Rust and Iron Stain Remover
Safety Data Sheet

Section 1. Identification

Product Name: Rust and Iron Stain Remover

Supplier Name: Whink Products Company
Address: PO Box 230
1901 15th Ave.
Eldora, IA 50627
Telephone number: 641-939-2353

Emergency phone number: Medical Emergency: 800-321-9065
Chemtrec 800-424-9300

Recommended use: Cleaning Agent
Restrictions on use: Use only as directed

Date of Preparation: April 15, 2015

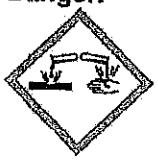
Section 2. Hazard(s) identification

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.

Classification:

Physical	Health
Not Hazardous	Eye Damage Category 1

Danger!



Hazard statement(s)
Causes serious eye damage.

Prevention
Wash thoroughly after handling.
Wear eye protection.
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.

Section 3. Composition / Information on Ingredients

Chemical name	CAS No.	Percent
Sodium Hydrosulfite	7775-14-6	25-45%
Sodium Chloride	7647-14-5	15-30%
Sodium Metabisulfite	7681-57-4	10-30%
Sodium Carbonate	497-19-8	1-10%
Citric Acid	77-92-9	1-5

Sodium Sulfite	7757-83-7	1-5%

The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4. First-Aid Measures

Inhalation: Remove victim to fresh air. If breathing is difficult or irritation occurs, get medical attention.
Skin contact: Remove contaminated clothing. Wash skin with soap and water. Get medical attention if irritation develops or persists. Launder clothing before reuse.
Eye contact: Immediately flush eye with water for at least 20 minutes while lifting the upper and lower lids. Remove contact lenses if present and easy to do after the first 5 minutes then continue flushing. Get immediate medical attention.
Ingestion: If conscious, rinse mouth with water. Do not induce vomiting. Never give anything by mouth to a person who is unconscious or convulsing. Get medical attention.

Most important symptoms/effects, acute and delayed: May cause severe eye irritation or burns. Permanent damage may occur. Prolonged skin contact may cause irritation. Inhalation of dust may cause irritation to mucous membranes and upper respiratory tract, with coughing or labored breathing. Ingestion may cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause allergic reaction in person sensitized to sulfites.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical treatment is recommended if eye contact occurs.

Section 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media: Use carbon dioxide or dry chemical to extinguish. Do not use water. Contact with water may produce sulfur dioxide.

Specific hazards arising from the chemical: This product is not combustible but may decompose producing carbon and sulfur oxides.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus. Cool fire exposure containers with water. Contain firefighting water for later disposal.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing and equipment to prevent eye and skin contact. Evacuate spill area.

Environmental precautions: Avoid release to the environment. Report spill as required by local and federal regulations.

Methods and materials for containment and cleaning up: Cover spill with a plastic sheet or tarp to minimize dust from spreading and to keep material dry. Scoop up and place into an appropriate container for disposal. Avoid generating dust. Wash spill area with water.

Section 7. Handling and Storage

Precautions for safe handling: Prevent eye contact. Avoid contact with skin and clothing. Do not breathe dust. Use with adequate ventilation. Remove contaminated clothing and launder before reuse. Wash thoroughly after handling. Empty containers retain product residues. Follow all SDS precautions in handling empty containers.

Conditions for safe storage, including any incompatibilities: Protect containers from physical damage. Store in a cool, dry area. Store in original containers.

Section 8. Exposure Controls / Personal Protection

Exposure guidelines:

Sodium Hydrosulfite	None Established
Sodium Chloride	None Established
Sodium Metabisulfite	5 mg/m^3 TWA ACGIH TLV
Sodium Carbonate	None Established
Citric Acid	None Established
Sodium Sulfite	None Established

Appropriate engineering controls: Use in a well-ventilated area. For operations where exposures limits are exceeded increased mechanical ventilation such as local exhaust may be required.

Personal Protective Equipment:
Respiratory protection: None required for normal use. For large jobs where exposure limits may be exceeded, an approved respirator with dust/mist cartridges may be required. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.
Skin protection: Rubber or other impervious gloves are recommended for prolonged exposure.
Eye protection: Wear chemical safety goggles to prevent eye contact.
Other: Impervious clothing as needed prevent contact. An eye wash facility should be available in the immediate work area.

Section 9. Physical and Chemical Properties

Appearance (physical state, color, etc.): White powder
Odor: Sulfur odor.

Odor threshold: Not available	**pH:** Not available
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 applicable	
Flammable limits: LEL: Not applicable	**UEL:** Not applicable
Vapor pressure: Not applicable	**Vapor density:** Not applicable
Relative density: Not available	**Solubility(ies):** Appreciable (42 g/100 cc water)
Partition coefficient: n-octanol/water: Not applicable	**Auto-ignition temperature:** Not applicable
Decomposition temperature: Not available	**VOC:** 0%.

Section 10. Stability and Reactivity

Reactivity: Reacts with water and under fire conditions.
Chemical stability: Stable.
Possibility of hazardous reactions: Reacts with water and under fire conditions producing sulfur oxides.
Conditions to avoid: Avoid excessive heat.
Incompatible materials: Avoid water, acids, alkalies and oxidizing agents.
Hazardous decomposition products: Thermal decomposition may produce oxides of carbon and sulfur and sulfur dioxide.

Section 11. Toxicological Information

Inhalation: Dust may cause respiratory tract irritation with coughing and difficulty in breathing. May cause allergic reaction in sensitized person with symptoms similar to those listed under ingestion.
Skin Contact: Prolonged skin contact may cause irritation.
Eye Contact: May cause severe irritation or burns with redness, pain and swelling. Permanent damage may occur.
Ingestion: Swallowing may cause gastrointestinal irritation, nausea, vomiting and abdominal pain. Sodium sulfite may cause an allergic reaction may occur in sensitive individuals resulting in wheezing, difficulty breathing, broncho constriction, shock, flushing, tingling sensation and gastrointestinal disturbances.
Chronic Effects: None known.
Sensitization: Sodium sulfite has been known to cause allergic reactions in sensitized individuals.
Germ Cell Mutagenicity: None of the components have been shown to cause germ cell mutagenicity.
Reproductive Toxicity: None of the components have been shown to cause reproductive or developmental toxicity.
Carcinogenicity: None of the components of this product are listed as carcinogens or suspected carcinogens by IARC, NTP, ACGIH or OSHA.
Acute toxicity values: Acute Toxicity Estimates (ATE) calculated: Oral 3125 mg/kg, Dermal >2000 mg/kg, Inhalation >5.5 mg/L/4 hr
Sodium Hydrosulfite: Oral rat LD50 2500 mg/kg, Inhalation rat LC50 >5.5 mg/L/4 hr, Dermal rat LD50 >2000 mg/kg
Sodium Chloride: Oral rat LD50 3550 mg/L, Inhalation rat LC50 >42 mg/L/1 hr, Dermal rabbit LD50 >10000 mg/kg
Sodium Metabisulfite: Oral rat LD50 1420 mg/kg, Inhalation rat LC50 >5.5 mg/L/4 hr, Dermal rat LD50 >2000 mg/kg
Sodium Carbonate: Oral rat LD50 2800 mg/kg, Inhalation rat LC50 2300 mg/m3/2 hr, Dermal rabbit LD50 >2000 mg/kg
Citric Acid: Oral mouse LD50 5400 mg/kg, Dermal rat LD50 >2000 mg/kg
Sodium Sulfite: Oral rat LD50 2610 mg/kg, Inhalation rat LC50 >5.5 mg/L / 4 hr, Dermal rat LD50 >2000 mg/kg

Section 12. Ecological Information

Ecotoxicity values:
Sodium Hydrosulfite: 96 hr LC50 Leuciscus idus 62.3 mg/L, 48 hr EC50 daphnia magna 98.31 mg/L, 72 hr EC50 Desmodesmus subspicatus 206.2 mg/L
Sodium Chloride: 96 hr LC50 Lepomis macrochirus 5840 mg/L, 48 hr LC50 daphnia magna 874 mg/L, 120 hr EC50 Nitzschia sp. 2430 mg/L
Sodium Metabisulfite: 96 hr LC50 Oncorhynchus mykiss 147 mg/L, 48 hr EC50 daphnia magna 89 mg/L, 72 hr EC50 Desmodesmus subspicatus 43.8 mg/L
Sodium Carbonate: 96 hr LC50 Lepomis macrochirus 300 mg/L, 48 hr EC50 200 mg/L
Sodium Sulfite: 96 hr LC50 Leuciscus idus 315.85 mg/L, 48 hr EC50 daphnia magna 89 mg/L, 96 hr EC50 Scenedesmus brasiliensis 63,126 mg/L
Citric Acid: 96 hr LC50 Pimephales promelas >100 mg/L, 24 hr LC50 1535 mg/L,

Persistence and degradability: Biodegradation is not applicable to inorganic substances.
Bioaccumulative potential: This product is not expected to bioaccumulate.
Mobility in soil: None know.
Other adverse effects: None known.

