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : Wear resistant gloves (consult your safety equipment supplier).

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Safety shoes

Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	red
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 180 °C Method: Cleveland open cup
Evaporation rate	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	0.855 g/cm3
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Viscosity		
Viscosity, kinematic	:	35 mm2/s (40 °C) Method: ASTM D 445

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reac-	:	Stable under recommended storage conditions.

tions		No hazards to be specially mentioned. Hazardous polymerisation does not occur.
Conditions to avoid	:	No data available
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Eye contact
Skin contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:

Distillates (petroleum):

Acute oral toxicity	:	LD50 (Rat): > 15 g/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 5 g/kg

Distillates (petroleum):

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

Distillates (petroleum):

Result: Possibly irritating to skin

Distillates (petroleum):

Result: Mild skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Unlikely to cause eye irritation or injury.

Components:

Distillates (petroleum):

Result: No eye irritation
Assessment: No eye irritation

Distillates (petroleum):

Result: Possibly irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

Dangerous goods descriptions (if indicated below) may not reflect quantity, end-use, or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

49 CFR
Not regulated as a dangerous good

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulfur dioxide	7446-09-5	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

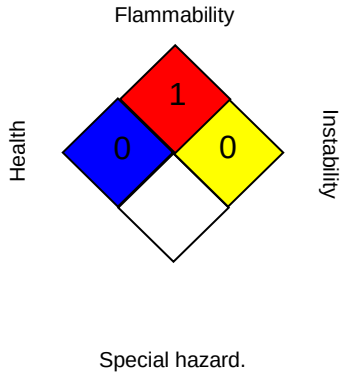
California Prop. 65

WARNING: This product can expose you to chemicals including Sulfur dioxide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Revision Date : 09/06/2018

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

Safety Data Sheet

Infosafe No™ LQ3HB | Issue Date March 2023 | ISSUED by MILL-ROSE

Product Name **Blue Monster PTFE Thread Seal Tape**

1. Identification

GHS Product Identifier	Blue Monster PTFE Thread Seal Tape
Company Name	Mill-Rose
Address	7310 Corporate Blvd Mentor, Ohio 44060 USA
Telephone/Fax Number	Tel: (440)9746730 Fax: (440)2551072
Recommended use of the chemical and restrictions on use	Industrial tape.

2. Hazard Identification

Classification of the substance or mixture	Not classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations , Australia. Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

3. Composition/information on ingredients

Information on Composition	This product contains the following ingredients: -Polytetrafluoroethylene -Distillates (petroleum), hydrotreated light -Pigment		
Ingredients	**Name**	**CAS**	**Proportion**
	Ingredients determined not to be hazardous		100%

4. First-aid measures

Inhalation	Not considered a potential route of exposure. However, if inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention .
Ingestion	Unlikely due to form of product. However, if ingested, do not induce vomiting. Wash out mouth thoroughly with water. If symptoms develop seek medical attention.
Skin	Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.
Eye contact	Not considered a potential route of exposure. However if in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and persist seek medical attention.
First Aid Facilities	Eyewash and normal washroom facilities.
Advice to Doctor	Treat symptomatically.
Other Information	For advice in an emergency, contact a Poisons Information Centre (Phone: Australia 131 126) or a doctor.

5. Fire-fighting measures

Suitable extinguishing media	Use carbon dioxide, dry chemical or foam.
Hazards from Combustion Products	Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide, hydrogen fluoride and oxides of nitrogen .
Specific hazards arising from the chemical	Combustible. This product will readily burn under fire conditions.
Decomposition Temp.	Not available
Precautions in connection with Fire	Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed

containers . Fight fire from safe location. This product shouldbe prevented from entering drains and watercourses.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment and clothing to prevent exposure. Collect the material and place into a suitable labelled container. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. Handling and storage

Precautions for Safe Handling: Avoid exposure. Use only in a well ventilated area. Keep containers tightly closed. Prevent the build up of dusts, mists or vapours in the work atmosphere. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for safe storage, including any incom patabilities: Store in a cool, dry, well-ventilated area, out of direct sunlight. Ensure that storage conditions comply with applicable local and national regulations.

Handling Temperatures Storage Temperatures: Recommended operating temperatures: -260°C to +260°C Store below 260°C.

8. Exposure controls/personal protection

Occupational exposure limit values: No exposure value assigned for this material by Safe Work, Australia. However, the available exposure limits for decomposition products are given below:

Safe Work, Australia Exposure Standards:

Substance	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	NOTICES
Hydrogen fluoride	3	2.6			Peak Limitation

TWA (Time Weighted Average) The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.
STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.
Peak Limitation: A ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes.

Biological Limit Values: No biological limits allocated.

Appropriate engineering controls: Use with good general ventilation.

Respiratory Protection Eye Protection: None required, when used as intended.

Protection: None required, when used as intended.

Hand Protection: None required, when used as intended.

Body Protection: Suitable protective work wear, e.g. cotton overalls buttoned at neck and wrist is recommended.

9. Physical and chemical properties

Appearance: Solid polymeric film

Colour: Blue

Odour: Odourless

Decomposition Temperature: Not available

Melting Point	Not available
Boiling Point	Not available
Solubility in Water	Insoluble
Specific Gravity	2.1
pH	Not applicable
Vapour Pressure	Not applicable
Vapour Density (Air=l)	Not available
Evaporation Rate	Not available
Odour Threshold	Not available
Viscosity	Not applicable
Partition Coefficient: n-octanol/water	Not available
Flash Point	Not applicable
Flammability	Not flammable
Auto-Ignition Temperature	Not self igniting
Explosion Limit • Upper	Not applicable
Explosion Limit • Lower	Not applicable

10. Stability and reactivity

Reactivity	Reacts with incompatible materials.
Chemical Stability	Stable under normal conditions of storage and handling.
Conditions to Avoid	Heat and sources of ignition. Temperatures >260°C without adequate ventilation.
Incompatible Materials	Strong oxidising agents. Alkali metals, extremely potent oxidisers e.g. fluorine , chlorine tri-fluoride, 80% NaOH or KOH, metal hydrides such as boranes (e.g. B2H6) aluminium chloride, ammonia, certain amines (R-NH2) imines (RH-NH) and 70% nitric acid at temperatures near 260°C. Do not use on oxygen lines.
Hazardous Decomposition Products	Thermal decomposition may result in the release of toxic and/or irritating fumes including carbon monoxide, hydrogen fluoride and carbon dioxide. Carbonyl fluoride is the main decomposition product formed when PTFE is subjected to extended exposure at normal sintering temperatures (400°C). Carbonyl fluoride is immediately converted to highly corrosive hydrogen fluoride in the presence of moist air.
Possibility of hazardous reactions	Reacts with incompatible materials.

11. Toxicological Information

Toxicology Information	No toxicology data available for this product.
	No toxicity was observed in male/female rats fed PTFE (up to 25%) for 90 days. Local sarcomas were induced in mice and rats implanted subcutaneously or intraperitoneally with PTFE. However, this is not considered relevant to normal industrial usage.
Ingestion	Ingestion unlikely due to form of product. Ingestion of this product may irritate the gastric tract causing nausea and vomiting .
Inhalation	No adverse effects expected. The material is not normally an inhalation hazard at temperatures below 260°C as it remains an inert solid. However, exposure to thermal degradation products at temperatures above 260°C or fumes from tobacco contaminated with particles of the product may result in polymer fume fever or influenza-like symtoms (chills, headaches, difficulty in breathing and fever)
	Symptoms may appear several hours after exposure but will disappear within

Skin	24-48 hours . There are exposure standards for decomposition products. May be irritating to skin. The symptoms may include redness, itching and swelling.
Eye	Eye contact may cause mechanical irritation. May result in mild abrasion.
Respiratory sensitisation Skin Sensitisation	Not expected to be a respiratory sensitiser. Not expected to be a skin sensitiser.
Germ cell mutagenicity	Not considered to be a mutagenic hazard.
Carcinogenicity	Polytetrafluoroethylene is listed as a Group 3: Not classifiable as to carcinogenicity to humans according to International Agency for Research on Cancer (IARC).
Reproductive Toxicity STOT· single exposure	Not considered to be toxic to reproduction. Not expected to cause toxicity to a specific target organ.
STOT-repøted exposure	Not expected to cause toxicity to a specific target organ.
Aspiration Hazard	Not considered to be an aspiration hazard.

12. Ecological information

Ecotoxicity	No ecological data are available for this material.
Persistence and degradability	Not available
Mobility	Not available
Bioaccumulative Potential	Not available
Other Adverse Effects	Not available
Environmental Protection	Prevent this material entering waterways, drains and sewers.

13. Disposal considerations

Disposal Considerations	The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

14. Transport information

Transport Information	Road and Rail Transport Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) (7th edition). Marine Transport (IMO/IMDG): Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea. Air Transport (ICAO/IATA): Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air. No
IMDG Marine pollutant	

15. Regulatory information

Regulatory Information	Not classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia. Not classified as a Scheduled Poison accord ing to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Poisons Schedule	Not Scheduled

16. Other Information

Date of preparation or last revision of SDS	SDS Created: October 2019
Literature References	Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice. Standard for the Uniform Scheduling of Medicines and Poisons. Australian Code for the Transport of Dangerous Goods by Road & Rail. Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens , restricted carcinogens and restricted hazardous chemicals. Workplace exposure standards for airborne contaminants, Safe work Australia. American Conference of Industrial Hygienists (ACGIH). Globally Harmonised System of classification and labelling of chemicals. ...End Of MSDS...

SAFETY DATA SHEET

1. Identification

Product identifier **Fusion Clear PVC Cement**

Other means of identification

SDS number 1127E

Synonyms Part Numbers: 32192, 32193

Recommended use Joining PVC Pipes

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name Oatey Co.

Address 4700 West 160th St.
Cleveland, OH 44135

Telephone 216-267-7100

E-mail info@oatey.com

Transport Emergency Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)

Emergency First Aid 1-877-740-5015

Contact person MSDS Coordinator

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection.

Response If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Cyclohexanone	108-94-1	40-50
Acetone	67-64-1	30-40
Ethene, chloro-, homopolymer, Polyvinyl chloride; PVC;	9002-86-2	10-20
Methyl ethyl ketone	78-93-3	11
Colloidal silicon dioxide	112945-52-5	1-5

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Store in a well-ventilated place. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. - OSHA

Components	Type	Value	Form
Colloidal silicon dioxide (CAS 112945-52-5)	TWA	0.8 mg/m3	Unspecified.
		20 mppcf	Unspecified.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Ethene, chloro-, homopolymer, Polyvinyl chloride; PVC; (CAS 9002-86-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3
		1000 ppm
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3
		50 ppm
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3
		200 ppm

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Colloidal silicon dioxide (CAS 112945-52-5)	TWA	0.8 mg/m3	
		20 mppcf	

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Ethene, chloro-, homopolymer, Polyvinyl chloride; PVC; (CAS 9002-86-2)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Acetone (CAS 67-64-1)	STEL	500 ppm	
	TWA	250 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Ethene, chloro-, homopolymer, Polyvinyl chloride; PVC; (CAS 9002-86-2)	TWA	3 mg/m3	Respirable particles.
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	

U.S. - NIOSH

Components	Type	Value	Form
Colloidal silicon dioxide (CAS 112945-52-5)	REL	6 mg/m3	Unspecified.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Colloidal silicon dioxide (CAS 112945-52-5)	TWA	6 mg/m3
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3
		25 ppm
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3
		300 ppm
	TWA	590 mg/m3
		200 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexanediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Cyclohexanone (CAS 108-94-1)	Skin designation applies.

US - Tennessee OELs: Skin designation

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves.

Skin protection

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Translucent.
Color	Clear.
Odor	Solvent.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	-4.0 °F (-20.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20°C
Vapor density	2.5
Relative density	0.93 g/cm3 +/- 0.02

Solubility(ies)

Solubility (water)	Negligible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not available.
Viscosity	3000 cP
Viscosity temperature	77 °F (25 °C)

Other information

Bulk density	0.93
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC	375 g/l SCAQMD 1168/M316A

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	Hydrogen chloride. Phosgene.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	> 15700 mg/kg, 24 Hours
Inhalation		
LC50	Rat	76 mg/l, 4 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours

Components	Species	Test Results
Oral		
LD50	Rat	800 mg/kg

Skin corrosion/irritation Causes skin irritation. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product contains polyvinyl chloride (PVC) that is not a fabricated product, and is therefore, defined and regulated as a toxic and hazardous substance under 29 C.F.R. § 1910.1017 due to the presumed presence of residual vinyl chloride monomer. The concentrations of residual vinyl chloride calculated to be contained in this product are well below the threshold for classification in accordance with 29 C.F.R. § 1910.1200.

IARC Monographs. Overall Evaluation of Carcinogenicity

Colloidal silicon dioxide (CAS 112945-52-5)	3 Not classifiable as to carcinogenicity to humans.
Cyclohexanone (CAS 108-94-1)	3 Not classifiable as to carcinogenicity to humans.
Ethene, chloro-, homopolymer, Polyvinyl chloride; PVC; (CAS 9002-86-2)	3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Ethene, chloro-, homopolymer, Polyvinyl chloride; PVC; (CAS 9002-86-2)	Cancer

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Acute			
Crustacea	LC50	Daphnia pulex	8800 mg/l, 48 Hours
Fish	LC50	Pimephales promelas	7163 mg/l, 96 Hours
Chronic			
Crustacea	NOEC	Daphnia magna	> 79 mg/l, 21 days
Cyclohexanone (CAS 108-94-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Cyclohexanone (CAS 108-94-1)	0.81
Methyl ethyl ketone (CAS 78-93-3)	0.29

Mobility in soil No data available.

Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Acetone RQ = 16393 LBS, Methyl ethyl ketone RQ = 45455 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Acetone, Methyl ethyl ketone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3H
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Acetone, Methyl ethyl ketone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Ethene, chloro-, homopolymer, Polyvinyl chloride; PVC; (CAS 9002-86-2)	Cancer
	Central nervous system Liver Blood Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV
Methyl ethyl ketone (CAS 78-93-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Colloidal silicon dioxide (CAS 112945-52-5)
Cyclohexanone (CAS 108-94-1)
Methyl ethyl ketone (CAS 78-93-3)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Ethene, chloro-, homopolymer, Polyvinyl chloride; PVC; (CAS 9002-86-2)
Methyl ethyl ketone (CAS 78-93-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Colloidal silicon dioxide (CAS 112945-52-5)
Cyclohexanone (CAS 108-94-1)
Methyl ethyl ketone (CAS 78-93-3)

US. Rhode Island RTK

Acetone (CAS 67-64-1)

Cyclohexanone (CAS 108-94-1)
Methyl ethyl ketone (CAS 78-93-3)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 18-November-2016

Revision date 06-June-2020

Version # 02- Added 32193

HMIS® ratings Health: 3
Flammability: 3
Physical hazard: 0

NFPA ratings

Disclaimer Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

RED HOT BLUE GLUE

Version number: 1.0 Date of compilation: 2022-08-09

SECTION 1: Identification

1.1 Product identifier

Trade name **RED HOT BLUE GLUE**

Product category/ies Medium Body PVC Plastic Cement

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses PVC solvent cement adhesive

1.3 Details of the supplier of the safety data sheet

T Christy Enterprises, Inc.
655 East Ball Road
Anaheim CA 92805
United States

Telephone: 714-507-3300
Website: tchristy.com

1.4 Emergency telephone number

Emergency information service 24 Hours - CHEMTEL: (800) 255-3924; International (813) 248-0585

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Hazard class	Category
acute toxicity (oral)	4
skin corrosion/irritation	2
serious eye damage/eye irritation	2
carcinogenicity	2
specific target organ toxicity - single exposure (respiratory tract irritation)	3
flammable liquid	2

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word danger

- Pictograms

GHS02, GHS07, GHS08 

- Hazard statements

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.

- Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
P301+P312	If swallowed: Call a poison center/doctor if you feel unwell.
P302+P352	If on skin: Wash with plenty of water.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a poison center/doctor if you feel unwell.
P321	Specific treatment (see on this label).
P330	Rinse mouth.
P362	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling tetrahydrofuran, cyclohexanone

2.3 Other hazards

Hazards not otherwise classified

May form explosive peroxides.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
tetrahydrofuran	CAS No 109-99-9	50 – < 75	Acute Tox. 4 / H302 Eye Irrit. 2 / H319 Carc. 2 / H351 STOT SE 3 / H335 Flam. Liq. 2 / H225
cyclohexanone	CAS No 108-94-1	10 – < 25	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 3 / H331 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335 Flam. Liq. 3 / H226
methyl ethyl ketone	CAS No 78-93-3	5 – < 10	Eye Irrit. 2 / H319 STOT SE 3 / H336 Flam. Liq. 2 / H225

For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

Flash point	-6.16 °F at 101.3 kPa

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
US	cyclohexanone	108-94-1	PEL (CA)	25	100						Cal/OSHA PEL
US	cyclohexanone	108-94-1	REL	25 (10 h)	100 (10 h)						NIOSH REL
US	cyclohexanone	108-94-1	PEL	50	200						29 CFR 1910.1000
US	cyclohexanone	108-94-1	TLV®	20		50				H	ACGIH® 2022
US	tetrahydrofuran	109-99-9	REL	200 (10 h)	590 (10 h)	250	735				NIOSH REL
US	tetrahydrofuran	109-99-9	PEL	200	590						29 CFR 1910.1000
US	tetrahydrofuran	109-99-9	TLV®	50		100				H	ACGIH® 2022
US	tetrahydrofuran (THF)	109-99-9	PEL (CA)	200	590	250	735				Cal/OSHA PEL
US	2-butanone	78-93-3	REL	200 (10 h)	590 (10 h)	300	885				NIOSH REL
US	2-butanone (methyl ethyl ketone)	78-93-3	PEL	200	590						29 CFR 1910.1000
US	methyl ethyl ketone	78-93-3	TLV®	200		300					ACGIH® 2022
US	methyl ethyl ketone (MEK) (2-butanone) (ethyl methyl ketone)	78-93-3	PEL (CA)	200	590	300	885				Cal/OSHA PEL
US	polyvinyl chloride	9002-86-2	TLV®		1					r	ACGIH® 2022

Notation

Ceiling-C	ceiling value is a limit value above which exposure should not occur
H	absorbed through the skin
r	respirable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified

Biological limit values

Country	Name of agent	Parameter	Notation	Identifier	Value	Source
US	cyclohexanone	1,2-cyclohexanediol	hydr	BEI®	80 mg/l	ACGIH® 2022
US	cyclohexanone	cyclohexanol	hydr	BEI®	8 mg/l	ACGIH® 2022
US	tetrahydrofuran	tetrahydrofuran		BEI®	2 mg/l	ACGIH® 2022
US	methyl ethyl ketone	methyl ethyl ketone		BEI®	2 mg/l	ACGIH® 2022

Notation
hydr hydrolysis

Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
tetrahydrofuran	109-99-9	DNEL	72.4 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
tetrahydrofuran	109-99-9	DNEL	96 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
tetrahydrofuran	109-99-9	DNEL	150 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
tetrahydrofuran	109-99-9	DNEL	300 mg/m³	human, inhalatory	worker (industry)	acute - local effects
tetrahydrofuran	109-99-9	DNEL	12.6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
cyclohexanone	108-94-1	DNEL	10 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
cyclohexanone	108-94-1	DNEL	20 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
cyclohexanone	108-94-1	DNEL	10 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
cyclohexanone	108-94-1	DNEL	20 mg/m³	human, inhalatory	worker (industry)	acute - local effects
cyclohexanone	108-94-1	DNEL	4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
cyclohexanone	108-94-1	DNEL	4 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects
methyl ethyl ketone	78-93-3	DNEL	600 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
methyl ethyl ketone	78-93-3	DNEL	1,161 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
tetrahydrofuran	109-99-9	PNEC	4.32 mg/l	aquatic organisms	freshwater	short-term (single instance)
tetrahydrofuran	109-99-9	PNEC	0.432 mg/l	aquatic organisms	marine water	short-term (single instance)
tetrahydrofuran	109-99-9	PNEC	4.6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
tetrahydrofuran	109-99-9	PNEC	23.3 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
tetrahydrofuran	109-99-9	PNEC	2.33 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
tetrahydrofuran	109-99-9	PNEC	2.13 mg/kg	terrestrial organisms	soil	short-term (single instance)
cyclohexanone	108-94-1	PNEC	0.356 mg/l	aquatic organisms	freshwater	short-term (single instance)
cyclohexanone	108-94-1	PNEC	0.036 mg/l	aquatic organisms	marine water	short-term (single instance)
cyclohexanone	108-94-1	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
cyclohexanone	108-94-1	PNEC	2.69 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
cyclohexanone	108-94-1	PNEC	0.269 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
cyclohexanone	108-94-1	PNEC	0.328 mg/kg	terrestrial organisms	soil	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	55.8 mg/l	aquatic organisms	freshwater	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	55.8 mg/l	aquatic organisms	marine water	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	709 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	284.7 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	284.7 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	22.5 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	blue
Particle	not relevant (liquid)
Odor	characteristic

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	65 °C at 101.3 kPa
Flash point	-21.2 °C at 101.3 kPa
Flash point	-6.16 °F at 101.3 kPa
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)

Vapor pressure	17 kPa at 20 °C
Density	0.944 $^{g}/_{cm^3}$ at 73 °F
Vapor density	this information is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	215 °C (auto-ignition temperature (liquids and gases))

Viscosity

- Dynamic viscosity	500 – 700 cP at 73 °F
Explosive properties	explosive
Oxidizing properties	none

9.2 Other information

VOC content	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: <= 510 g/L
Temperature class (USA, acc. to NEC 500)	T3 (maximum permissible surface temperature on the equipment: 200°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Harmful if swallowed.

GHS of the United Nations, annex 4: May be harmful in contact with skin or if inhaled.

- Acute toxicity estimate (ATE)

Oral 653 $^{mg}/_{kg}$

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
tetrahydrofuran	109-99-9	oral	500 $^{mg}/_{kg}$
cyclohexanone	108-94-1	oral	500 $^{mg}/_{kg}$
cyclohexanone	108-94-1	dermal	1,100 $^{mg}/_{kg}$
cyclohexanone	108-94-1	inhalation: vapor	>6.2 $^{mg}/_{l}$/4h

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Suspected of causing cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans			
Name of substance	**CAS No**	**Classification**	**Number**
tetrahydrofuran	109-99-9	2B	
cyclohexanone	108-94-1	3	

Legend
2B Possibly carcinogenic to humans
3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Information on this property is not available.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number

DOT	UN 1133
IMDG-Code	UN 1133
ICAO-TI	UN 1133

14.2 UN proper shipping name

DOT	Adhesives
IMDG-Code	ADHESIVES
ICAO-TI	Adhesives

14.3 Transport hazard class(es)

DOT	3
IMDG-Code	3
ICAO-TI	3

14.4 Packing group

DOT	II
IMDG-Code	II
ICAO-TI	II

14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Particulars in the shipper's declaration	UN1133, Adhesives, 3, II
Reportable quantity (RQ)	1,633 lbs (741.2 kg) (tetrahydrofuran) (cyclohexanone)
Danger label(s)	3

Special provisions (SP)	149, B52, IB2, T4, TP1, TP8
ERG No	128

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant	-
Danger label(s)	3

Special provisions (SP)	-
Excepted quantities (EQ)	E2
Limited quantities (LQ)	5 L
EmS	F-E, S-D
Stowage category	B

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Danger label(s)	3

Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
tetrahydrofuran	109-99-9		4	1000 (454)
methyl ethyl ketone	78-93-3		3 4	5000 (2270)
cyclohexanone	108-94-1		4	5000 (2270)

Legend

3	"3" indicates that the source is section 112 of the Clean Air Act
4	"4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
tetrahydrofuran	109-99-9		CDC 4th National Exposure Report CWA 303(d) IARC Carcinogens - 2B IRIS Neurotoxicants
methyl ethyl ketone	78-93-3		CA TACs OEHHA RELs

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
tetrahydrofuran	109-99-9				1.0 %
methyl ethyl ketone	78-93-3				1.0 %
cyclohexanone	108-94-1				1.0 %

- Hazardous Substances List (MN-ERTK)

Name of substance	CAS No	References	Remarks
tetrahydrofuran	109-99-9	A, O	
methyl ethyl ketone	78-93-3	A, N, O	
cyclohexanone	108-94-1	A, N, O	skin

Legend

A	American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH
N	National Institute for Occupational Safety and Health (NIOSH), "Recommendations for Occupational Safety and Health Standards," August 1988, available from NIOSH, Publications Dissemination Office, Division of Standards Development and Technology Transfer
O	Occupational Safety and Health Administration (OSHA), Safety and Health Standards, Code of Federal Regulations, title 29, part 1910, subpart Z, "Toxic and Hazardous Substances, 1990." General information: Minnesota Department of Labor and Industry, Occupational Safety and Health Division
skin	If a potential for absorption from skin contact merits special consideration, the word "skin" follows the substance name.

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
tetrahydrofuran	109-99-9		F3 R1
methyl ethyl ketone	78-93-3		F3
cyclohexanone	108-94-1		F2

Legend
F2 Flammable - Second Degree
F3 Flammable - Third Degree
R1 Reactive - First Degree

- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
FURAN, TETRAHYDRO-	109-99-9	E
2-BUTANONE	78-93-3	E
CYCLOHEXANONE	108-94-1	E

Legend
E Environmental hazard

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
tetrahydrofuran	109-99-9	T, F
methyl ethyl ketone	78-93-3	T, F
cyclohexanone	108-94-1	T, F

Legend
F Flammability (NFPA®)
T Toxicity (ACGIH®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Proposition 65 List of chemicals

Name acc. to inventory	CAS No	Remarks	Type of the toxicity
tetrahydrofuran	109-99-9		cancer

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	2	temporary or minor injury may occur
Flammability	3	material that can be ignited under almost all ambient temperature conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	3	material that can be ignited under almost all ambient temperature conditions
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
TR	CICR	not all ingredients are listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists
ACGIH® 2022	From ACGIH®, 2022 TLVs® and BEIs® Book. Copyright 2022. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ERG No	Emergency Response Guidebook - Number

Abbr.	Descriptions of used abbreviations
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LHS	Lower hazard substance
NFPA®	National Fire Protection Association (United States)
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NLP	No-Longer Polymer
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Safety Data Sheet

Issuing Date Jun-01-2015 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name **SODIUM CHLORIDE HIGH RANGE TEST STRIP**

Leslie's Salt Test Strips

Other means of identification

Product Code(s) **2998**/18724

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals. Industrial (not for food or food contact use).

Details of the supplier of the safety data sheet

Manufacturer Address
LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748

Emergency telephone number

24 Hour Emergency Number (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

EMERGENCY OVERVIEW

Appearance White plastic strip with colored test pad **Physical state** No information available **Odor** Odorless

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep out of reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN: Wash with plenty of soap and water.
Take off contaminated clothing and wash before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED, Drink 1 or 2 glasses of water, Call a physician immediately

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is exempt from the MSDS requirement since it is defined as an "article" per 29 CFR 1910.1200(b)(6)(v). "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

4. FIRST AID MEASURES

First Aid Measures

General advice No hazards which require special first aid measures.

Eye contact Rinse with plenty of water.

Skin contact Wash skin with soap and water.

Inhalation Not Applicable.