Section 13. Disposal Considerations

Waste Disposal Recommendations: Dispose of in accordance with all local, regional, national, provincial, territorial and international regulations

Section 14. Transport Information

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT		Not Regulated			
IMDG		Not Regulated			

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

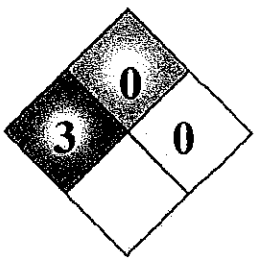
Special precautions: None known

Section 15. Regulatory Information

Safety, health, and environmental regulations specific for the product in question.
CERCLA Hazardous Substances (Section 103)/RQ: This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
Section 302 Extremely Hazardous Substances (TPQ): None
SARA Hazard Category (311/312): Acute health
EPA SARA 313: This product contains the following chemicals regulated under SARA Title III, section 313: None
California Proposition 65: This product the following chemicals known to the State of California to cause cancer or reproductive toxicity: None
EPA TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

Section 16. Other Information

NFPA RATING: Health = 3 Fire = 0 Instability = 0
HMIS RATING: Health = 3 Fire = 0 Physical Hazard = 0



SDS Revision History: Convert to US GHS – changes in all sections.
Date of preparation: April 15, 2015
Date of Previous Edition: April 3, 2012

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.

Rust Stain Remover
Safety Data Sheet

Section 1. Identification

Product Name: Rust Stain Remover

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Address: PO Box 230
1901 15th Ave.
Eldora, IA 50627
Telephone number: 641-939-2353

Emergency phone number: Medical Emergency: 800-321-9065; Chemtrec: 800-424-9300

Recommended use: Rust Remover
Restrictions on use: Use only as directed

Date of Preparation: July 20, 2014

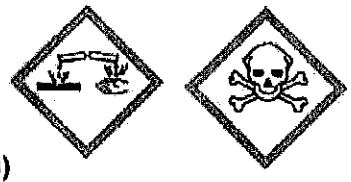
Section 2. Hazard(s) Identification

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.

Classification:

Physical	Health
Not Hazardous	Acute Toxicity (oral) Category 4 Acute Toxicity (dermal) Category 3 Eye Damage Category 1 Skin Corrosion Category 1B

Danger!



Hazard statement(s)
Causes severe skin burns and eye damage.
Toxic in contact with skin.
Harmful if swallowed.
May be harmful if inhaled.

Storage
Store locked up.
Disposal
Dispose of contents and container in accordance with local and national regulations.

Prevention
Do not breathe vapors or mists.Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves, protective clothing, eye protection and face protection.
Response
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.. Immediately call a POISON CENTER or doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. 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 IN EYES: Rinse cautiously with water for several minutes.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus. Cool fire exposure containers with water.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing and equipment to prevent eye and skin contact. Ventilate the area. Evacuate spill area. Only trained individuals should attempt to clean up spills.

Environmental precautions: Avoid release to the environment. Report spill as required by local and federal regulations.

Methods and materials for containment and cleaning up: Dike spill and prevent spill from entering sewers and waterways. If possible, carefully neutralize with soda ash or lime. Collect into appropriate containers for disposal with an inert absorbent. Wash spill area with solution of soda ash. Do not use metal or glass containers.

Section 7. Handling and Storage

Precautions for safe handling: Prevent eye and skin contact. Do not breathe vapors or mists. Use only with adequate ventilation and appropriate protective clothing. Immediately remove contaminated clothing and other items. Wash thoroughly after handling. Empty containers retain product residues. Follow all SDS precautions in handling empty containers.

Conditions for safe storage, including any incompatibilities: Protect containers from physical damage. Store in a cool, well-ventilated area. Keep in original containers.

Section 8. Exposure Controls / Personal Protection

Exposure guidelines:

Hydrofluoric Acid (as hydrogen fluoride)	3 ppm TWA OSHA PEL 0.5 ppm TWA, 2 ppm Ceiling skin ACGIH TLV

Appropriate engineering controls: Use in a well-ventilated area. For operations where exposures limits are exceeded increased mechanical ventilation such as local exhaust may be required.

Personal Protective Equipment:
Respiratory protection: None required for normal use. For large jobs where the recommended exposure limit may be exceeded an approved respirator may be required. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.
Skin protection: PVC, neoprene or other impervious gloves are recommended to prevent skin contact.
Eye protection: Wear chemical safety goggles and faceshield to prevent eye and face contact.
Other: Impervious apron, boots and other clothing are recommended if needed to prevent contact or if splashing is possible. A safety shower and an eye wash facility should be available in the immediate work area.

Section 9. Physical and Chemical Properties

Appearance (physical state, color, etc.): Colorless liquid
Odor: Sharp acrid odor.

Section 12. Ecological Information

This product may be harmful to aquatic organisms due to change in pH of water where released.

Ecotoxicity values:
Hydrofluoric acid: LC50 fish 41-340 mg/L/96 hr, NOEC fish 4 mg/L/21 d.; EC50 daphnia magna 97-270 mg/l/48 hr, NOEC 3.7 mg/L/21 d.; EbC50 algae 43-122 mg/L/96 hr.
Persistence and degradability: Biodegradation is not applicable to inorganic substances such as hydrofluoric acid.
Bioaccumulative potential: Hydrofluoric acid is not Bioaccumulative based on BCF of <55 in various organisms.
Mobility in soil: If the pH is > 6.5 soil can bind fluorides tightly. High calcium content will immobilize fluorides, which can be damaging to plants when present in acid soils.
Other adverse effects: None known.

Section 13. Disposal Considerations

Waste Disposal Recommendations: EPA Hazardous Waste Code: U134; Hydrofluoric acid (C,T), Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations Container remains hazardous when empty if not thoroughly rinsed. Continue to observe all precautions.

Section 14. Transport Information

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	UN1790	Hydrofluoric acid solution	8 (6.1)	II	None
IMDG	UN1790	Hydrofluoric acid solution	8 (6.1)	II	None

This product may be shipped as a Limited Quantity in inner packages of 1 L and package limit of 30 kg when shipped by ground.

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

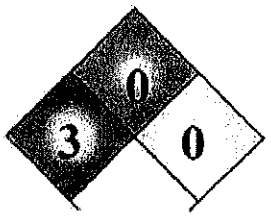
Special precautions: None known

Section 15. Regulatory Information

Safety, health, and environmental regulations specific for the product in question.
CERCLA Hazardous Substances (Section 103)/RQ: The RQ of this product based on the RQ of hydrogen fluoride is 4000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
Section 302 Extremely Hazardous Substances (TPQ): Hydrofluoric Acid (100 lbs)
SARA Hazard Category (311/312): Acute health
EPA SARA 313: This product contains the following chemicals regulated under SARA Title III, section 313:
Hydrofluoric Acid 7664-39-3 1-2.3%
California Proposition 65: This product the following chemicals known to the State of California to cause cancer or reproductive toxicity: None
EPA TSCA Inventory: All of the components of this product are listed on the TSCA Inventory.

Section 16. Other Information

NFPA RATING: Health = 3 Fire = 0 Instability = 0
HMIS RATING: Health = 3 Fire = 0 Physical Hazard = 0



Safetec of America, Inc.
887 Kensington Avenue
Buffalo, NY, USA, 14215
Telephone: (716) 895-1822

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label
: **SaniZide®Plus Germicidal Solution**

Product Code(s) : 9900010
Premoistened towelette
Canister: 160 Count
Container: 4oz, 8oz, 16oz, 32oz and 1 gallon

Recommended use of the chemical and restrictions on use
: Personal Care Applications
Restriction on use: None known

Chemical family : Mixture.