Ingestion White plastic strip is indigestable, may cause gastrointestinal discomfort if many have been swallowed. Consult a physician if necessary.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Water spray, dry chemical, carbon dioxide (CO_2), or foam.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Methods and material for containment and cleaning up

Methods for containment Not Applicable.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products Not Applicable.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Hygiene Measures Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state No information available
Appearance White plastic strip with colored test pad **Odor** Odorless

Property	Values	Remarks • Method
pH		No information available
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	No information available	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Stability Stable.
Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid None known based on information supplied.
Incompatible materials Not Applicable.
Hazardous decomposition products None known.

11. TOXICOLOGICAL INFORMATION

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Information on likely routes of exposure

Inhalation Not an expected route of exposure.
Eye contact May cause temporary eye irritation.
Skin contact Prolonged or repeated contact may dry skin and cause irritation.
Ingestion Plastic strip is indigestable. May cause gastrointestinal discomfort if consumed in large amounts.

Component Information

Information on toxicological effects

Chronic toxicity No known effect.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Persistence and degradability
No information available.

Bioaccumulation/Accumulation
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods Dispose of waste product or used containers according to local regulations. This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

RID Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

U.S. State Right-to-Know Regulations

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

16. OTHER INFORMATION

NFPA **Health hazard** 0 **Flammability** 0 **Instability** 0 **Physical and Chemical Hazards** N/A

HMIS

Health Hazard	0
Fire Hazard	0
Reactivity	0

Prepared by Regulatory Affairs Department
Issuing Date Jun-01-2015
Revision Date Jul-02-2015
Reason for revision New US GHS format

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet

U.S. SILICA COMPANY SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier: Silica Sand, Ground Silica, and Fine Ground Silica

Product Name/Trade Names:
Sand and Ground Silica Sand (sold under various names: ASTM TESTING SANDS • GLASS SAND • FILPRO® · FLINT SILICA • DM-SERIES • F-SERIES • FOUNDRY SANDS • FJ-SERIES H-SERIES • L-SERIES • N-SERIES • NJ SERIES • OK-SERIES • P-SERIES • T-SERIES • hydraulic fracturing sand, all sizes • frac sand, all sizes • MIN-U-SIL® Fine Ground Silica • MYSTIC WHITE II® • #1 DRY • #1 SPECIAL • PENN SAND® • PRO WHITE® · SILURIAN® · Q-ROK® • SIL-CO-SIL® Ground Silica • MICROSIL® • SUPERSIL® • MASON SAND • GS SERIES • PERSPEC • proppant, all sizes • SHALE FRAC® - SERIES • KOSSE WHITE® • OTTAWA WHITE® • OPTIJUMP® • LIGHTHOUSE™

Chemical Name or Synonym:
Crystalline Silica (Quartz), Sand, Silica Sand, Flint, Ground Silica, Fine Ground Silica, Silica Flour.

Recommended use of the chemical and restrictions on use: (non-exhaustive list): brick, ceramics, foundry castings, glass, grout, hydraulic fracturing sand, frac sand, proppant, mortar, paint and coatings, silicate chemistry, silicone rubber, thermoset plastics.

DO NOT USE U.S. SILICA COMPANY SAND OR GROUND SILICA FOR SAND BLASTING

Manufacturer:
U.S. Silica Company
24275 Katy Freeway, Suite 600
Katy, TX 77494
U.S.A.

Phone: 800-243-7500
Emergency Phone: 844-468-7263
(Monday through Friday- 9 to 4 pm Central Standard Time)
Fax: 281-394-9017

2. HAZARD(S) IDENTIFICATION

Classification:

Physical	Health
Not Hazardous	Carcinogen Category 1A Specific Target Organ Toxicity – Repeated Exposure Category 1

DANGER
May cause cancer by inhalation.
Causes damage to lungs through prolonged or repeated exposure by inhalation.
Response:
If exposed or concerned: Get medical advice.
Disposal:
Dispose of contents/containers in accordance with national and local regulation

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust.
Do not eat, drink or smoke when using this product.
Wear protective gloves and safety glasses or goggles.
In case of inadequate ventilation wear respiratory protection.

Date of preparation/revision: December 19, 2019

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Percent
Crystalline Silica (quartz)	14808-60-7	95-99.9

4. FIRST-AID MEASURES

Inhalation: First aid is not generally required. If irritation develops from breathing dust, move the person from the overexposure and seek medical attention if needed.

Skin contact: First aid is not required.

Eye contact: Wash immediately with plenty of water. Do not rub eyes. If irritation persists, seek medical attention.

Ingestion: First aid is not required.

Most important symptoms/effects, acute and delayed: Particulates may cause abrasive eye injury. Inhalation of dust may cause respiratory tract irritation. Symptoms of exposure may include cough, sore throat, nasal congestion, sneezing, wheezing and shortness of breath. Prolonged inhalation of respirable crystalline silica above certain concentrations may cause lung diseases, including silicosis and lung cancer.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is not required.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use extinguishing media appropriate for surrounding fire.

Specific hazards arising from the chemical: Product is not flammable, combustible or explosive.

Special protective equipment and precautions for fire-fighters: None required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing and respiratory protection (see Section 8). Avoid generating airborne dust during clean-up.

Environmental precautions: No specific precautions. Report releases to regulatory authorities if required by local, state and federal regulations.

Methods and materials for containment and cleaning up: Avoid dry sweeping. Do not use compressed air to clean spilled sand or ground silica. Use water spraying/flushing or ventilated/HEPA filtered vacuum cleaning system. Wet before sweeping. Dispose of in closed containers.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid generating dust. Do not breathe dust. Do not rely on your sight to determine if dust is in the air.

Respirable crystalline silica dust may be in the air without a visible dust cloud. Use adequate exhaust ventilation and dust collection to reduce respirable crystalline silica dust levels to below the permissible exposure limit ("PEL"). Maintain and test ventilation and dust collection equipment. Use all available work practices to control dust exposures, such as water sprays. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Keep airborne dust concentrations below permissible exposure limits.

Where necessary to reduce exposures below the PEL or other applicable limit (if lower than the PEL), wear a respirator approved for silica containing dust when using, handling, storing or disposing of this product or bag. See Section 8, for further information on respirators. Do not alter the respirator. Do not wear a tight-fitting respirator with facial hair such as a beard or mustache that prevents a good seal between the respirator and face. Maintain, clean, and fit test respirators in accordance with applicable standards. Wash or vacuum clothing that has become dusty.

Participate in training, exposure monitoring, and health surveillance programs to monitor any potential adverse health effects that may be caused by breathing respirable crystalline silica. The OSHA Respirable Crystalline Silica Standards; 29CFR1910.1053, 1915.1053 and 1926.1053, the OSHA Hazard Communication Standard, 29 CFR Sections 1910.1200, 1915.1200, 1917.28, 1918.90, 1926.59 and 1928.21, and state and local worker or community "right-to-know" laws and regulations should be strictly followed.

DO NOT USE U.S. SILICA COMPANY SAND OR GROUND SILICA FOR SAND BLASTING

Conditions for safe storage, including any incompatibilities: Use dust collection to trap dust produced during loading and unloading. Keep containers closed and store bags to avoid accidental tearing, breaking, or bursting.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Component	OSHA PEL	ACGIH TLV	NIOSH REL
Crystalline Silica (quartz, cristobalite and tridymite)	0.05 mg/m3 TWA (respirable dust)	0.025 mg/m3 TWA (respirable dust)	0.05 mg/m3 TWA (respirable dust)

If crystalline silica (quartz) is heated to more than 870°C, quartz can change to a form of crystalline silica known as tridymite; if crystalline silica (quartz) is heated to more than 1470°C, quartz can change to a form of crystalline silica known as cristobalite.

Appropriate engineering controls: Use adequate general or local exhaust ventilation to maintain concentrations in the workplace below the applicable exposure limits listed above. Refer to OSHA Standards 29CFR1910.1053, 1915.1053 and 1926.1053 for additional information.

Respiratory protection: If it is not possible to reduce airborne exposure levels to below the OSHA PEL or other applicable limit with ventilation, use the table below to assist you in selecting respirators that will reduce personal exposures to below the OSHA PEL. This table is part of the OSHA Respirator Standard 29CFR1910.134(d). ***Assigned protection factor (APF)*** means the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program as specified by the Standard. For example, an APF of 10

means that the respirator should reduce the airborne concentration of a particulate by a factor of 10, so that if the workplace concentration of a particulate was 150 ug/m3, then a respirator with an APF of 10 should reduce the concentration of particulate to 15 ug/m3. In additional a cartridge change-out schedule must be developed based on the concentrations in the workplace.

1. -- Assigned Protection Factors[5]

Type of respirator[1], [2]	Quarter mask	Half mask	Full facepiece	Helmet/ hood	Loose-fitting facepiece
1. Air-Purifying Respirator	5	[3] 10	50	.....	.....
2. Powered Air-Purifying Respirator (PAPR)	.....	50	1,000	[4] 25/1,000	25
3. Supplied-Air Respirator (SAR) or Airline Respirator					
• Demand mode	.....	10	50	.....	.....
• Continuous flow mode	.....	50	1,000	[4] 25/1,000	25
• Pressure-demand or other positive-pressure mode	.....	50	1,000	.....	.....
4. Self-Contained Breathing Apparatus (SCBA)					
• Demand mode	.....	10	50	50	.....
• Pressure-demand or other positive-pressure mode (e.g., open/closed circuit)	.....	.....	10,000	10,000	.....

Notes: 1 Employers may select respirators assigned for use in higher workplace concentrations of a hazardous substance for use at lower concentrations of that substance, or when required respirator use is independent of concentration.

2 The assigned protection factors in Table 1 are only effective when the employer implements a continuing, effective respirator program as required by this section (29 CFR 1910.134), including training, fit testing, maintenance, and use requirements.

3 This APF category includes filtering facepieces, and half masks with elastomeric facepieces.

4 The employer must have evidence provided by the respirator manufacturer that testing of these respirators demonstrates performance at a level of protection of 1,000 or greater to receive an APF of 1,000. This level of performance can best be demonstrated by performing a WPF or SWPF study or equivalent testing. Absent such testing, all other PAPRs and SARs with helmets/hoods are to be treated as loose-fitting facepiece respirators and receive an APF of 25.

5 These APFs do not apply to respirators used solely for escape. For escape respirators used in association with specific substances covered by 29 CFR 1910 subpart Z, employers must refer to the appropriate substance specific standards in that subpart. Escape respirators for other IDLH atmospheres are specified by 29 CFR 1910.134 (d)(2)(ii).

Skin protection: Maintain good industrial hygiene. Protection recommended for workers suffering from dermatitis or sensitive skin.

Eye protection: Safety glasses with side shields or goggles recommended if eye contact is anticipated.

Other: None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): White or tan sand: granular, crushed or ground to a powder.
Odor: None.

Odor threshold: Not determined	**pH:** 6-8
Melting point/freezing point: 3110°F/1710°C	**Boiling point/range:** 4046°F/2230°C
Flash point: Not applicable	**Evaporation rate:** Not applicable
Flammable limits: LEL: Not applicable	**UEL:** Not applicable
Vapor pressure: Not applicable	**Vapor density:** Not applicable
Relative density: 2.65	**Solubility(ies):** Insoluble in water
Partition coefficient: n-octanol/water: Not applicable	**Auto-ignition temperature:** Not determined
Decomposition temperature: Not determined	**Viscosity:** Not applicable
Flammability (solid, gas): Not applicable	

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions of use.
Chemical stability: Stable.
Possibility of hazardous reactions: Contact with powerful oxidizing agents, such as fluorine, chlorine trifluoride and oxygen difluoride, may cause fires.
Conditions to avoid: Avoid generation of dust in handling and use.
Incompatible materials: Powerful oxidizers such as fluorine, chlorine trifluoride, and oxygen difluoride and hydrofluoric acid.
Hazardous decomposition products: Silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride.

11. TOXICOLOGICAL INFORMATION

Acute effects of exposure:
Inhalation: Inhalation of dust may cause respiratory tract irritation. Symptoms of exposure may include cough, sore throat, nasal congestion, sneezing, wheezing and shortness of breath.
Ingestion: Ingestion in an unlikely route of exposure. If dust is swallowed, it may irritate the mouth and throat.
Skin contact: No adverse effects are expected.
Eye contact: Particulates may cause abrasive injury.

Chronic effects: Prolonged **i**nhalation of respirable crystalline silica may cause lung disease, silicosis, lung cancer and other effects as indicated below.

The method of exposure that can lead to the adverse health effects described below is inhalation.

A. SILICOSIS

Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute:

Chronic or Ordinary Silicosis is the most common form of silicosis and can occur after many years (10 to 20 or more) of prolonged repeated inhalation of relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Complicated silicosis or PMF symptoms, if present, are shortness of breath and cough. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pumonale).

Accelerated Silicosis can occur with prolonged repeated inhalation of high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier, and progression is more rapid.

Acute Silicosis can occur after the repeated inhalation of very high concentrations of respirable crystalline silica over a short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough, weakness and weight loss. Acute silicosis is fatal.

B. CANCER
IARC - The International Agency for Research on Cancer ("IARC") concluded that “crystalline silica in the form of quartz or cristobalite dust is *carcinogenic to humans (Group 1)”*. For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100C,"A Review of Human Carcinogens: Arsenic, Metals, Fibres and Dusts " (2011).

NTP classifies “Silica, Crystalline (respirable size)” as Known to be a human carcinogen.

C. AUTOIMMUNE DISEASES
Several studies have reported excess cases of several autoimmune disorders -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis -- among silica-exposed workers.

D. TUBERCULOSIS
Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to tuberculosis bacteria. Individuals with chronic silicosis have a three-fold higher risk of contracting tuberculosis than similar individuals without silicosis.