Name, address, and telephone number of the supplier:

Safetec of America, Inc.
887 Kensington Avenue
Buffalo, NY, USA
14215
Supplier's Telephone # : 716-895-1822
24 Hr. Emergency Tel # : 1-800-255-3924

Name, address, and telephone number of the manufacturer:
Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Towelette / pad saturated with clear, colourless liquid, or Clear liquid. Odorless.

This product is sold as a personal care item that is safe for consumers and other users under normal and reasonably foreseeable use. As such, it is not regulated under Hazcom 2012/WHMIS 2015 labeling and SDS requirements do not apply.

The classification below is provided forf informational purposes only.
Classification:
Skin Irritation - Category 2
Serious eye damage/eye irritation - Category 2A

Label elements

Hazard pictogram(s)

Signal Word

Warning!

Hazard statement(s)

Causes skin irritation.
Causes serious eye irritation.

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Precautionary statement(s)

Wash thoroughly after handling.
Wear protective gloves and eye/face protection.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/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/attention.

Other hazards

Other hazards which do not result in classification: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
Ethoxylated nonylphenol	Nonylphenol Ethoxylated	9016-45-9	**0.53**
Alkyl dimethyl benzyl ammonium chloride	Quaternary ammonium compound Benzalkonium chloride	68391-01-5	**0.11**
alkyl dimethyl ethylbenzyl ammonium chlorides	N/Av	68956-79-6	**0.11**

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion : None required when used as intended. If swallowed, DO NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

Inhalation : None required when used as intended. If symptoms develop, move victim to fresh air. Get medical attention if symptoms persist.

Skin contact : None required when used as intended. If irritation or symptoms develop, seek medical attention.

Eye contact : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

: None expected, when used as intended.

Causes skin irritation. Symptoms may include redness, edema, drying defatting and cracking of the skin.
Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Indication of any immediate medical attention and special treatment needed

: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Water. Water spray. Dry chemicals. Foam. Carbon dioxide (CO2).

Unsuitable extinguishing media

: Do not use water jet as extinguisher, as this will spread the fire.

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Special hazards arising from the substance or mixture / Conditions of flammability

: Burning may produce irritating, toxic and obnoxious fumes.

Flammability classification (OSHA 29 CFR 1910.106)

: Not flammable.

Hazardous combustion products

: Carbon oxides. Hydrogen chloride

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: None known.

Special fire-fighting procedures

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

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

Methods and material for containment and cleaning up

: Wipe up with absorbent material (e.g. cloth, fleece).

Special spill response procedures

: If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Handle in accordance with good industrial hygiene and safety practice. Do not ingest. Avoid contact with eyes.

Conditions for safe storage : Keep container tightly closed. Keep cool. Store away from incompatible materials.

Incompatible materials : Strong oxidizing agents. Acids.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Ethoxylated nonylphenol	N/Av	N/Av	N/Av	N/Av
Alkyl dimethyl benzyl ammonium chloride	N/Av	N/Av	N/Av	N/Av
alkyl dimethyl ethylbenzyl ammonium chlorides	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

: Ensure adequate ventilation, especially in confined areas.

Respiratory protection : None required when used as intended.

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Skin protection : None required when used as intended.
Eye / face protection : None required when used as intended.
Other protective equipment : None required when used as intended.
General hygiene considerations
: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Towelette / pad saturated with clear, colourless liquid. orClear liquid.
Odour : Odorless.
Odour threshold : Not available.
pH : 11 - 12
Melting/Freezing point : (-1.1 °C) 30.02 °F
Initial boiling point and boiling range
: (93.33 °C) 200 °F
Flash point : (93.3 °C) 200.0 °F
Flashpoint (Method) : Seta closed cup
Evaporation rate (BuAe = 1) : Not available.
Flammability (solid, gas) : Not applicable.
Lower flammable limit (% by vol.)
: Not available.
Upper flammable limit (% by vol.)
: Not available.
Oxidizing properties : Not available.
Explosive properties : Not available.
Vapour pressure : Not available.
Vapour density : > 1
Relative density / Specific gravity
: 1.01
Solubility in water : Complete
Other solubility(ies) : Not available.
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution
: Not available.
Auto-ignition temperature : Not available.
Decomposition temperature : Not available.
Viscosity : Not available.
Volatiles (% by weight) : Not available.
Volatile organic Compounds (VOC's)
: 0%
Absolute pressure of container
: Not available.
Flame projection length : Not available.
Other physical/chemical comments
: None known or reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability : Stable under normal conditions.

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Possibility of hazardous reactions
: Hazardous polymerization does not occur.

Conditions to avoid : High temperatures.

Incompatible materials : Strong oxidizing agents. Acids

Hazardous decomposition products
: None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : NO

Routes of exposure skin absorption
: YES

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation
: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Sign and symptoms ingestion
: No harmful effects expected in amounts likely to be ingested by accident.

Sign and symptoms skin : None expected, when used as intended. Causes skin irritation. Symptoms may include a burning sensation, redness, swelling, drying, and cracking of the skin.

Sign and symptoms eyes : None expected, when used as intended. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision.

Potential Chronic Health Effects
: None expected, when used as intended.

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.

Reproductive effects & Teratogenicity
: This product is not expected to cause reproductive effects.

Sensitization to material : This product is not expected to cause respiratory sensitization.
This product is not expected to cause skin sensitization.

Specific target organ effects : This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Medical conditions aggravated by overexposure
: None reported by the manufacturer.

Synergistic materials : None reported by the manufacturer.

Toxicological data : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

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Chemical name	LC_{50}(4hr) Inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Ethoxylated nonylphenol	1310mg/kg	N/Av	>2000 mg/kg
Alkyl dimethyl benzyl ammonium chloride	N/Av	N/Av	N/Av
alkyl dimethyl ethylbenzyl ammonium chlorides	N/Av	N/Av	N/Av

Other important toxicological hazards

: None reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Do not allow material to contaminate ground water system. The product is not classified as environmentally hazardous.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Ethoxylated nonylphenol	9016-45-9	0.13 mg/L Bluegill (Lepomis macrocrhius)	N/Av	N/Av
Alkyl dimethyl benzyl ammonium chloride	68391-01-5	N/Av	N/Av	N/Av
alkyl dimethyl ethylbenzyl ammonium chlorides	68956-79-6	N/Av	N/Av	N/Av

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Ethoxylated nonylphenol	9016-45-9	4.8 mg/L Water flea (Daphnia magna)	N/Av	N/Av
Alkyl dimethyl benzyl ammonium chloride	68391-01-5	N/Av	N/Av	N/Av
alkyl dimethyl ethylbenzyl ammonium chlorides	68956-79-6	N/Av	N/Av	N/Av

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Ethoxylated nonylphenol	9016-45-9	20 mg/L/72hr Green algae (Selenastrum capricornutum)	8 mg/L/72hr Green algae (Selenastrum capricornutum)	N/Av
Alkyl dimethyl benzyl ammonium chloride	68391-01-5	N/Av	N/Av	N/Av
alkyl dimethyl ethylbenzyl ammonium chlorides	68956-79-6	N/Av	N/Av	N/Av

Persistence and degradability

: No data is available on the product itself.

SAFETY DATA SHEET

Bioaccumulation potential : No data is available on the product itself.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Ethoxylated nonylphenol (CAS 9016-45-9)	N/Av	N/Av
Alkyl dimethyl benzyl ammonium chloride (CAS 68391-01-5)	N/Av	N/Av
alkyl dimethyl ethylbenzyl ammonium chlorides (CAS 68956-79-6)	N/Av	N/Av

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

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

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal : Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

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

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

SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None.	Not regulated. None Known.	not regulated	none	
49CFR/DOT Additional Information	None.				
ICAO/IATA	None.	Not regulated.	not regulated	none	
ICAO/IATA Additional Information	None.				
IMDG	None.	Not regulated.	not regulated	none	
IMDG Additional information	None.				

Special precautions for user : None reported by the manufacturer.

SAFETY DATA SHEET

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not established.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Ethoxylated nonylphenol	9016-45-9	Yes	N/Ap	N/Av	No	N/Ap
Alkyl dimethyl benzyl ammonium chloride	68391-01-5	Yes	N/Ap	N/Av	No	N/Ap
alkyl dimethyl ethylbenzyl ammonium chlorides	68956-79-6	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Skin irritation Eye irritation
Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals. .

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Ethoxylated nonylphenol	9016-45-9	No	N/Ap	No	No	No	No	No	No
Alkyl dimethyl benzyl ammonium chloride	68391-01-5	No	N/Ap	No	No	No	No	No	No
alkyl dimethyl ethylbenzyl ammonium chlorides	68956-79-6	No	N/Ap	No	No	No	No	No	No

Canadian Information:

All ingredients are listed on the DSL, or are exempted materials. Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

SAFETY DATA SHEET

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Ethoxylated nonylphenol	9016-45-9	500-024-6	Present	Present	(7)-172	KE-26244	Present	HSR003054; HSNO Approval: HSR006598, HSR006618 (dilution)
Alkyl dimethyl benzyl ammonium chloride	68391-01-5	269-919-4	Present	Present	(3)-2694	KE-00775	Present	HSR003609
alkyl dimethyl ethylbenzyl ammonium chlorides	68956-79-6	273-318-2	Present	Present	No data available.	2001-3-1988	Present	No data available.

SECTION 16. OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
CA: California
CAS: Chemical Abstract Services
CEPA: Canadian Environmental Protection Act
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
CPR: Controlled Products Regulation
CSA: Canadian Standards Association
DOT: Department of Transportation
DSL: Domestic Substances List
EPA: Environmental Protection Agency
HMIS: Hazardous Materials Identification System
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Dangerous Goods
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OEL: National occupational exposure limits
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
PPE: Personal Protective Equipment
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RQ: Reportable Quantity
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit

Safetec of America, Inc.
887 Kensington Avenue
Buffalo, NY, USA, 14215
Telephone: (716) 895-1822

SAFETY DATA SHEET

TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WEL: Workplace Exposure Limit
WHMIS: Workplace Hazardous Materials Identification System

References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2018.
2. International Agency for Research on Cancer Monographs, searched 2018.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2018 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - March 2015 version.
6. California Proposition 65 List - November 23, 2018 version.
7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2018.

Preparation Date (mm/dd/yyyy) : 04/17/2017

Reviewed Date SDS (dd/mm/yyyy) : 14/03/2019

Revision No. : 2

Revision Information : (M)SDS sections updated 2. HAZARDS IDENTIFICATION,4. FIRST AID MEASURES, 11. TOXICOLOGICAL INFORMATION,15. REGULATORY INFORMATION .

Other special considerations for handling : Provide adequate information, instruction and training for operators.

Prepared for: Safetec of America,Inc. 887 Kensington Avenue Buffalo, NY 14215 Telephone: 1-716-895-1822 www.safetec.com	Safetec of America, Inc.
Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com	icc ComplianceCenter

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This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and peemission of ICC The Compliance Center Inc. and Safetec of America, Inc.

END OF DOCUMENT

SAFETY DATA SHEET

Section 1. Identification

Product identifier : SAKRETE CEMENT COLOR

Chemical family : Inorganic Metal oxide.

Identified uses : Inorganic pigment

Supplier : SAKRETE OF NORTH AMERICA
8201 Arrowridge Blvd.
Charlotte, NC 28273
USA

For information: 866-725-7383

In case of emergency : Chemtrec (800) 424-9300
International (703) 527-3887

Section 2. Hazards identification

HAZCOM Standard Status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), the SDS contains valuable information critical to the safe handling and proper use of the product. The SDS should be retained and available for employees and other users of this product.

Physical state : Powder.

Color : Brown.

Classification of the substance or mixture : Not classified.

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Hazard Not Otherwise Classified (HNOC) : None known.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
calcium carbonate	5 - 10%	1317-65-3

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

Section 3. Composition/information on ingredients

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of 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.

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.

Potential acute health effects

Eye contact : May cause mechanical irritation (abrasion).

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause mechanical irritation (abrasion).

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Potential chronic health effects

Long-term exposure to high concentrations of dust containing iron oxide can cause a benign condition termed "pulmonary siderosis". This condition is not associated with any physical impairment of lung function.

Notes to physician : Treat symptomatically. No specific treatment.

Protection of first-aiders : No special measures required.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire. In case of fire, use water spray (fog), foam or dry chemical.

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
metal oxide/oxides

Section 5. Fire-fighting measures

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 : 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. Avoid breathing dust. Put on appropriate personal protective equipment.

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 : Move containers from spill area. Approach release from upwind. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Prevent entry into sewers, water courses, basements or confined areas.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Avoid breathing dust. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Conditions for safe storage : Do not store near sources of heat (furnaces, kilns, boilers, etc.). Exposure to excessive heat may cause this product to become unstable (slowly auto-oxidize) which generates additional heat. Under certain circumstances this heat generation may be sufficient to cause combustible materials to ignite. Do not store near strong oxidizers, sources of heat, or near flammable or combustible materials. 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. Empty containers or liners may retain some product residues.

Section 8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
calcium carbonate	**OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust

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.

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.

Section 8. Exposure controls/personal protection

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection : Dust-protection mask

Skin protection : Wear suitable protective clothing and gloves. Suitable protective footwear.

Eye/face protection : If contact with product is possible, wear safety glasses with side shields.

Medical Surveillance : Not available.

Section 9. Physical and chemical properties

Physical state : Solid. [Powder.]

Color : Brown.

Odor : Odorless.

Odor threshold : Not available.

pH : 4 to 8 [Conc. (% w/w): 5%]

Boiling point : Not available.

Melting point : >1000°C (>1832°F)

Flash point : Not available.

Evaporation rate : Not available.

Explosion limits : Not available.

Vapor pressure : Not available.

Specific gravity (Relative density) : 4 to 5

Bulk density : 300 to 1000 kg/m^3

Solubility : Insoluble in the following materials: cold water

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

Vapor density : Not available.

Viscosity : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : 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 temperatures. At temperatures greater than 176 F (80 C), this product may become unstable and slowly auto-oxidize into Fe2O3 which generates additional heat. Under certain conditions this heat may be sufficient to cause combustible materials to ignite.

Incompatible materials : acids, ammonium salts, fluorine, mercury, hydrogen

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

Section 11. Toxicological information

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

Potential acute health effects

Eye contact : May cause mechanical irritation (abrasion).

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause mechanical irritation (abrasion).

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Potential chronic health effects

Short term exposure

Potential immediate effects : Not available.

Long term exposure

Potential delayed effects : Not available.

General : Long-term exposure to high concentrations of dust containing iron oxide can cause a benign condition termed "pulmonary siderosis". This condition is not associated with any physical impairment of lung function.

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.

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	Test
calcium carbonate	LD50 Oral	Rat	6450 mg/kg	-	-

Irritation/Corrosion

Conclusion/Summary

Skin : calcium carbonate:Moderate irritant

Eyes : calcium carbonate:Severe irritant

Carcinogenicity

Product/ingredient name	CAS #	IARC	NTP	OSHA
calcium carbonate	1317-65-3	Not classified.	Not classified.	Not classified.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
calcium carbonate	Category 3	Not applicable.	Respiratory tract irritation

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Result	Species	Exposure
calcium carbonate	- - - -	Acute EC50 >200 mg/l Acute EC50 >1000 mg/l Acute LC50 >10000 mg/l Acute LC50 56000 mg/l	Algae Daphnia Fish Fish - Gambusia affinis	72 hours 48 hours 96 hours 48 hours

Conclusion/Summary : Not available.

Persistence and degradability

Conclusion/Summary : Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not 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. 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. Waste disposal should be in accordance with existing federal state, provincial and or local environmental controls laws.

RCRA classification : If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	-	-	-	-		Not regulated.
IMDG Class	-	-	-	-		Not regulated.
IATA-DGR Class	-	-	-	-		Not regulated.

PG* : Packing group

RQ : 0 lbs

Section 15. Regulatory information

SARA 311/312 : None

SARA Title III Section 302 Extremely Hazardous Substances : None

SARA Title III Section 313 : None

Toxic Chemicals

Section 15. Regulatory information

US EPA CERCLA Hazardous Subtances (40 CFR 302) : None

State regulations

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropraite agency in your state.