E. KIDNEY DISEASE
Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica exposed workers. For additional information on the subject, the following may be consulted: "Kidney Disease and Silicosis”, Nephron, Volume 85, pp. 14-19 (2000).

F. NON-MALIGNANT RESPIRATORY DISEASES

The reader is referred to Section 3.5 of the NIOSH Special Hazard Review cited below for information concerning the association between exposure to crystalline silica and chronic bronchitis, emphysema and small airways disease. There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases, particularly among smokers. It is unclear whether the observed associations exist only with underlying silicosis, only among smokers, or result from exposure to mineral dusts generally (independent of the presence or absence of crystalline silica, or the level of crystalline silica in the dust).

Sources of information:
The ***NIOSH Hazard Review - Occupational Effects of Occupational Exposure to Respirable Crystalline Silica*** published in April 2002 summarizes and discusses the medical and epidemiological literature on the health risks and diseases associated with occupational exposures to respirable crystalline silica. The *NIOSH Hazard Review* is available from NIOSH - Publications Dissemination, 4676 Columbia Parkway, Cincinnati, OH 45226, or through the NIOSH web site, www.cdc.gov/niosh/topics/silica, then click on the link "NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica" found under "Hazard Review".

For a more recent review of the health effects of respirable crystalline silica, the reader may consult *Fishman's Pulmonary Diseases and Disorders*, Fourth Edition, Chapter 57. "Coal Workers' Lung Diseases and Silicosis".

The US Occupational Safety and Health Administration (OSHA) Crystalline Silica Standards 29CFR1910.1053, 1915.1053 and 1926.1053, Appendix B describes the silica related diseases and provides resources and references.

Numerical measures of toxicity:
Crystalline Silica (quartz): LD50 oral rat >22,500 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity: Crystalline silica (quartz) is not known to be ecotoxic.
Persistence and degradability: Silica is not degradable.
Bioaccumulative potential: Silica is not bioaccumulative.
Mobility in soil: Silica is not mobile in soil.
Other adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Discard any product, residue, disposable container or liner in full compliance with national regulations.

14. TRANSPORT INFORMATION

UN number: None
UN proper shipping name: Not regulated
Transport hazard classes(es): None
Packing group, if applicable: None
Environmental hazards: None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not determined **Special precautions:** None known.

15. REGULATORY INFORMATION

UNITED STATES (FEDERAL AND STATE)

TSCA Status: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7.

RCRA: This product is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.

Emergency Planning and Community Right to Know Act (SARA Title III): This product contains the following chemicals subject to SARA 302 or SARA 313 reporting: None above the de minimus concentrations.

Clean Air Act: Crystalline silica (quartz) mined and processed by U.S. Silica Company is not processed with or does not contain any Class I or Class II ozone depleting substances.

FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).

California Proposition 65: Crystalline silica (airborne particles of respirable size) is classified as a substance known to the State of California to be a carcinogen.

California Inhalation Reference Exposure Level (REL): California established a chronic non-cancer effect REL of 3µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no non-cancer health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

Pennsylvania Worker and Community Right to Know Act: Quartz is a hazardous substance under the Act, but it is not a special hazardous substance or an environmental hazardous substance.

Texas Commission on Environmental Quality: The Texas CEQ has established chronic and acute Reference Values and short term and long term Effects Screening Levels for crystalline silica (quartz). The information can be accessed through www.tceq.texas.gov.

CANADA

Domestic Substances List: U. S. Silica Company products, as naturally occurring substances, are on the Canadian DSL.

OTHER NATIONAL INVENTORIES

Australian Inventory of Chemical Substances (AICS): All of the components of this product are listed on the AICS inventory or exempt from notification requirements.

China: Silica is listed on the IECSC inventory or exempt from notification requirements.

Japan Ministry of International Trade and Industry (MITI): All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law Registry Number 1-548.

Korea Existing Chemicals Inventory (KECI) (set up under the Toxic Chemical Control Law): Listed on the ECL with registry number 9212-5667.

New Zealand: Silica is listed on the HSNO inventory or exempt from notification requirements.

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed for PICCS.

Taiwan: Silica is listed on the CSNN inventory or exempt from notification requirements.

16. OTHER INFORMATION

Date of preparation/revision: December 19, 2019

Hazardous Material Information System (HMIS):

Health *
Flammability 0
Physical Hazard 0
Protective Equipment E
* For further information on health effects, see Sections 2, 8 and 11 of this MSDS.

National Fire Protection Association (NFPA):

Health 0
Flammability 0
Instability 0

Web Sites with Information about Effects of Crystalline Silica Exposure:

The Occupational Safety and Health Administration (OSHA) web site contains information on the OSHA standard related to respirable crystalline silica at https://www.osha.gov/dsg/topics/silicacrystalline/index.html.

The U.S. National Institute for Occupational Safety and Health (NIOSH) maintains a site with information about crystalline silica and its potential health effects at http://www.cdc.gov/niosh/topics/silica.

The IARC Monograph that includes crystalline silica, Volume 100C, can be accessed in PDF form at the IARC web site, http://monographs.iarc.fr/ENG/Monographs/PDFs/index.php.

U. S. Silica Company Disclaimer

The information and recommendations contained herein are based upon data believed to be up to- date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by purchase, resale, use or exposure to our silica. Customers and users of silica must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.

SAFETY DATA SHEET

Issuing Date: 05-Oct-2015 **Revision Date:** 05-Oct-2015 **Version** 1

1. IDENTIFICATION

Product Name	Dawn Ultra Dishwashing Liquid, Original Scent
Product ID:	97591965_RET_NG
Product Type:	Finished Product - Consumer (Retail) Use Only
Recommended use	Dish Care
Restrictions on Use	Use only as directed on label.
Synonyms	Dawn Ultra Dishwashing Liquid, Pomegranate Awakening (97591967_RET_NG) Dawn Ultra Dishwashing Liquid, Apple Orchard Harvest (97591968_RET_NG)
Manufacturer	PROCTER & GAMBLE - Fabric and Home Care Division Ivorydale Technical Centre 5289 Spring Grove Avenue Cincinnati, Ohio 45217-1087 USA Procter & Gamble Inc. P.O. Box 355, Station A Toronto, ON M5W 1C5 1-800-331-3774
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Hazard Category	
Eye Damage / Irritation	Category 2B
Signal Word	WARNING
Hazard Statements	Causes eye irritation
Hazard pictograms	None

Precautionary Statements - Prevention Wash hands thoroughly after handling

Precautionary Statements - Response IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF SWALLOWED:
Drink 1 or 2 glasses of water

Precautionary Statements - Storage None

Precautionary Statements - Disposal None

Hazards not otherwise classified (HNOC) None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Sulfuric acid, mono-C10-16-alkyl esters, sodium salts	Sulfuric acid, mono-C10-16-alkyl esters, sodium salts	No	68585-47-7	15 - 20
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	No	68585-34-2	5 - 10
Amine oxides, C10-16-alkyldimethyl	Amine oxides, C10-16-alkyldimethyl	No	70592-80-2	5 - 10
Ethanol	Ethanol	No	64-17-5	1 - 5

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact Rinse with plenty of water. Get medical attention immediately if irritation persists.

Skin contact Rinse with plenty of water. Get medical attention if irritation develops and persists.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Dry chemical, CO_2, alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media None.

Special hazard None known.

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

Advice for emergency responders Use personal protective equipment as required.

Methods and materials for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	CAS-No	ACGIH TLV	OSHA PEL	Mexico PEL
Ethanol	64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3 (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m^3	Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m^3

Chemical Name	CAS-No	Alberta	Quebec	Ontario TWAEV	British Columbia
Ethanol	64-17-5	TWA: 1000 ppm TWA: 1880 mg/m^3	TWA: 1000 ppm TWA: 1880 mg/m^3	STEL: 1000 ppm	STEL: 1000 ppm

No relevant exposure guidelines for other ingredients

Exposure controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	liquid
Appearance	Various color by product
Odor	Scented
Odor threshold	No information available

Property	Values	Note
pH value	9.0 - 9.2	10% aqueous solution
Melting/freezing point	No information available	
Boiling point/boiling range	100 - 104 °C / 212 - 219 °F	
Flash point	No Flash to Boiling (NFTB)	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.04	
Water solubility	100%	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	.
Decomposition temperature	No information available	.

Viscosity of Product No information available
VOC Content (%) Products comply with US state and federal regulations for VOC content in consumer products.

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

Conditions to Avoid None under normal processing.

Materials to avoid None in particular.

Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information
Information on likely routes of exposure

Inhalation No known effect.
Skin contact No known effect.
Ingestion No known effect.
Eye contact Irritating to eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity No known effect.
Skin corrosion/irritation No known effect.
Serious eye damage/eye irritation Irritating to eyes.
Skin sensitization No known effect.
Respiratory sensitization No known effect.
Germ cell mutagenicity No known effect.
Neurological Effects No known effect.
Reproductive toxicity No known effect.
Developmental toxicity No known effect.
Teratogenicity No known effect.
STOT - single exposure No known effect.
STOT - repeated exposure No known effect.
Target Organ Effects No known effect.
Aspiration hazard No known effect.
Carcinogenicity No known effect.

Component Information

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	68585-34-2	>2001 mg/kg	-	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Codes (non-household setting) 331

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	CAS-No	Hazardous Substances RQs	Extremely Hazardous Substances RQs	CERCLA/SARA 302 TPQ
Sodium hydroxide	1310-73-2	1000 lb	-	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following substance(s) which are either listed as hazardous air pollutants (HAPS) or VOC's per the Clean Air Act:

Chemical Name	CAS-No	CAA (Clean Air Act) - 1990 Hazardous Air Pollutants
Phenoxyethanol	122-99-6	X

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1310-73-2	1000 lb	-	-	X

California Proposition 65

This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

Chemical Name	CAS-No	New Jersey
Ethanol	64-17-5	X

Chemical Name	CAS-No	Massachusetts
Ethanol	64-17-5	X

Chemical Name	CAS-No	Pennsylvania
Ethanol	64-17-5	X
Sodium hydroxide	1310-73-2	X
Phenoxyethanol	122-99-6	X

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 05-Oct-2015
Revision Date: 05-Oct-2015
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Leslie's Swimming Pool Supplies Soda Ash**

Other means of identification Not available

Recommended use pH adjuster

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name LPM Manufacturing, Inc.

Address 2005 E. Indian School Rd.
Phoenix, AZ 85016
United States

Telephone 602-366-3999

E-mail Not available.

Emergency phone number 800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Serious eye damage/eye irritation	Category 2A
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word Warning

Hazard statement May be corrosive to metals.
Causes serious eye irritation.

Precautionary statement

Prevention Keep only in original container.
Wash thoroughly after handling.
Wear eye/face protection.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Absorb spillage to prevent material damage.

Storage Store in corrosive resistant container with a resistant inner liner.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium carbonate		497-19-8	>99.6

4. First Aid Measures

Inhalation If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.

Skin contact Brush away excess of dry material. Flush with water. Obtain medical attention if irritation persists.

Eye contact If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Rinse mouth with water, then drink one or two glasses of water. Never give anything by mouth if victim is unconscious, or is convulsing.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Suitable extinguishing media	Treat for surrounding material.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In the event of fire, cool tanks with water spray.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	Firefighters should wear a self-contained breathing apparatus.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Sweep up material and place in a disposal container without raising dust. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS). Guard against dust accumulation of this material.

8. Exposure Controls/Personal Protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Not normally required if good ventilation is maintained.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Other	Wear suitable protective clothing.
Respiratory protection	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
Thermal hazards	Not applicable.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Solid
Physical state	Solid.
Form	Granular.
Color	White.
Odor	Odorless
Odor threshold	Not available.
pH	11.3 (1% Solution)
Melting point/freezing point	1563.8 °F (851 °C)
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	2.53
Partition coefficient (n-octanol/water)	Not available.
Flash point	> 199.4 °F (> 93.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0 kPa at 25 °C
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	752 °F (400 °C)
Viscosity	Not available.
Other information	
Bulk density	>= 1 g/cm3 at 20 °C
Density	2.53 g/cm3 estimated
Molecular formula	C-Na2-O3
Molecular weight	105.99 g/mol

10. Stability and Reactivity

Reactivity	Do not mix with other chemicals.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Wet storage. Source of ignition.
Incompatible materials	Acids. Wet storage. Magnesium. Phosphorus pentoxide. Ammonia. Silver nitrate Fluorine. Aluminum. Lithium
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	No adverse effects due to skin contact are expected.

Eye contact Causes serious eye irritation. Dust in the eyes will cause irritation.

Symptoms related to the physical, chemical and toxicological characteristics Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Sodium carbonate (CAS 497-19-8)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Guinea pig	400 mg/m3
		0.8 mg/l, 2 Hours
	Mouse	1.2 mg/l, 2 Hours
	Rat	2.3 mg/l, 2 Hours
Oral		
LD50	Rat	4090 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Causes serious eye irritation.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Not available.

Further information Not available.

12. Ecological Information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Sodium carbonate (CAS 497-19-8)			
Crustacea	EC50	Daphnia	265 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	156.6 - 298.9 mg/l, 48 hours

Components		Species	Test Results
Fish	LC50	Bluegill (Lepomis macrochirus)	300 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Texas Effects Screening Levels: Listed substance

Sodium carbonate (CAS 497-19-8) Listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

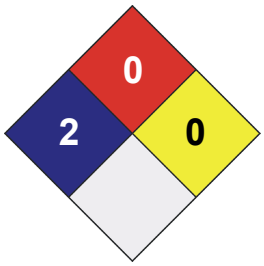
Not regulated.

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date 16-December-2014

Further information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Other information This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Prepared by Dell Tech Laboratories Ltd. Phone: (519) 858-5021

SECTION 1. IDENTIFICATION

Product identifier

Trade name : LESLIE'S SUPER FLOC

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Water treatment chemical

Details of the supplier of the safety data sheet	**Emergency telephone number**
Innovative Water Care, LLC 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States of America (USA) EHSProductSafetyTeam@solenis.com	1-800-654-6911 (Outside the USA:1-423-780-2970) **Product Information** 1-800-511-6737 (Outside the USA:1-423-780-2347)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
Specific target organ toxicity - repeated exposure (Inhalation)	:	Category 1 (Lungs)
Specific target organ toxicity - repeated exposure (Oral)	:	Category 2 (Central nervous system)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.
H372 Causes damage to organs (Lungs) through prolonged or repeated exposure if inhaled.
H373 May cause damage to organs (Central nervous system)

through prolonged or repeated exposure if swallowed.

Precautionary statements :

Prevention:

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P314 Get medical advice/ attention if you feel unwell.
P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Material can create slippery conditions.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Classification	Concentration (%)
ALUMINUM CHLORIDE	7446-70-0	Skin Corr. 1; H314 Eye Dam. 1; H318 STOT RE 1; H372 STOT RE 2; H373	>= 15 - < 20

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.

Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Move to fresh air.
If breathed in, move person into fresh air.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If on skin, rinse well with water.
Wash contaminated clothing before re-use.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.

If swallowed : Get medical attention immediately.
Do NOT induce vomiting.
Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : Causes serious eye damage.
Causes damage to organs through prolonged or repeated exposure if inhaled.
May cause damage to organs through prolonged or repeated exposure if swallowed.
Causes severe burns.
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
Cough
Headache
Shortness of breath
lung edema (fluid buildup in the lung tissue)

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	aluminum oxides Chlorine hydrogen chloride toxic fumes Ammonia Carbon monoxide Carbon dioxide (CO2) nitrogen oxides (NOx)
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Material can create slippery conditions. Water may cause extremely slippery conditions. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Material can create slippery conditions. Use personal protective equipment. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Comply with all applicable federal, state, and local regulations.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	For small spills, quickly contain and remove the spilled material using absorbent pads, socks, kitty litter, sawdust etc, then appropriately dispose. Do not leave absorbents to sit overnight, as they will become hard and difficult to remove. The remaining residue or film can be treated with dilute caustic (2%) or dilute liquid bleach (2–5%), allowed to soak for up to one hour, and clean with warm water (between 49C – 54C (120F – 130 F)) or flushed to a sewer using high volumes of water taking into account local guidelines. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Avoid spillage on floor as the product can become very slippery. Do not breathe vapours/dust. Do not smoke. When diluting, always add the product to water. Never add water to the product. Container hazardous when empty. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage stability	:	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ALUMINUM CHLORIDE	7446-70-0	TWA	2 mg/m3 (Aluminium)	OSHA P0
		TWA	2 mg/m3 (Aluminium)	NIOSH REL

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : A NIOSH-approved air-purifying respirator with an

appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection

Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Wear chemical splash goggles and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist. Maintain eye wash station in immediate work area.
Skin and body protection	:	Wear as appropriate: Impervious clothing Chemical resistant apron Safety shoes Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear resistant gloves (consult your safety equipment supplier). Discard gloves that show tears, pinholes, or signs of wear.
Hygiene measures	:	Wash hands before breaks and at the end of workday. When using do not eat or drink. Ensure that eyewash stations and safety showers are close to the workstation location. When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	clear
Odour	:	odourless
Odour Threshold	:	No data available
pH	:	1.5 - 2.0
Melting point/freezing point	:	No data available

Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1.13
Density	:	No data available
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Product will not undergo hazardous polymerization.
Conditions to avoid	:	excessive heat Protect from frost.

Heat, flames and sparks.
Exposure to moisture

Incompatible materials : Alcohols
alkalis
allyl chloride
aluminum
Copper
Ethylene oxide
Iron
organic nitro compounds
oxygen difluoride
Potassium
sodium
strong alkalis
strong mineral acids
Strong oxidizing agents
water

Hazardous decomposition products : hydrogen chloride
aluminum oxides
Chlorine
Hydrogen chloride gas
Ammonia
Carbon monoxide
Carbon dioxide (CO2)
Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Components:

ALUMINUM CHLORIDE:

Acute oral toxicity : LD50 (Rat, male): 3,450 mg/kg

LD50 (Rat, female): 3,470 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2 g/kg
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

Skin corrosion/irritation

Causes severe burns.

Product:

Remarks : Causes severe skin burns and eye damage.

Components:

ALUMINUM CHLORIDE:

Result : Corrosive to skin

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks : May cause irreversible eye damage.

Components:

ALUMINUM CHLORIDE:

Result : Corrosive to eyes

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Components:

ALUMINUM CHLORIDE:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Result: positive

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: positive

Test Type: Ames test
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Result: positive

Carcinogenicity

Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Causes damage to organs (Lungs) through prolonged or repeated exposure if inhaled.
May cause damage to organs (Central nervous system) through prolonged or repeated exposure if swallowed.

Components:

ALUMINUM CHLORIDE:

Exposure routes	:	Ingestion
Target Organs	:	Central nervous system
Assessment	:	Shown to produce significant health effects in animals at concentrations of >20 to 200 mg/kg bw.
Exposure routes	:	inhalation (dust/mist/fume)
Target Organs	:	Lungs
Assessment	:	Shown to produce significant health effects in animals at concentrations of 0.02 mg/l/6h/d or less.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity	:	Acute aquatic toxicity Category 3; Harmful to aquatic life.
Chronic aquatic toxicity	:	Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

ALUMINUM CHLORIDE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 36.6 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia (water flea)): 7.4 mg/l
Exposure time: 48 h
Test Type: static test

EC50 (Daphnia magna (Water flea)): 27.3 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.25 mg/l
End point: Growth rate
Exposure time: 42 d
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.8 mg/l
End point: Reproduction Test
Exposure time: 21 d
Test Type: semi-static test

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l
Exposure time: 180 min
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes

Persistence and degradability

Components:

ALUMINUM CHLORIDE:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN number	:	UN 2581
Proper shipping name	:	Aluminium chloride solution
Class	:	8
Packing group	:	III
Packing instruction (cargo aircraft)	:	856
Packing instruction (passenger aircraft)	:	852

IMDG-Code

UN number	:	UN 2581
Proper shipping name	:	ALUMINIUM CHLORIDE, SOLUTION
Class	:	8
Packing group	:	III
EmS Code	:	F-A, S-B
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

UN number	:	UN 2581
Proper shipping name	:	Aluminum chloride, solution
Class	:	8
Packing group	:	III
ERG Code	:	154
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

aluminium chloride, anhydrous	7446-70-0

Pennsylvania Right To Know

WATER	7732-18-5
aluminium chloride, anhydrous	7446-70-0

New Jersey Right To Know

WATER	7732-18-5
aluminium chloride, anhydrous	7446-70-0
Poly(diallyldimethylammonium chloride)	26062-79-3

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TCSI : On the inventory, or in compliance with the inventory

TSCA : All substances listed as active on the TSCA inventory

AIIC : On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL

ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

Revision Date	:	08/01/2023

Full text of H-Statements

H314	:	Causes severe skin burns and eye damage.
H318	:	Causes serious eye damage.
H372	:	Causes damage to organs through prolonged or repeated exposure if inhaled.
H373	:	May cause damage to organs through prolonged or repeated exposure if swallowed.

Full text of other abbreviations

Eye Dam.	:	Serious eye damage
Skin Corr.	:	Skin corrosion
STOT RE	:	Specific target organ toxicity - repeated exposure
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and

Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet
Key literature references and sources of data
SOLENIS Internal data
SOLENIS internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

US / EN

Safety Data Sheet

Issuing Date Sep-14-2015 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product name **6-WAY INSTATEST POOL & SPA TEST STRIPS**

2976-3029-D

Other means of identification
Product Code(s) **3028**

Recommended use of the chemical and restrictions on use
Recommended Use Industrial (not for food or food contact use). Test kit reagent for water testing. Use as a laboratory reagent.

Details of the supplier of the safety data sheet

Manufacturer Address
LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748

Emergency telephone number
24 Hour Emergency Number (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

EMERGENCY OVERVIEW

Appearance White plastic strip with multiple test pads **Physical state** Test strip **Odor** Odorless

Precautionary Statements - Prevention
Keep out of the reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN: Wash with plenty of soap and water Take off contaminated clothing and wash before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED Drink 1 or 2 glasses of water Call a physician immediately

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

First Aid Measures

General advice No hazards which require special first aid measures.

Eye contact Rinse thoroughly with water as necessary.

Skin contact Wash skin with soap and water.

Inhalation Not Applicable.

Ingestion Consult a physician. White plastic strip is indigestable, may cause gastrointestinal discomfort if many have been swallowed.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Water spray, dry chemical, carbon dioxide (CO_2), or foam.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Not Applicable.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture.

Incompatible Products Not Applicable.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Appropriate engineering controls

Engineering Measures None under normal use conditions.

Individual protection measures, such as personal protective equipment

Eye/Face Protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Hygiene Measures Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Test strip		
Appearance	White plastic strip with multiple test pads	**Odor**	Odorless

Property	**Values**	**Remarks • Method**
pH		No information available
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	No information available	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Stability Stable.
Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods.
Incompatible materials Not Applicable.
Hazardous decomposition products None known.

11. TOXICOLOGICAL INFORMATION

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Information on likely routes of exposure

- **Inhalation** Not an expected route of exposure.
- **Eye contact** May cause temporary eye irritation.
- **Skin contact** Repeated exposure may cause skin dryness or cracking.
- **Ingestion** May cause gastrointestinal discomfort if consumed in large amounts. Plastic strip is indigestable.

Component Information

Information on toxicological effects

12. ECOLOGICAL INFORMATION

Ecotoxicity

Persistence and degradability
No information available.

Bioaccumulation/Accumulation
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods Dispose of waste product or used containers according to local regulations.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories
TSCA Complies

DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

16. OTHER INFORMATION

NFPA **Health hazard** 0 **Flammability** 0 **Instability** 0 **Physical and Chemical Hazards** N/A

Health Hazard	0
Fire Hazard	0
Reactivity	0

Prepared by Regulatory Affairs Department
Issuing Date Sep-14-2015
Revision Date Sep-15-2015
Reason for revision Initial Release

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet

SECTION 1. IDENTIFICATION

Product identifier

Trade name : POOLBRAND BLACKOUT GRANULAR 90

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Pesticide

Details of the supplier of the safety data sheet	**Emergency telephone number**
Innovative Water Care, LLC 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States of America (USA) EHSProductSafetyTeam@solenis.com	1-800-654-6911 (Outside the USA:1-423-780-2970) **Product Information** 1-800-511-6737 (Outside the USA:1-423-780-2347)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids	:	Category 2
Acute toxicity (Oral)	:	Category 4
Eye irritation	:	Category 2A
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements :

Prevention:

P210 Keep away from heat.
P220 Keep/ Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P261 Avoid breathing dust.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use water spray to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Components

Chemical name	CAS-No.	Classification	Concentration (%)
TRICHLORO-S-TRIAZINETRIONE	87-90-1	Ox. Sol. 2; H272 Acute Tox. 4; H302 Eye Irrit. 2A; H319 STOT SE 3; H335	>= 90 - <= 100

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Call a POISON CENTRE or doctor/physician if exposed or you feel unwell. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on skin, rinse well with water. First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water. If on clothes, remove clothes.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye.
If swallowed	:	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth with water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) Harmful if swallowed. Causes serious eye irritation. May cause respiratory irritation.
Notes to physician	:	Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water
Unsuitable extinguishing media	:	Dry extinguishers containing ammonium compounds.
Specific hazards during firefighting	:	May intensify fire, oxidizer. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Chlorine nitrogen chloride nitrogen compounds

toxic fumes

Further information : Use water to cool containers exposed to fire.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Avoid dust formation.
Avoid breathing dust.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Comply with all applicable federal, state, and local regulations.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Sweep up and shovel using a clean broom or shovel.
Shovel material into clean dry containers.
All spills of this product should be treated as contaminated.
Contaminated product may initiate a chemical reaction that may spontaneously ignite any combustible material present, resulting in a fire.
Avoid getting spilled product wet.
Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Keep away from combustible material.
Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling : Avoid dust formation.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage	:	Store in original container. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage stability	:	Do not store next to a heat source, in direct sunlight, or elevated temperatures. Do not store where the daily average temperature exceeds prescribed storage temperature for 7 consecutive days. Prevent ingress of humidity and moisture into container or package. Keep containers tightly closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects. Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

Respiratory protection	:	In the case of dust or aerosol formation use respirator with an approved filter. Dust safety masks are recommended when the dust concentration is more than 10 mg/m3.
Hand protection		
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Safety glasses
Skin and body protection	:	Wear as appropriate: Safety shoes Dust impervious protective suit Flame-resistant clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear resistant gloves (consult your safety equipment supplier).
Hygiene measures	:	Avoid breathing dust.

Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	crystalline
Colour	:	white
Odour	:	slight chlorine
Odour Threshold	:	No data available
pH	:	2.7 - 2.9 Concentration: 1 %
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	No data available
Bulk density	:	56 - 57 LF3
Solubility(ies)		
Water solubility	:	1.4 g/l (68 °F / 20 °C)
Solubility in other solvents	:	No data available

Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	437 °F / 225 °C
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available
Particle size	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under recommended storage conditions. May be unstable at temperatures above 225 Deg. C (437 Deg. F).
Possibility of hazardous reactions	:	Product will not undergo hazardous polymerization. NFPA Oxidizer Class: Meets the criteria of an NFPA Class 1 Oxidizer.
Conditions to avoid	:	Keep away from heat, flame, sparks and other ignition sources. excessive heat
Incompatible materials	:	Do not allow product to come in contact with other materials, including e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. A chemical reaction with such substances can cause a fire. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter.
Hazardous decomposition products	:	Chlorine nitrogen chloride nitrogen compounds toxic fumes

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Components:

TRICHLORO-S-TRIAZINETRIONE:

Acute oral toxicity : LD50 (Rat): 490 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : Product dust may be irritating to eyes, skin and respiratory system.
Causes serious eye irritation.