Ingredient name	CAS number	State Code	Concentration (%)
Iron (III) Oxide	1309-37-1	MA - S, NJ - HS, PA - RTK HS	24 - 30%
calcium carbonate	1317-65-3	MA - S, NJ - HS, PA - RTK HS	5 - 10%
C.I. Pigment Yellow 42	51274-00-1		42 - 48%
C.I. Pigment Black 11	1317-61-9		14 - 20%

Massachusetts Substances: MA - S
Massachusetts Extraordinary Hazardous Substances: MA - Extra HS
New Jersey Hazardous Substances: NJ - HS
Pennsylvania RTK Hazardous Substances: PA - RTK HS
Pennsylvania Special Hazardous Substances: PA - Special HS

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

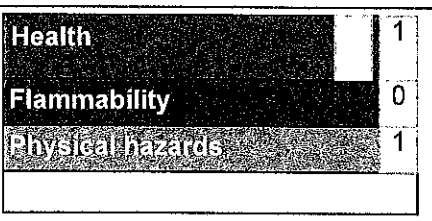
Potential exposure to some or all of the California Proposition 65 chemicals in this product have been determined to be below the No Significant Risk Level (NSRL)

Ingredient name	CAS #	Concentration (%)	Cancer	Reproductive
Crystalline Quartz Silica	14808-60-7	< 0.1%	Yes	

U.S. Toxic Substances Control Act : Listed on the TSCA Inventory.

Section 16. Other information

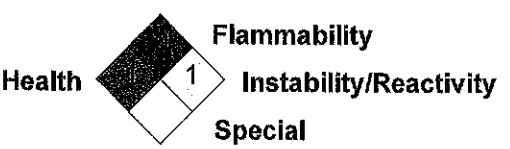
Hazardous Material Information System :



0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme
***=Chronic**

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

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



0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

Sakrete of North America's method of hazard communication is comprised of Product Labels and Safety Data Sheets. HMIS and NFPA ratings are provided by Sakrete of North America as a customer service.

Section 16. Other information

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Date of issue	:	05-26-2015
Date of previous issue	:	No previous validation
Version	:	1
		Product Safety and Regulatory Affairs

▼ Indicates information that has changed from previously issued version.

Notice to reader

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of Sakrete of North America. The information in this SDS relates only to the specific material designated herein. Sakrete of North America assumes no legal responsibility for use of or reliance upon the information in this SDS.

SAFETY DATA SHEET

Be Right™

1. IDENTIFICATION

Product identifier
Product Name Sample Vial

Other means of identification
Product Code(s)
TNT870B

Safety data sheet number M02626

Component of Kits or Sets TNT870

Recommended use of the chemical and restrictions on use
Recommended Use Determination of aluminum.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information
Chemical Name Not applicable
Formula Not applicable
CAS No Not applicable
Alternate CAS Number Not applicable
NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Hazard statements

Specific hazards arising from the chemical
None reported.

Hazardous combustion products May emit acrid smoke and fumes.

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

U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

EC Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

WHMIS Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Do not touch or walk through spilled material. Ventilate affected area. Use personal protective equipment as required.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Avoid release to the environment. 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 with plastic sheet to prevent spreading.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust.

Emergency Response Guide Number Not applicable

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Flammability class Not applicable

Vapor pressure	Not applicable
Vapor density (air = 1)	Not applicable
Specific gravity (water = 1 / air = 1)	No data available
Partition Coefficient (n-octanol/water)	No data available
Soil Organic Carbon-Water Partition Coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity	Not applicable
Kinematic viscosity	Not applicable

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	No information available	No data available	No information available

Other information

Metal Corrosivity	Not classified as corrosive to metal according to GHS criteria
Steel Corrosion Rate	Not applicable
Aluminum Corrosion Rate	Not applicable
Volatile Organic Compounds (VOC) Content	Not applicable.
Bulk density	No data available
Explosive properties	Not classified according to GHS criteria.
Explosion data	Can burn in fire, releasing toxic vapors.
Upper explosion limit	No data available
Lower explosion limit	No data available
Flammable properties	Can burn in fire, releasing toxic vapors.
Flammability Limit in Air	
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Flash point	Not applicable

	known or supplied information.
Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.
Aggravated Medical Conditions	None known.
Toxicologically synergistic products	None known.
Toxicokinetics, metabolism and distribution	No information available.

Product Acute Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Unknown acute toxicity
0.14% of the mixture consists of ingredient(s) of unknown toxicity.

Ingredient Acute Toxicity Data

Oral Exposure Route	Toxicological data for ingredients is not indicative of likely harm.
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Product Skin Corrosion/Irritation Data
No data available.

Ingredient Skin Corrosion/Irritation Data
No data available

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data
No data available

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route	No data available.
Respiratory Sensitization Exposure Route	No data available.

Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Product Germ Cell Mutagenicity *invitro* Data
No data available.

Ingredient Germ Cell Mutagenicity *invitro* Data	Toxicological data for ingredients is not indicative of likely harm.
Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Germ Cell Mutagenicity *invivo* Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available
Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data

Product Information No data available

Partition Coefficient (n-octanol/water) No data available

Ingredient Information

Mobility
Mobility in soil: Moderate to high mobility. If available, see ingredient data below.

Product Information No data available

Soil Organic Carbon-Water Partition Coefficient No data available

Ingredient Information

Additional information

Water solubility

Product Information

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Ingredient Information

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 Working in a well-ventilated area,. Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Special instructions for disposal Dilute to 3 to 5 times the volume with cold water. Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

14. TRANSPORT INFORMATION

DOT Not regulated

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 Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA and HMIS Classifications

NFPA	Health hazards - 0	Flammability - 0	Instability - 0	Physical and Chemical Properties -
HMIS	Health hazards - 0	Flammability - 0	Physical hazards - 0	Personal protection - X - See section 8 for more information

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

NIOSH IDLH	*Immediately Dangerous to Life or Health*
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	*no data*

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/11/2015

Reviewed on 12/19/2014

1 Identification

· **Product identifier**

· **Trade name:** SeaKlear: Natural Clarifier

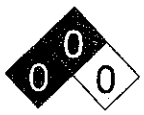
· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
HaloSource Inc.
1725 220th Street SE, Suite 103, Bothell, WA 98021
Quality@halosource.com

· **Information department:** Product safety department
· **Emergency telephone number:**
During normal opening times: +1 (425) 881-6464
800-424-9300 CHEMTREC (Domestic, North America)
+1-703-527-3887 CHEMTREC (International, collect calls accepted)

2 Hazard(s) identification

· **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:** Void

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/11/2015 Reviewed on 12/19/2014

Trade name: SeaKlear: Natural Clarifier

(Contd. of page 1)

4 First-aid measures

· **Description of first aid measures**
· **General information:** No special measures required.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Generally the product does not irritate the skin.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:** Dilute with plenty of water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **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** No special measures required.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/11/2015 Reviewed on 12/19/2014

Trade name: SeaKlear: Natural Clarifier

(Contd. of page 2)

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
· **Breathing equipment:** Not required.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Solution
Color:	Blue (Green for some applications)
· **Odor:**	Pungent
· **Odour threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	< 4.5
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	
Decomposition temperature:	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/11/2015 Reviewed on 12/19/2014

Trade name: SeaKlear: Natural Clarifier

(Contd. of page 3)

Upper:	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17 mm Hg)
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with Water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	0.0 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/11/2015 Reviewed on 12/19/2014

Trade name: SeaKlear: Natural Clarifier

(Contd. of page 4)

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Generally not hazardous for water
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Smaller quantities can be disposed of with household waste.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number** · **DOT, ADN, IMDG, IATA**	not regulated
· **UN proper shipping name** · **DOT, ADN, IMDG, IATA**	not regulated
· **Transport hazard class(es)** · **DOT, ADN, IMDG, IATA** · **Class**	not regulated
· **Packing group** · **DOT, 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.
· **UN "Model Regulation":**	-

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/11/2015 Reviewed on 12/19/2014

Trade name: SeaKlear: Natural Clarifier

(Contd. of page 5)

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Department issuing SDS:** Environment protection department.
· **Contact:** Mrs. Jackson
· **Date of preparation / last revision** 05/11/2015 / -
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (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
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/11/2015 Reviewed on 12/19/2014

Trade name: SeaKlear: Natural Clarifier

(Contd. of page 6)

CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)

Product Name: SevoFlo
Issued: May-21-2015

ANIMAL HEALTH

SAFETY DATA SHEET

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: SevoFlo

Synonyms: 1,1,1,3,3,3-Hexafluoro-2-(fluoromethoxy) propane; Sevoflurane; Fluoromethyl-2,2,2-trifluoro-1-(trifluoromethyl) ethyl ether

List Number: 5458

Drug Code Number: 74341
98009

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

Recommended use: Pharmaceuticals

1.3 Details of the supplier of the safety data sheet

Supplier:
Abbott Animal Health
100 Abbott Park Road
Dept AH52
Blgn AP6C-5
Abbott Park
IL 60064

Customer Service Telephone: 1 - 888 - 299 - 7416 (Abbott Animal Health 8:00 am - 5:00 pm CST)

E-mail Address: Abbott.SDS@abbott.com

1.4 Emergency telephone number

Emergency Telephone: 1 (800) 424-9300 CHEMTREC (USA)
1 (703) 527 3887 CHEMTREC (INTERNATIONAL)

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008

Reproductive toxicity	Category 2
Specific target organ systemic toxicity (single exposure)	Category 3

None

Inhalation: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Maintain airway, provide oxygen and ventilation. Facilities for circulatory resuscitation must be immediately available . No known antidote.