Components:

TRICHLORO-S-TRIAZINETRIONE:

Species : Rabbit
Result : Severely irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

May cause respiratory irritation.

Components:

TRICHLORO-S-TRIAZINETRIONE:

Target Organs	:	Respiratory Tract
Assessment	:	May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks	:	No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity	:	Acute aquatic toxicity Category 1; Very toxic to aquatic life.
Chronic aquatic toxicity	:	Chronic aquatic toxicity Category 1; Very toxic to aquatic life with long lasting effects.

Components:

TRICHLORO-S-TRIAZINETRIONE:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.23 mg/l End point: mortality Exposure time: 96 h GLP: yes LC50 (Oncorhynchus mykiss (rainbow trout)): 0.24 mg/l End point: mortality Exposure time: 96 h GLP: yes
Toxicity to daphnia and other	:	EC50 (Daphnia magna (Water flea)): 0.17 mg/l

aquatic invertebrates Exposure time: 48 h

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 1; Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

TRICHLORO-S-TRIAZINETRIONE:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Bioaccumulative potential

Components:

TRICHLORO-S-TRIAZINETRIONE:

Partition coefficient: n-octanol/water : log Pow: 0.94

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste

handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN number	:	UN 2468
Proper shipping name	:	Trichloroisocyanuric acid, dry
Class	:	5.1
Packing group	:	II
Packing instruction (cargo aircraft)	:	562
Packing instruction (passenger aircraft)	:	558

IMDG-Code

UN number	:	UN 2468
Proper shipping name	:	TRICHLOROISOCYANURIC ACID, DRY
Class	:	5.1
Packing group	:	II
EmS Code	:	F-A, S-Q
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

UN number	:	UN 2468
Proper shipping name	:	Trichloroisocyanuric acid, dry
Class	:	5.1
Packing group	:	II
ERG Code	:	140
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.
49CFR/IMDG: Packages with inner packaging less than 1L or 1kg and gross weight under 30kg may ship under the Limited Quantity Exception.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Oxidiser (liquid, solid or gas)
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

symclosene	87-90-1

Pennsylvania Right To Know

symclosene	87-90-1

New Jersey Right To Know

symclosene	87-90-1

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Exempt
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	Exempt
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

TSCA list

Exempt- This product is exempt from Significant New Use Rule requirements. See information under Biocides for product registration information."

Exempt-This product is exempt from TSCA 12(b) requirements. See information under Biocides for product registration information."

Biocides

EPA Reg. # 69470-28-75217

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Danger, Corrosive., Causes irreversible eye damage., May be fatal if inhaled., Harmful if swallowed or absorbed through the skin.

SECTION 16. OTHER INFORMATION

Further information

Revision Date : 07/13/2023

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical

Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet
Key literature references and sources of data
SOLENIS Internal data
SOLENIS internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

US / EN

Epoxy Putty Stick - Under Water Cure - Part A

SECTION 1: Identification

Product identifier

Product name: Epoxy Putty Stick - Under Water Cure - Part A
Product code: 8277, 8277H

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable.
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:
United States
J-B Weld Company, LLC
400 CMH Road
Sulphur Springs, TX 75482
903-885-7696
info@jbweld.com

Emergency telephone number:

United States
InfoTrac
Transportation Emergencies (24 hour): 800-535-5053
Poison Control Centers (24 hour): medical emergencies 800-222-1222

SECTION 2: Hazard(s) identification

GHS classification:

Eye irritation, category 2A
Skin irritation, category 2
Skin sensitization, category 1

Label elements

Hazard pictograms:

Signal word: Warning

Hazard statements:

H319 Causes serious eye irritation.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

Precautionary statements:

P264 Wash skin and eyes thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists get medical advice/attention
P321 Specific treatment (see supplemental first aid instructions on this label).
P362 Take off contaminated clothing and wash before reuse
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention
P363 Wash contaminated clothing before reuse
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention
P501 Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 14807-96-6	Talc Powder	<15
CAS number: 13463-67-7	Titanium Dioxide	<10
CAS number: 65997-17-3	Glass, oxide, chemicals	<25
CAS number: 3101-60-8	P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	<1
CAS number: 25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	<30

Additional Information:

Fiberglass powder (CAS # 65997-17-3) is classified as a carcinogen in its inhalable form. Since the fiberglass powder in this product is not inhalable, the product itself is not classified as a carcinogen in the form presented.
The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200).

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell

After skin contact:

Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention
Take off all contaminated clothing
Gently blot or brush away excess product

Wash with plenty of lukewarm, gently flowing water
Get medical advice if skin irritation occurs or you feel unwell

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention
Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open
Remove contact lenses, if present and easy to do so
Continue rinsing for 15-20 minutes
Get medical advice if eye irritation persists

After swallowing:

Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing
Sweep or scoop up solid material while minimizing dust generation
Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.
Avoid breathing dust.
Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.
Keep container dry.
Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
United States (OSHA)	Talc Powder	14807-96-6	OSHA PEL Ceiling 20 mppcf
	Titanium Dioxide	13463-67-7	OSHA PEL TWA 15 mg/m³ (Total dust)
ACGIH	Talc Powder	14807-96-6	ACGIH TLV TWA 2 mg/m³; (Inhalable particulate matter containing no asbestos and < 1% crystalline silica)
	Titanium Dioxide	13463-67-7	ACGIH TLV TWA 10 mg/m³
	Glass, oxide, chemicals	65997-17-3	8-Hour Exposure Limit (TLV-TWA): 1 fibers/cm³
NIOSH	Talc Powder	14807-96-6	NIOSH REL TWA 2.0 mg/m³
	Titanium Dioxide	13463-67-7	IDLH: 5,000 mg/m³
	Glass, oxide, chemicals	65997-17-3	NIOSH Recommended exposure limit (REL) [for up to a 10-hour workday during a 40-hour workweek] is: 3 fibers/cm3

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or

handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:
Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:
Select glove material impermeable and resistant to the substance.
Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:
Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	White (solid)
Odor	Not determined or not available.
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	135°C (275°F)
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	1.98 g/cm³
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.

Chemical stability:
Stable under normal conditions of use and storage.

Possibility of hazardous reactions:
None under normal conditions of use and storage.

Conditions to avoid:
None known.

Incompatible materials:
None known.

Hazardous decomposition products:
None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Skin corrosion/irritation

Assessment:
Causes skin irritation

Product data:
No data available.

Substance data:

Name	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Causes skin irritation.
P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	Causes skin irritation

Serious eye damage/irritation

Assessment:
Causes serious eye irritation

Product data:
No data available.

Substance data:

Name	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Causes serious eye irritation.
P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	Causes serious eye damage

Respiratory or skin sensitization

Assessment:

May cause an allergic skin reaction

Product data:

No data available.

Substance data:

Name	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	May cause an allergic skin reaction.
P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	Result : May cause sensitisation by skin contact.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Species	Result
Glass, oxide, chemicals	Not applicable	May cause cancer via inhalation.
Titanium Dioxide	Not applicable.	Airborne, unbound particles of respirable size are known to cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Talc Powder	Group 3 - Not classifiable as to its carcinogenicity to humans
Glass, oxide, chemicals	Group 2B
Titanium Dioxide	Group 2B

National Toxicology Program (NTP):

Name	Classification
Glass, oxide, chemicals	Reasonably anticipated to be human carcinogens

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

Other information:

No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	EC50 - Scenedesmus capricornutum - 9 mg/L - 48 h

Chronic (long-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Listed
3101-60-8	P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	Listed
14807-96-6	Talc Powder	Listed
65997-17-3	Glass, oxide, chemicals	Listed
13463-67-7	Titanium Dioxide	Listed

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Not Listed
3101-60-8	P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	Not Listed
14807-96-6	Talc Powder	Not Listed
65997-17-3	Glass, oxide, chemicals	Not Listed
13463-67-7	Titanium Dioxide	Not Listed

CERCLA: Not determined.

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Not Listed
3101-60-8	P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	Not Listed
14807-96-6	Talc Powder	Listed
65997-17-3	Glass, oxide, chemicals	Listed
13463-67-7	Titanium Dioxide	Listed

New Jersey Right to Know:

25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Not Listed
3101-60-8	P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	Not Listed
14807-96-6	Talc Powder	Listed
65997-17-3	Glass, oxide, chemicals	Listed
13463-67-7	Titanium Dioxide	Listed

New York Right to Know:

25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Not Listed
3101-60-8	P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	Not Listed
14807-96-6	Talc Powder	Not Listed
65997-17-3	Glass, oxide, chemicals	Not Listed
13463-67-7	Titanium Dioxide	Listed

Pennsylvania Right to Know:

25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Not Listed
3101-60-8	P-tert-butylphenyl 1-(2,3-epoxy)propyl ether	Not Listed

14807-96-6	Talc Powder	Listed
65997-17-3	Glass, oxide, chemicals	Listed
13463-67-7	Titanium Dioxide	Listed

California Proposition 65: None of the ingredients are listed.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 2-0-0

HMIS: 2-0-0

Initial preparation date: 07.24.2018

End of Safety Data Sheet

Epoxy Putty Stick - Under Water Cure - Part B

SECTION 1: Identification

Product identifier

Product name: Epoxy Putty Stick - Under Water Cure - Part B
Product code: 8277 & 8277H

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable.
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:
United States
J-B Weld Company, LLC
400 CMH Road
Sulphur Springs, TX 75482
903-885-7696
info@jbweld.com

Emergency telephone number:

United States
InfoTrac
Transportation Emergencies (24 hour): 800-535-5053
Poison Control Centers (24 hour): medical emergencies 800-222-1222

SECTION 2: Hazard(s) identification

GHS classification:

Eye irritation, category 2A
Skin irritation, category 2
Skin sensitization, category 1

Label elements

Hazard pictograms:

Signal word: Warning

Hazard statements:

H319 Causes serious eye irritation.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

Precautionary statements:

P264 Wash skin and eyes thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists get medical advice/attention
P321 Specific treatment (see supplemental first aid instructions on this label).
P362 Take off contaminated clothing and wash before reuse
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention
P363 Wash contaminated clothing before reuse
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention
P501 Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 14807-96-6	Talc Powder	<20
CAS number: 112-24-3	Amine Mix	<1
CAS number: 13463-67-7	Titanium Dioxide	<2
CAS number: 65997-17-3	Glass Powder	<15
CAS number: 7727-43-7	Barium Sulphate	<15
CAS number: 68479-04-9	Amine complex	<1
CAS number: 26950-63-0	Polyamine	<5
CAS number: 57-55-6	Diluent	<1
CAS number: 72244-98-5	Curing Agent	<20
CAS number: 186898-76-0	Amine complex	<5

Additional Information:

Fiberglass powder (CAS # 65997-17-3) is classified as a carcinogen in its inhalable form. Since the fiberglass powder in this product is not inhalable, the product itself is not classified as a carcinogen in the form presented.

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200).

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell

After skin contact:

Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention
Take off all contaminated clothing
Gently blot or brush away excess product
Wash with plenty of lukewarm, gently flowing water
Get medical advice if skin irritation occurs or you feel unwell

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention
Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open
Remove contact lenses, if present and easy to do so
Continue rinsing for 15-20 minutes
Get medical advice if eye irritation persists

After swallowing:

Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing
Sweep or scoop up solid material while minimizing dust generation
Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.
Avoid breathing dust.
Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.
Keep container dry.
Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
WEEL	Diluent	57-55-6	WEEL TWA 10.0 mg/m³
	Amine Mix	112-24-3	WEEL TWA 1.0 ppm
United States (OSHA)	Talc Powder	14807-96-6	OSHA PEL Ceiling 20 mppcf
	Titanium Dioxide	13463-67-7	OSHA PEL TWA 15 mg/m³ (Total dust)
	Barium Sulphate	7727-43-7	OSHA PEL TWA 15 mg/m³ (Total dust)
	Barium Sulphate	7727-43-7	OSHA PEL TWA 5 mg/m³ (Respirable fraction)
ACGIH	Barium Sulphate	7727-43-7	ACGIH TLV TWA 5.0 mg/m³ (inhalable fraction, particulate containing no asbestos and <1% crystalline silica)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Talc Powder	14807-96-6	ACGIH TLV TWA 2 mg/m³; (Inhalable particulate matter containing no asbestos and < 1% crystalline silica)
	Titanium Dioxide	13463-67-7	ACGIH TLV TWA 10 mg/m³
	Glass Powder	65997-17-3	8-Hour Exposure Limit (TLV-TWA): 1 fibers/cm³
NIOSH	Barium Sulphate	7727-43-7	NIOSH TWA 5.0 mg/m³ (Respirable fraction)
	Talc Powder	14807-96-6	NIOSH REL TWA 2.0 mg/m³
	Barium Sulphate	7727-43-7	NIOSH TWA 10.0 mg/m³ (Total dust)
	Titanium Dioxide	13463-67-7	IDLH: 5,000 mg/m³
	Glass Powder	65997-17-3	NIOSH Recommended exposure limit (REL) [for up to a 10-hour workday during a 40-hour workweek] is: 3 fibers/cm3

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.
Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Epoxy Putty Stick - Under Water Cure - Part B

Appearance	Very thick light yellow paste (solid)
Odor	Not determined or not available.
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	107.78°C (226°F)
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	1.96 g/cm³
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.

Chemical stability:
Stable under normal conditions of use and storage.

Possibility of hazardous reactions:
None under normal conditions of use and storage.

Conditions to avoid:
None known.

Incompatible materials:
None known.

Hazardous decomposition products:
None known.

SECTION 11: Toxicological information

Acute toxicity
Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Skin corrosion/irritation

Assessment:

Causes skin irritation

Product data:

No data available.

Substance data:

Name	Result
Amine complex	Causes severe skin burns and eye damage.
Polyamine	Corrosive to the skin.
Amine Mix	Causes severe skin burns and eye damage.

Serious eye damage/irritation

Assessment:

Causes serious eye irritation

Product data:

No data available.

Substance data:

Name	Result
Polyamine	Corrosive effect on the eyes.

Respiratory or skin sensitization

Assessment:

May cause an allergic skin reaction

Product data:

No data available.

Substance data:

Name	Result
Curing Agent	May cause an allergic skin reaction.
Polyamine	Sensitization possible through skin contact.
Amine Mix	May cause an allergic skin reaction.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Species	Result
Glass Powder	Not applicable	May cause cancer via inhalation.
Titanium Dioxide	Not applicable.	Airborne, unbound particles of respirable size are known to cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Glass Powder	Group 2B
Talc Powder	Group 3 - Not classifiable as to its carcinogenicity to humans

Epoxy Putty Stick - Under Water Cure - Part B

Name	Classification
Titanium Dioxide	Group 2B

National Toxicology Program (NTP):

Name	Classification
Glass Powder	Reasonably anticipated to be human carcinogens

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Amine complex	Harmful if swallowed.

Information on likely routes of exposure:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

Other information:

No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment:

Harmful to aquatic life

Product data: No data available.

Epoxy Putty Stick - Under Water Cure - Part B

Substance data:

Name	Result
Amine Mix	LC50 - Daphnia magna (Water flea) - 33.9 mg/L - 48 h

Chronic (long-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Curing Agent	NOEC - Daphnia magna (Water flea) - 3.5 mg/L - 21 d

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

Epoxy Putty Stick - Under Water Cure - Part B

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

186898-76-0	Amine complex	Not Listed
57-55-6	Diluent	Listed
68479-04-9	Amine complex	Listed
72244-98-5	Curing Agent	Listed
26950-63-0	Polyamine	Listed
112-24-3	Amine Mix	Listed
65997-17-3	Glass Powder	Listed
14807-96-6	Talc Powder	Listed
13463-67-7	Titanium Dioxide	Listed
7727-43-7	Barium Sulphate	Listed

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

186898-76-0	Amine complex	Not Listed
57-55-6	Diluent	Not Listed
68479-04-9	Amine complex	Not Listed
72244-98-5	Curing Agent	Not Listed
26950-63-0	Polyamine	Not Listed
112-24-3	Amine Mix	Not Listed

65997-17-3	Glass Powder	Not Listed
14807-96-6	Talc Powder	Not Listed
13463-67-7	Titanium Dioxide	Not Listed
7727-43-7	Barium Sulphate	Listed

CERCLA: Not determined.

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

186898-76-0	Amine complex	Not Listed
57-55-6	Diluent	Not Listed
68479-04-9	Amine complex	Not Listed
72244-98-5	Curing Agent	Not Listed
26950-63-0	Polyamine	Not Listed
112-24-3	Amine Mix	Listed
65997-17-3	Glass Powder	Listed
14807-96-6	Talc Powder	Listed
13463-67-7	Titanium Dioxide	Listed
7727-43-7	Barium Sulphate	Listed

New Jersey Right to Know:

186898-76-0	Amine complex	Not Listed
57-55-6	Diluent	Listed
68479-04-9	Amine complex	Not Listed
72244-98-5	Curing Agent	Not Listed
26950-63-0	Polyamine	Not Listed
112-24-3	Amine Mix	Listed
65997-17-3	Glass Powder	Listed
14807-96-6	Talc Powder	Listed
13463-67-7	Titanium Dioxide	Listed
7727-43-7	Barium Sulphate	Listed

New York Right to Know:

186898-76-0	Amine complex	Not Listed

Epoxy Putty Stick - Under Water Cure - Part B

57-55-6	Diluent	Not Listed
68479-04-9	Amine complex	Not Listed
72244-98-5	Curing Agent	Not Listed
26950-63-0	Polyamine	Not Listed
112-24-3	Amine Mix	Listed
65997-17-3	Glass Powder	Not Listed
14807-96-6	Talc Powder	Not Listed
13463-67-7	Titanium Dioxide	Listed
7727-43-7	Barium Sulphate	Not Listed

Pennsylvania Right to Know:

186898-76-0	Amine complex	Not Listed
57-55-6	Diluent	Listed
68479-04-9	Amine complex	Not Listed
72244-98-5	Curing Agent	Not Listed
26950-63-0	Polyamine	Not Listed
112-24-3	Amine Mix	Listed
65997-17-3	Glass Powder	Listed
14807-96-6	Talc Powder	Listed
13463-67-7	Titanium Dioxide	Listed
7727-43-7	Barium Sulphate	Listed

California Proposition 65: None of the ingredients are listed.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 2-0-0

HMIS: 2-0-0

Initial preparation date: 07.24.2018

End of Safety Data Sheet

Safety Data Sheet
California CARB Compliant

1 - Identification

Product Name: WD-40 Multi-Use Product Aerosol **Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion** **Restrictions on Use: None identified** **SDS Date Of Preparation: March 5, 2019**	**Manufacturer: WD-40 Company** **Address: 9715 Businesspark Avenue San Diego, California, USA 92131** **Telephone:** **Emergency: 1-888-324-7596** **Information: 1-888-324-7596** **Chemical Spills: 1-800-424-9300 (Chemtrec)** **1-703-527-3887 (International Calls)**

2 – Hazards Identification

Hazcom 2012/GHS Classification:
Flammable Aerosol Category 1
Gas Under Pressure: Compressed Gas
Aspiration Toxicity Category 1
Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

Label Elements:

DANGER!
Extremely Flammable Aerosol.
Contains gas under pressure; may explode if heated.
May be fatal if swallowed and enters airways.
May cause drowsiness or dizziness.

Prevention
Keep away from heat, sparks, open flames, hot surfaces. – No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Avoid breathing vapors or mists.
Use only outdoors or in a well-ventilated area.

Response
IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

Storage
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place.

Disposal
Dispose of contents and container in accordance with local and national regulations.

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent	US Hazcom 2012/ GHS Classification
LVP Aliphatic Hydrocarbon	64742-47-8	45-50%	Aspiration Toxicity Category 1
Petroleum Base Oil	64742-56-9 64742-65-0 64742-53-6 64742-54-7 64742-71-8	<35%	Not Hazardous
Aliphatic Hydrocarbon	64742-47-8	<25%	Flammable Liquid Category 3 Aspiration Toxicity Category 1 Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)
Carbon Dioxide	124-38-9	2-3%	Simple Asphyxiant Gas Under Pressure, Compressed Gas

Note: The specific chemical identity and exact percentages are a trade secret.

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.
Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.
Signs and Symptoms of Exposure: Harmful or fatal if swallowed. Aspiration of liquid into the lungs during swallowing or vomiting may cause lung damage. May cause eye and respiratory irritation. Inhalation of mists or vapors may cause drowsiness, dizziness and other nervous system effects. Skin contact may cause drying of the skin.
Indication of Immediate Medical Attention/Special Treatment Needed: Immediate medical attention is needed for ingestion.

5 – Fire Fighting Measures

Suitable (and unsuitable) Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Specific Hazards Arising from the Chemical: Extremely flammable aerosol. Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Combustion will produce oxides of carbon and hydrocarbons.
Special Protective Equipment and Precautions for Fire-Fighters: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.

6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.
Methods and Materials for Containment/Cleanup: Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Precautions for Safe Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.

Conditions for Safe Storage: Store in a cool, well-ventilated area, away from incompatible materials. Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol. Store away from oxidizers.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA (Inhalable) ACGIH TLV (as Mineral oil) 5 mg/m3 TWA OSHA PEL (as Oil mist, mineral)
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA, 30,000 ppm STEL ACGIH TLV 5000 ppm TWA OSHA PEL

The Following Controls are Recommended for Normal Consumer Use of this Product

Appropriate Engineering Controls: Use in a well-ventilated area.

Personal Protection:

Eye Protection: Avoid eye contact. Always spray away from your face.

Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended

Appropriate Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:

Eye Protection: Safety goggles recommended where eye contact is possible.

Skin Protection: Wear chemical resistant gloves.

Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.

Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Appearance:	Light amber liquid	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8%
Odor:	Mild petroleum odor	Vapor Pressure:	95-115 PSI @ 70°F
Odor Threshold:	Not established	Vapor Density:	Greater than 1 (air=1)
pH:	Not Applicable	Relative Density:	0.8 – 0.82 @ 60°F
Melting/Freezing Point:	Not established	Solubilities:	Insoluble in water
Boiling Point/Range:	361 - 369°F (183 - 187°C)	Partition Coefficient; n-octanol/water:	Not established
Flash Point:	138°F (59°C) Tag Closed Cup (liquid)	Autoignition Temperature:	Not established

Evaporation Rate:	Not established	Decomposition Temperature:	Not established
Flammability (solid, gas):	Flammable Aerosol	Viscosity:	2.79-2.96 cSt @ 100°F
VOC:	24.1% MIR=0.43gO3/gVOC	Pour Point:	-63°C (-81.4°F) ASTM D-97

10 – Stability and Reactivity

Reactivity: Not reactive under normal conditions
Chemical Stability: Stable
Possibility of Hazardous Reactions: May react with strong oxidizers generating heat.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.
Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

Symptoms of Overexposure:
Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.
Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.
Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.
Chronic Effects: None expected.
Carcinogen Status: None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.
Reproductive Toxicity: None of the components is considered a reproductive hazard.
Numerical Measures of Toxicity:
Acute Toxicity Estimates: Oral > 5,000 mg/kg; Dermal >2,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

12 – Ecological Information

Ecotoxicity: No specific aquatic toxicity data is currently available; however components of this product are not expected to be harmful to aquatic organisms
Persistence and Degradability: Components are readily biodegradable.
Bioaccumulative Potential: Bioaccumulation is not expected based on an assessment of the ingredients.
Mobility in Soil: No data available
Other Adverse Effects: None known

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Do not puncture or incinerate containers, even empty. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description: UN1950, Aerosols, 2.1 Ltd. Qty
(Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark)
IMDG Shipping Description: UN1950, Aerosols, 2.1, LTD QTY
ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1

NOTE: WD-40 Company does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

15 – Regulatory Information

U.S. Federal Regulations:
CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
SARA TITLE III:
Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not require a California Proposition 65 warning.
VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.
Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List or exempt from notification

16 – Other Information

HMIS Hazard Rating:
Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Physical Hazard – 0 (minimal hazard)

Revision Date: March 5, 2019 Supersedes: July 19, 2018

Revision Summary: Section 9 update VOC data

Prepared by: Industrial Health & Safety Consultants, Inc. Shelton, CT, USA

Reviewed by: I. Kowalski Regulatory Affairs Dept.

1012200/No.0084704

SAFETY DATA SHEET

1. Product And Company Identification

SDS ID: SDS 757
PRODUCT NAME: Prestone® All Season 3-1 Windshield Washer Fluid
PRODUCT NUMBER: AS658, AS6581F, 77330, AS658-55/F, AS658-55/1, AS658-55/1F
FORMULA NUMBER: 2717-63A, 2717-63B

PRODUCT NOT FOR SALE IN CALIFORNIA

MANUFACTURER:
Prestone Products Corporation
69 Eagle Rd.
Danbury, CT 06810

CANADIAN OFFICE:
Prestone Canada
33 MacIntosh Blvd.
Concord, ON L4K 4L5

MEXICO OFFICE:
ASG Operations Mexico S. de R.L. de C.V.
Carretera Mexico Cuautitlan, Kilometro 31.5, Nave Industrial 5,
Loma Bonita, Cuautitlan, Mexico, 54800

MEDICAL EMERGENCIES AND ALL OTHER INFORMATION PHONE NUMBER:
(888)269-0750 (in the US and Canada)
01-800-715-4135 (in Mexico)
TRANSPORTATION EMERGENCY PHONE NUMBER (Chemical Spills and Transport Accidents only):
CHEMTREC 1-800-424-9300 (in the US and Canada) +1 703 741-5970 (outside the US and Canada)

PRODUCT USE: Automobile windshield cleaner/deicer - consumer product
RESTRICTIONS ON USE: None identified

2. Hazards Identification

GHS/HAZCOM 2012 Classification:

Health	Physical
Acute Toxicity Category 3 (Inhalation, Oral, Dermal) Specific Target Organ Toxicity – Single Exposure Category 1 Specific Target Organ Toxicity – Repeated Exposure Category 2	Flammable Liquid Category 3

Label Elements

DANGER!
H226 Flammable liquid and vapor.
H301+H 311+H331 Toxic if swallowed, in contact with skin and if inhaled.
H370 Causes damage to eyes and central nervous system.
H373 May cause damage to kidneys through prolonged or repeated exposure.

Prevention:
P210 Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground, or bond container and receiving equipment

P241 Use explosion-proof electrical, ventilating, and lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe vapors, or spray.
P264 Wash exposed skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, protective clothing, and eye protection.
Response:
P301+ P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P330 Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water, or shower.
P312 Call a POISON CENTER or doctor if you feel unwell.
P363 Wash contaminated clothing before reuse
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311 Call a POISON CENTER, or doctor.
P314 Get medical attention f you feel unwell.
P370 + P378 In case of fire: Use water fog, carbon dioxide, alcohol foam or dry chemical to extinguish.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
Disposal:
P501 Dispose of contents and container in accordance with local and national regulations.

3. Composition/Information on Ingredients

Component	CAS No.	Amount
Non-hazardous Ingredients	Mixture	60-80%
Methyl Alcohol (Methanol)	67-56-1	15-<35%
Ethylene Glycol	107-21-1	0-<1%

The exact concentrations are a trade secret.