Ingestion: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. No known antidote.

Protection of First-aiders: Use personal protective equipment

4.2 Most important symptoms and effects, both acute and delayed

Signs and Symptoms: Clinical data suggests the following: headaches, incoordination, nausea, breathing difficulty. slow heart rate, sedation, sleep, drowsiness, dizziness, Very rare instances of allergic reactions.

Medical Conditions Aggravated by Exposure: Data suggest any pre-existing ailments in the following organs: central nervous system, respiratory system. Hypersensitivity to the material and/or similar materials.

4.3 Indication of any immediate medical attention and special treatment needed

Notes To Physician: Maintain ventilation, electrolyte balance and monitor cardiovascular function, as necessary.

Section 5. Firefighting measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable Extinguishing Media: Not determined

5.2 Special hazards arising from the substance or mixture

Special Exposure Hazards: Avoid inhalation of combustion products.

5.3 Advice for firefighters

Protective Equipment and Precautions for Firefighters: Wear self-contained breathing apparatus and protective suit

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions: Use personal protective equipment identified in Section 8.

6.2. Environmental precautions

Environmental Precautions: Contain material and prevent release to waterways or soil.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Not determined
Odor:	Ethereal odor.
Odor Threshold:	Not determined
pH:	7.0 - 7.5
Boiling Pt. @ 760 mm Hg (°C):	58.6
Melting/Freezing Point (°C):	Not determined
Flash Point (°C):	Not determined.
Evaporation Rate at 20°C:	Highly volatile.
Flammability (Solid):	Non-flammable.
Lower Explosive Limit:	> 25%
Upper Explosive Limit:	Not determined.
Vapor Pressure (mm Hg):	245.5 at 30 deg C
Vapor Density (Air = 1):	6.94
Specific Gravity:	1.525 (H20 = 1)
Solubility(ies):	Slightly soluble in: water, Miscible with ethanol, ether, chloroform, benzene,
Partition coefficient: n-octanol/water	Not determined.
Autoignition Temp. (°C):	Not determined.
Decomposition temperature (°C):	Not determined.
Viscosity (centipoise):	Not determined.
Explosion Severity:	Not determined.
Oxidizer Properties:	Not determined.

9.2. Other information

Not determined

Min. Ignition Energy-Layer (mJ):	> 5000

Section 10. Stability and reactivity

10.1. Reactivity

Not determined

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

Hazardous reactions: Not determined.

10.4. Conditions to avoid

Not determined.

Reproductive Effects: In animals adverse reproductive effects include: maternal toxicity, reduced fetal growth, fetal abnormalities.

Carcinogenicity: Not determined.

Mutagenicity: Negative in the Ames assay. Negative in the micronucleus test. Negative in the chromosomal aberration assay. Negative in the mouse lymphoma assay.

Chemical Name	Micronucleus Assay	Ames Test:	Mouse Lymphoma Assay	Chromosomal Abbr. Assay
Sevoflurane 28523-86-6	Negative	Negative	Negative	Negative

Aspiration hazard: Not determined

Notes:

1. **ALD: Approximate lethal dosage**
2. **LC50: Concentration in air that produces 50% mortality**
3. **LD50: Oral or dermal dosage that produces 50% mortality**

Section 12. Ecological information

12.1. Toxicity

Data for component (s) given below.

Chemical Name	Percent	LC 50 (mg/l)	Species	Duration
Sevoflurane 28523-86-6	100	43	Fathead Minnow	96 Hours

Chemical Name	Percent	48h EC50 (daphnia - mg/l) (48HLCD)	Species	Duration
Sevoflurane 28523-86-6	100	48	Daphnia magna	48 Hours

Chemical Name	Percent	72h IC50 (algae - mg/l) (72HICA)	Species	Duration
Sevoflurane 28523-86-6	100	>100	Pseudokirchneriella subcapitata	72 Hours

12.2. Persistence and degradability

Not determined.

Chemical Name	Percent	% Degradation	Duration
Sevoflurane 28523-86-6	100	4.4	28 days

12.3. Bioaccumulative potential

Not determined

Chemical Name	Percent	Log Po/w
Sevoflurane 28523-86-6	100	1.75

Sevoflurane 28523-86-6	-	-	-	Not listed.	-

Chemical Name	ENCS	ISHL	IECSC	AICS	KECL	New Zealand
Sevoflurane 28523-86-6	-	Present	-	-	-	

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

Carcinogenicity Rating:

Chemical Name	Percent	NTP:	IARC:	ACGIH:
Sevoflurane	100	Not Listed	Not Listed	Non répertorié

SARA 313 Information

Chemical Name	Percent	SARA 313 Chemical:	CERCLA RQ/SARA EHS RQ (lbs):	SARA EHS TPQ (lbs):
Sevoflurane	100	No	Not applicable	Not applicable

Immediate Health: Yes
Delayed Health: No
Fire: No
Sudden Pressure: No
Reactivity: No

RCRA Status: Not determined.

Proposition 65 Status: Does not contain chemicals known to the state of California to cause cancer or reproductive harm.

WHMIS Hazard Class: Not determined.

NFPA Rating: Not determined.

Notes:

1. SARA = Superfund Amendments and the Reauthorization Act.
2. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act.
3. FIFRA = Federal Insecticide, Fungicide and Rodenticide Act.
4. TSCA = Toxic Substances Control Act.
5. EC = European Community.
6. WHMIS = Canadian Workplace Hazardous Materials Information System.
7. UN GHS = United Nations Globally Harmonized System for Hazard Identification.

15.2. Chemical safety assessment

Chemical safety assessment has not been conducted on the substance/product.

Section 16. Other information

Risk Phrases:
R62 - Possible risk of impaired fertility
R67 - Vapors may cause drowsiness and dizziness

SAFETY DATA SHEET

DOW CORNING(R) 795 SILICONE BUILDING SEALAN T, LIMESTONE

DOW CORNING

Version	Revision Date:	SDS Number:	Date of last issue: 03/24/2015
3.0	10/10/2015	948592-00003	Date of first issue: 12/12/2014

SECTION 1. IDENTIFICATION

Product name : DOW CORNING(R) 795 SILICONE BUILDING SEALAN T, LIMESTONE

Product code : 000000000003104494

Manufacturer or supplier's details

Company name of supplier : Dow Corning Corporation

Address : South Saginaw Road
Midland Michigan 48686

Telephone : (989) 496-6000

Emergency telephone : 24 Hour Emergency Telephone : (989) 496-5900
CHEMTREC : (800) 424-9300

Recommended use of the chemical and restrictions on use

Recommended use : Adhesive, binding agents

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Precautionary Statements : **Prevention:**
P271 Use only outdoors or in a well-ventilated area.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Silicone elastomer

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Calcium carbonate	471-34-1	>= 50 - < 70
Amorphous fumed silica	112945-52-5	>= 1 - < 5
Magnesium carbonate	546-93-0	>= 1 - < 5
Quartz	14808-60-7	>= 0.1 - < 1
Titanium dioxide	13463-67-7	>= 0.1 - < 1
Methanol	67-56-1	>= 0.1 - < 1

for fire-fighters	essary. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	: Use only with adequate ventilation.
Advice on safe handling	: Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage	: Keep in properly labeled containers. Store in accordance with the particular national regulations.
Materials to avoid	: Do not store with the following product types: Strong oxidizing agents

able fraction)

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

Engineering measures : Processing may form hazardous compounds (see section 10).
Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.
Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety glasses

Skin and body protection : Skin should be washed after contact.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Methyl alcohol is formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products		
Thermal decomposition	:	Benzene Formaldehyde

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Skin contact
Ingestion
Eye contact

Acute toxicity
Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 200 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:

Calcium carbonate:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 420 Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat): > 3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403

Skin corrosion/irritation

Not classified based on available information.

Ingredients:

Calcium carbonate:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Magnesium carbonate:

Method: EPISKIN Human Skin Model Test
Result: No skin irritation

Titanium dioxide:

Species: Rabbit
Result: No skin irritation

Methanol:

Species: Rabbit
Result: No skin irritation

Carbon black:

Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:

Calcium carbonate:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Magnesium carbonate:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Titanium dioxide:

Species: Rabbit
Result: No eye irritation

Methanol:

Species: Rabbit
Result: No eye irritation

Carbon black:

Species: Rabbit
Result: No eye irritation

Methanol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

: Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Carbon black:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:

Magnesium carbonate:

Species: Mouse
Application Route: Ingestion
Exposure time: 18 Months
Result: negative
Remarks: Based on data from similar materials

Quartz:

Species: Humans
Application Route: inhalation (dust/mist/fume)
Result: positive
Remarks: IARC (International Agency for Research on Cancer)
The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment : Positive evidence from human epidemiological studies (inhalation)

Titanium dioxide:

Species: Rat
Application Route: inhalation (dust/mist/fume)
Exposure time: 24 Months
Method: OECD Test Guideline 453
Result: positive
Remarks: The mechanism or mode of action may not be relevant in humans.
The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in inhalation studies with animals.

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Methanol:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Mouse
Application Route: Ingestion
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: positive
Remarks: The effects were seen only at maternally toxic doses.

STOT-single exposure

Not classified based on available information.

Ingredients:

Methanol:

Target Organs: Eyes, Central nervous system
Assessment: Causes damage to organs.

STOT-repeated exposure

Not classified based on available information.

Ingredients:

Quartz:

Routes of exposure: 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.

Carbon black:

Routes of exposure: inhalation (dust/mist/fume)
Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Repeated dose toxicity

Ingredients:

Calcium carbonate:

Species: Rat
NOAEL: 1,000 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Calcium carbonate:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	ErC50 (Desmodesmus subspicatus (green algae)): > 14 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Magnesium carbonate:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 2,120 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 490 - 1,127 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae	:	ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to bacteria	:	EC50: > 900 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

Quartz:

Ecotoxicology Assessment

Acute aquatic toxicity	:	No toxicity at the limit of solubility.
Chronic aquatic toxicity	:	No toxicity at the limit of solubility.

Titanium dioxide:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l

Partition coefficient: n-octanol/water	:	log Pow: -0.77

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Resource Conservation and Recovery Act (RCRA)	:	This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.
Waste from residues	:	Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

Not regulated as a dangerous good

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.

Domestic regulation

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)

Toluene	108-88-3

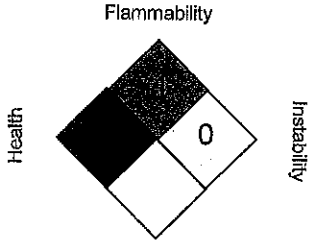
The ingredients of this product are reported in the following inventories:

TSCA	: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
AICS	: All ingredients listed or exempt.
IECSC	: All ingredients listed or exempt.
DSL	: All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

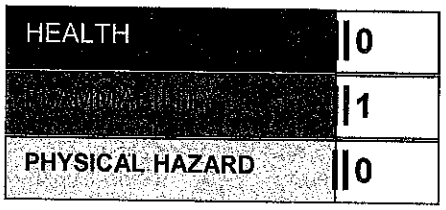
SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:



0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	: ACGIH - Biological Exposure Indices (BEI)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	: USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
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 Z-1 / TWA	: 8-hour time weighted average
OSHA Z-3 / TWA	: 8-hour time weighted average

SAFETY DATA SHEET

Be Right™

1. IDENTIFICATION

Product identifier
Product Name Silicone Oil

Other means of identification
Product Code(s)
126900

Safety data sheet number M00833

Component of Kits or Sets

Recommended use of the chemical and restrictions on use

Recommended Use	Laboratory reagent. Lubricant.
Uses advised against	None.
Restrictions on use	None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information

Chemical Name	Poly(dimethylsiloxane)
Formula	Proprietary
CAS No	63148-62-9
Alternate CAS Number	Not applicable
NIOSH (RTECS) Number	JM9237000

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Signal word - Warning

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, call a physician.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician.

Inhalation IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED: Rinse Mouth. If symptoms persist, call a physician.

Self-protection of the first aider Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

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.

Flammable properties
Combustion generates toxic fumes.

Specific hazards arising from the chemical
May react violently with. strong oxidizers.

Hazardous combustion products Silicon dioxide. Carbon monoxide, Carbon dioxide.

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

U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

EC Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear tight sealing safety goggles and/or face protection shield.
Skin and body protection	Wear protective gloves and protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls
Prevent product from entering drains. Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid		
Gas Under Pressure	Not classified according to GHS criteria		
Appearance	aqueous solution	**Color**	colorless
Odor	None	**Odor threshold**	No data available

Property	Values	Remarks • Method
Molecular weight	No information available	
pH	No data available	
Melting point/freezing point	No data available	
Boiling point / boiling range	> 140 °C / 284 °F	
Evaporation rate	< 1 (ether = 1)	
Vapor pressure	< 5.026 mm Hg / < 0.67 kPa at 25 °C / 77 °F	
Vapor density (air = 1)	> 1	
Specific gravity (water = 1 / air = 1)	0.98	
Partition Coefficient (n-octanol/water)	No data available	
Soil Organic Carbon-Water Partition Coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	

No information available

Possibility of Hazardous Reactions
No information available.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid
Extreme temperatures. Poor Ventilation.

Incompatible materials
Oxidizers.

Hazardous Decomposition Products
Silicon dioxide. Carbon monoxide. Carbon dioxide.

Explosive properties
Not classified according to GHS criteria.

Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature
No data available

Sensitivity to Static Discharge
None reported

Sensitivity to Mechanical Impact
None reported

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information	Causes mild skin irritation. Causes eye irritation. Causes serious eye irritation.
Inhalation	No known effect based on information supplied.
Eye contact	Contact with eyes may cause irritation. Severely irritating to eyes.
Skin contact	Causes mild skin irritation.
Ingestion	No known effect based on information supplied.
Aggravated Medical Conditions	Skin disorders. Eye disorders.
Toxicologically synergistic products	None known.
Toxicokinetics, metabolism and distribution	This Product is by Weight 100% an Individual Pure Chemical Substance.

Product Acute Toxicity Data This Product is by Weight 100% an Individual Pure Chemical Substance

Oral Exposure Route If available, see ingredient data below

Dermal Exposure Route If available, see ingredient data below

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route — This Product is by Weight 100% an Individual Pure Chemical Substance. If available, see ingredient data below.

Respiratory Sensitization Exposure Route — This Product is by Weight 100% an Individual Pure Chemical Substance. If available, see ingredient data below.

Ingredient Sensitization Data

Skin Sensitization Exposure Route — No data available.

Respiratory Sensitization Exposure Route — No data available.

Chronic Toxicity Information

Product Repeat Dose Toxicity Data

Oral Exposure Route — If available, see ingredient data below.

Dermal Exposure Route — If available, see ingredient data below.

Inhalation (Dust/Mist) Exposure Route — If available, see ingredient data below.

Inhalation (Vapor) Exposure Route — If available, see ingredient data below.

Inhalation (Gas) Exposure Route — If available, see ingredient data below.

Ingredient Repeat Dose Toxicity Data

Oral Exposure Route — No data available

Dermal Exposure Route — No data available

Inhalation (Dust/Mist) Exposure Route — No data available

Inhalation (Vapor) Exposure Route — No data available

Inhalation (Gas) Exposure Route — No data available

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Poly(dimethylsiloxane)	63148-62-9	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of Labor)	X - Present

Product Carcinogenicity Data

This Product is by Weight 100% an Individual Pure Chemical Substance

Oral Exposure Route — If available, see ingredient data below

Dermal Exposure Route — If available, see ingredient data below

Ingredient Reproductive Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity — Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data — This Product is by Weight 100% an Individual Pure Chemical Substance

Aquatic toxicity

Fish — If available, see ingredient data below

Crustacea — If available, see ingredient data below

Algae — If available, see ingredient data below

Terrestrial toxicity

Soil — If available, see ingredient data below

Vertebrates — If available, see ingredient data below

Invertebrates — If available, see ingredient data below

Ingredient Ecological Data

Aquatic toxicity

Fish — Toxicological data for ingredients is not indicative of likely harm.