4. First Aid Measures

INHALATION: Remove the victim to fresh air. If breathing has stopped administer artificial respiration. If breathing is difficult, have medical personnel administer oxygen. Get immediate medical attention.

SKIN CONTACT: Remove contaminated clothing. Immediately wash contacted area thoroughly with soap and water. Get medical attention.

EYE CONTACT: Immediately flush eyes with large amounts of water. Get medical attention if irritation persists.

INGESTION: Seek immediate medical attention. Immediately call local poison control center or go to an emergency department. Never give anything by mouth to or induce vomiting in an unconscious or drowsy person.

MOST IMPORTANT SYMPTOMS: Inhalation may cause headache, dizziness, drowsiness, nausea, visual impairment, narcosis and unconsciousness. Toxic if swallowed, inhaled or absorbed through the skin. May cause gastrointestinal pain, nausea and vomiting. Ingestion, inhalation or absorption of methanol through the skin may cause central nervous system effects and damage to the optic nerve. Poisonous if swallowed. Prolonged ingestion of ethylene glycol may cause kidney damage based on animal data.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED: Seek immediate medical attention for ingestion; inhalation or skin contact.

NOTES TO PHYSICIAN:
The combination of visual disturbances, metabolic acidosis and an osmol gap is evidence of methanol poisoning. Ethanol is antidotal and its early administration may block the formation of toxic metabolites of methanol. The objective is to rapidly achieve and maintain a blood ethanol level of approximately 100 mg/dl by giving a loading dose of ethanol followed by a maintenance dose. Intravenous administration of ethanol is the preferred route. Ethanol blood levels should be checked frequently. Hemodialysis may be required. Treat acidosis with intravenous sodium bicarbonate. 4-Methyl pyrazole (Fomepizole®), a potent inhibitor of alcohol dehydrogenase, has been used therapeutically to decrease the metabolic consequences of methanol poisoning. Fomepizole® is easier to use clinically than ethanol, does not cause CNS depression or hypoglycemia and requires less monitoring than ethanol. Folic acid may also be administered to enhance the metabolism of formic acid, the toxic metabolite of methanol.

4-Methyl pyrazole (Fomepizole(R)), a potent inhibitor of alcohol dehydrogenase, has been used therapeutically to decrease the metabolic consequences of methanol and ethylene glycol poisoning. Fomepizole is easier to use clinically than ethanol, does not cause CNS depression or hypoglycemia and requires less monitoring than ethanol. Folic acid may also be administered to enhance the metabolism of formic acid, the toxic metabolite of methanol. Additional therapeutic modalities which may decrease the adverse consequences of ethylene glycol metabolism are the administration of both thiamine and pyridoxine.

Pulmonary edema with hypoxia has been described in a number of patients following poisoning with ethylene glycol. Respiratory support with mechanical ventilation may be required.

There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects have been reported involving the seventh, eighth and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing and dysphagia.

As there are complicated and serious overdoses, we recommend you consult with the toxicologists at your poison control center.

5. Firefighting Measures

SUITABLE EXTINGUISHING MEDIA: Use water fog, carbon dioxide, alcohol foam or dry chemical. Cool fire exposed containers with water.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Flammable liquid. Methanol-water mixtures will burn unless very dilute. Flame is invisible in daylight. Vapors are heavier than air and may flow along surfaces to distant ignition sources and flashback. Burning may produce carbon monoxide and carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Eliminate all ignition sources. Ventilate area. Wear appropriate protective clothing and equipment (See Section 8).

METHODS AND MATERIALS FOR CONTAINMENT/CLEANUP: Collect with absorbent material and place in a container suitable for flammable waste.

7. Handling and Storage

PRECAUTIONS FOR SAFE HANDLING:

May be fatal or cause blindness if swallowed! Do not swallow. Avoid eye and skin contact. Avoid breathing vapors or mists. Use only with adequate ventilation. Wash exposed skin thoroughly with soap and water after use. Flammable liquid! Keep away from heat, sparks, open flames and all other sources of ignition. Do not smoke during use.

Empty containers retain product residue and may be dangerous. Do not cut, weld, drill, etc. containers, even empty. Do not reuse empty containers unless properly cleaned.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Keep away from heat, sparks, open flames and all other sources of ignition. Store in a cool, well-ventilated area.

NFPA CLASSIFICATION: IC

8. Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

CHEMICAL	EXPOSURE LIMIT
Non-hazardous Ingredients	None Established PEL/TLV
Methyl Alcohol (Methanol)	200 ppm TWA OSHA PEL 200 ppm TWA ACGIH TLV skin 250 ppm STEL ACGIH TLV
Ethylene Glycol	25 ppm TWA, 50 ppm STEL ACGIH TLV (as vapor) 10 mg/m3 TWA ACGIH TLV (as inhalable fraction of the aerosol)

APPROPRIATE ENGINEERING CONTROLS: Use general ventilation or local exhaust as required to maintain exposures below the occupational exposure limits.

RESPIRATORY PROTECTION: For operations where the exposure limit is exceeded a NIOSH approved supplied air respirator or positive pressure self-contained breathing apparatus is recommended. Organic vapor cartridge respirators are not recommended for methanol vapor exposures. Equipment selection depends on contaminant type and concentration. Select and use in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Chemical resistant gloves such as butyl rubber or Viton where contact is possible.

EYE PROTECTION: Splash proof goggles are recommended to prevent eye contact.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Appropriate protective clothing as needed to minimize skin contact.

9. Physical and Chemical Properties

APPEARANCE:	Clear orange liquid	ODOR:	Citrus
ODOR THRESHOLD:	160 - 690 ppm (Methanol)	pH:	10.7-10.8
MELTING/FREEZING POINT:	< 28°F (< -33.3°C)	BOILING POINT/RANGE:	180-182°F (82.2-83.3°C)
FLASH POINT:	90°F (32.2°C) Setaflash	EVAPORATION RATE: (Butyl Acetate = 1)	Not determined
FLAMMABILITY (SOLID, GAS)	Not applicable	FLAMMABILITY LIMITS:	LEL: 6.0% (Methanol) UEL: 36% (Methanol)
VAPOR PRESSURE:	Not determined	VAPOR DENSITY (air = 1):	Not determined
RELATIVE DENSITY:	0.9425	SOLUBILITIES	Water: 100%
PARTITION COEFFICIENT (n-octanol/water)	Not determined	AUTOIGNITION TEMPERATURE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined	VISCOSITY:	Not determined; ~ 1

10. Stability and Reactivity

REACTIVITY: Normally unreactive

CHEMICAL STABILITY: Stable

POSSIBILITY OF HAZARDOUS REACTIONS: Reaction with strong oxidizers will generate heat.

CONDITIONS TO AVOID: Heat, sparks, flames and all other sources of ignition.

INCOMPATIBLE MATERIALS: Strong bases, strong acids, strong oxidizing agents and materials reactive with hydroxyl compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion will produce carbon monoxide, carbon dioxide.

11. Toxicological Information

POTENTIAL HEALTH EFFECTS:

ACUTE HAZARDS:

INHALATION: May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations may produce nausea, vomiting, headache, dizziness, drowsiness, tingling, numbness and shooting pains in the hands and forearms, and visual disturbances.

SKIN CONTACT: Prolonged contact with the skin may cause redness and defatting of the skin and absorption of harmful amounts of methanol.

EYE CONTACT: Liquid, vapors or mist may cause discomfort in the eye with persistent conjunctivitis, seen as slight excess redness or conjunctiva. Serious corneal injury is not anticipated.

INGESTION: Contains methanol and ethylene glycol. May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, headache, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects, including irregular eye movements, convulsions and coma. Visual effects from methanol include blurred vision, double vision, changes in color perception, restriction of visual fields and complete blindness. Cardiac failure and pulmonary edema may develop. Severe kidney damage which may be fatal follows the swallowing of large volumes of ethylene glycol. Signs of renal insufficiency may be delayed 36 to 48 hours post ingestion. A few reports have been published describing the development of weakness of the facial muscles, diminishing hearing, and difficulty with swallowing, during the late stages of severe poisoning. Cardiogenic pulmonary edema can also occur from ethylene glycol poisoning.

With massive overdoses of methanol, liver, kidney and heart muscle injury have been described. There may be a delay of 6-12 hours between swallowing methanol and the onset of signs and symptoms. Ingestion of moderate quantities of methanol also produces metabolic acidosis. 60-200 ml of methanol is a fatal dose for most adults Ingestion of as little as 10 ml may cause blindness.

CHRONIC EFFECTS: Prolonged or repeated inhalation exposure may produce signs of central nervous system involvement, including nausea, vomiting, headache, ringing in the ears, dizziness, vertigo, cloudy and double vision. Prolonged overexposure at levels of 800-1000 ppm may result and in severe eye damage. Prolonged or repeated skin contact may cause skin sensitization and an associated dermatitis in some individuals. Ethylene glycol has been found to cause birth defects in laboratory animals. The significance of this finding to humans has not been determined.

CARCINOGEN: None of the components of these products is listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH or OSHA.

ACUTE TOXICITY VALUES:

Calculated ATE for product:	ATE Oral: 287.8 mg/kg ATE Dermal: 863.5 mg/kg ATE Inhalation: 8.63 mg/L
Methanol:	LD50 Oral rat 5,628 mg/kg LC50 Inhalation rat 64,000 ppm/4 hr. LD50 Dermal rabbit 15,800 mg/kg
Ethylene Glycol:	LD50 Oral Rat: 4,700 mg/kg LD50 Skin Rabbit: 9,530 mg/kg

12. Ecological Information

ECOTOXICITY:

Methanol:	LC50 Fathead minnows 29,400 mg/L/96 hr. EC50 Daphnia magna >10,000 mg/L/24 hr.
Ethylene Glycol:	LC50 Fathead Minnow <10,000 mg/L/96 hr. EC50 Daphnia Magna 100,000 mg/L/48 hr. Bacterial (Pseudomonas putida): 10,000 mg/l Protozoa (Entosiphon sulcatum and Uronema parduczi; Chatton-Lwoff) : >10,000 mg/l Algae (Microcystis aeruginosa): 2,000 mg/l Green algae (Scenedesmus quandricauda) : >10,000 mg/l

PERSISTENCE AND DEGRADABILITY: Methanol: Readily biodegradable. Ethylene Glycol is readily biodegradable (97-100% in 2-12 days).

BIOACCUMULATIVE POTENTIAL: Methanol: Estimated BCF of 3 - Potential for bioconcentration in aquatic organisms is low. Ethylene glycol: A BCF of 10, reported for ethylene glycol in fish, Golden ide (Leuciscus idus melanotus), after 3 days of exposure suggests the potential for bioconcentration in aquatic organisms is low.

MOBILITY IN SOIL: Methanol: Very high mobility in soil. Ethylene glycol is highly mobile in soil.

OTHER ADVERSE EFFECTS: None

13. Disposal Considerations

Recycle, incinerate, treat or landfill in accordance with all local, state/provincial and federal regulations.

14. Transport Information

U. S. DOT HAZARD CLASSIFICATION (For Ground Shipments Only)
Containers Not Over 5 Liters (1.3 gal.):
PROPER SHIPPING NAME: UN1992, Flammable Liquid, toxic, n.o.s (contains Methanol), 3(6.1), PG III, Limited Quantity
TECHNICAL NAME: Methanol
UN NUMBER: UN1992
HAZARD CLASS/PACKING GROUP: 3 (6.1), III
LABELS REQUIRED: None, Limited Quantity Mark

Containers over 5 Liters: UN1992, Flammable Liquid, toxic, n.o.s (contains Methanol), 3(6.1), PG III

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION
Shipments with inner packagings 5 L or smaller and gross mass for the package not exceeding 30 kg can be shipped as a

Limited Quantity (see above). This product is exempted from marking the UN number (see IMDG Code 3.4.7)

DESCRIPTION: UN1992, Flammable Liquid, toxic, n.o.s. (contains Methanol), 3 (6.1), PG III, FP 32.2 C, Limited Quantities
ID NUMBER: UN1992
HAZARD CLASS: 3 (6.1)
PACKING GROUP: III
LABELS REQUIRED: None, Limited Quantity Mark Required
PLACARDS REQUIRED: LIMITED QUANTITIES Mark on Cargo Transport Containers

CANADIAN TDG CLASSIFICATION (For Ground Shipments Only)
Containers Not Over 5 Liters:
PROPER SHIPPING NAME: Consumer Commodity (Limited Quantity)
TECHNICAL NAME: None
UN NUMBER: None
HAZARD CLASS: None
PACKING GROUP: None

Containers Over 5 Liters: UN1992, Flammable Liquid, toxic, n.o.s., (Methanol), 3 (6.1), PG III

IATA/ICAO SHIPPING CLASSIFICATION: These products are not suitable for shipment by air.

15. Regulatory Information

EPA SARA 311/312 HAZARD CLASSIFICATION: Refer to Section 2 for OSHA Hazard Classification

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title lll, Section 313 (40 CFR 372):

Methanol	67-56-1	15-<35%
Ethylene Glycol	107-21-1	0-<1%

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Methanol (35% maximum) of 5,000 lbs, is 14,285 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CALIFORNIA PROPOSITION 65: Product not for sale in California.

CALIFORNIA AIR RESOURCE BOARD (CARB) CONSUMER PRODUCT REGULATION: Product not for sale in California.

KOREA: All of the ingredients of this product are listed on the Korean Existing Chemical List (KECL).

16. Other Information

NFPA Rating: Fire: 3 Health: 3 Instability: 0

REVISION SUMMARY: Section 1 Correct Product Numbers, Sections 2 and 15 percent ethylene glycol.

SDS Date of Preparation/Revision: January 24, 2019

This SDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.