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Poly(dimethylsiloxane) (100) CAS#: 63148-62-9	96 hours	None reported	LC_{50}	10000 mg/L	ERMA (New Zealands Environmental Risk Management Authority)

Crustacea — No data available

Algae — No data available

Terrestrial toxicity

Soil — No data available

Vertebrates — No data available

Invertebrates — No data available

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Contaminated packaging	Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG	Not regulated

Additional information
There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.
If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

National Inventories

TSCA	Complies
DSL/NDSL	Complies

TSCA- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL- Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Complies
TCSI	Complies
AICS	Complies
NZIoC	Complies

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
TCSI- Taiwan Chemical Substances Inventory
AICS- Australian Inventory of Chemical Substances
NZIoC- New Zealand Inventory of Chemicals

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

X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By	Hach Product Compliance Department
Issue Date	02-Sep-2016
Revision Date	02-Sep-2016
Revision Note	None

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

End of Safety Data Sheet

GRAINGER
FOR THE ONES WHO GET IT DONE

[X] Close this window SDS

Common Name: IS 808 - TRANSLUCENT
Manufacturer: MOMENTIVE PERFORMANCE MATERIALS
SDS Revision Date: 9/29/2015
SDS Format: GHS-US

Grainger Item Number(s): 4UH07
Manufacturer Model Number(s):

SDS Table of Contents

Click the desired link below to jump directly to that section in the SDS.

MOMENTIVE (TM)

SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

IS 808 - TRANSLUCENT

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

top

PRODUCT NAME: IS 808 - TRANSLUCENT

CHEMICAL NAME: SILICONE INDUSTRIAL SEALANT

MANUFACTURER/IMPORTER/DISTRIBUTOR INFORMATION:
MOMENTIVE PERFORMANCE MATERIALS LLC
260 HUDSON RIVER ROAD
WATERFORD NY 12188

CONTACT PERSON: COMMERCIAL.SERVICES@MOMENTIVE.COM

TELEPHONE:
GENERAL INFORMATION: +1-800-295-2392

EMERGENCY TELEPHONE NUMBER:

SUPPLIER:
CHEMTREC: 1-800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

top

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:
TOXIC TO REPRODUCTION: CATEGORY 2

GHS LABEL ELEMENTS:

HAZARD PICTOGRAMS: HEALTH HAZARD

SIGNAL WORD: WARNING

HAZARD STATEMENTS:
H361: IF SUSPECTED OF DAMAGING FERTILITY.

PRECAUTIONARY STATEMENTS:
GENERAL: NOT APPLICABLE.

PREVENTION:
OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.
DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD.
USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED.

RESPONSE:
IF EXPOSED OR CONCERNED: GET MEDICAL ATTENTION.

STORAGE: STORE LOCKED UP.

DISPOSAL:
P501DISPOSE OF CONTENTS AND CONTAINER IN ACCORDANCE WITH ALL LOCAL, REGIONAL, NATIONAL AND INTERNATIONAL REGULATIONS.

OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION:
UNCURED PRODUCT IS IRRITATING TO EYES, SKIN, AND RESPIRATORY SYSTEM. GENERATES ACETIC ACID DURING CURE.UNCURED PRODUCT IS IRRITATING TO EYES, SKIN, AND RESPIRATORY SYSTEM. GENERATES ACETIC ACID DURING CURE.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

top

SUBSTANCE/MIXTURE: MIXTURE

CHEMICAL NAME: NOT AVAILABLE

HAZARDOUS INGREDIENTS	% BY WEIGHT	CAS NUMBER
OCTAMETHYLCYCLOTETRASILOXANE	1 - 5	556-67-2
SILANETRIOL, 1-METHYL-, 1,1,1-TRIACETATE	0.1 - 1	4253-34-3

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

top

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 10 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 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. REMOVE CONTAMINATED CLOTHING AND SHOES. CONTINUE TO RINSE FOR AT LEAST 10 MINUTES. GET MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE. CLEAN SHOES THOROUGHLY BEFORE REUSE.

INGESTION:
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. GET MEDICAL ATTENTION. 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.

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 AID PERSONNEL:
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

top

EXTINGUISHING MEDIA:

SUITABLE EXTINGUISHING MEDIA:
USE DRY CHEMICAL, CO2, ALCOHOL-RESISTANT FOAM OR WATER SPRAY (FOG).
UNSUITABLE EXTINGUISHING MEDIA: WATER JET

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:
NO SPECIFIC FIRE OR EXPLOSION HAZARD.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:
MEASUREMENTS AT TEMPERATURES ABOVE 150 DEG. C IN PRESENCE OF AIR (OXYGEN) HAVE SHOWN THAT SMALL AMOUNTS OF FORMALDEHYDE ARE FORMED DUE TO OXIDATIVE DEGRADATION.

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. USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS COOL. FIRE WATER CONTAMINATED WITH THIS MATERIAL MUST BE CONTAINED AND PREVENTED FROM BEING DISCHARGED TO ANY WATERWAY, SEWER OR DRAIN.

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.FIREFIGHTERS MUST WEAR NIOSH/MSHA APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE MASK AND FULL PROTECTIVE CLOTHING.

SECTION 6. ACCIDENTAL RELEASE MEASURES

top

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 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 MATERIAL FOR CONTAINMENT AND CLEANING UP:

SMALL SPILL:
MOVE CONTAINERS FROM SPILL AREA. VACUUM OR SWEEP UP MATERIAL AND PLACE IN A DESIGNATED, LABELED WASTE CONTAINER. DISPOSE OF VIA A LICENSED WASTE DISPOSAL CONTRACTOR.

NOTE:
SEE SECTION 1 OF SDS FOR EMERGENCY CONTACT INFORMATION AND SECTION 13 OF SDS FOR WASTE DISPOSAL.

LARGE SPILL:
MOVE CONTAINERS FROM SPILL AREA. APPROACH RELEASE FROM UPWIND. PREVENT ENTRY INTO SEWERS, WATER COURSES, BASEMENTS OR CONFINED AREAS. VACUUM OR SWEEP UP MATERIAL AND PLACE IN A DESIGNATED, LABELED WASTE CONTAINER. DISPOSE OF VIA A LICENSED WASTE DISPOSAL CONTRACTOR.

NOTE:
SEE SECTION 1 OF SDS FOR EMERGENCY CONTACT INFORMATION AND SECTION 13 OF SDS FOR WASTE DISPOSAL.

SECTION 7. HANDLING AND STORAGE

top

PRECAUTIONS FOR SAFE HANDLING:

PROTECTIVE MEASURES:
PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8 OF SDS). AVOID EXPOSURE - OBTAIN SPECIAL INSTRUCTIONS BEFORE USE. AVOID EXPOSURE

DURING PREGNANCY. DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD. DO NOT INGEST. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. USE ONLY WITH ADEQUATE VENTILATION. 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.

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 OF SDS) 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

top

CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS:

INGREDIENT NAME	EXPOSURE LIMITS
OCTAMETHYLCYCLOTETRASILOXANE	() RECOMMENDED EXPOSURE LIMIT (REL): 5 PPM

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. 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.

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. IF EXPOSURE LIMITS ARE EXCEEDED OR RESPIRATORY IRRITATION IS EXPERIENCED, NIOSH/MSHA APPROVED RESPIRATORY PROTECTION SHOULD BE WORN. SUPPLIED AIR RESPIRATORS MAY BE REQUIRED FOR NON-ROUTINE OR EMERGENCY SITUATIONS. RESPIRATORY PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH OSHA REGULATIONS (SEE 29CFR 1910.134).

USE A PROPERLY FITTED, PARTICULATE FILTER RESPIRATOR COMPLYING WITH AN APPROVED STANDARD IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

top

APPEARANCE:

PHYSICAL STATE: PASTE

COLOR: COLORLESS.

ODOR: ACETIC ACID.

ODOR THRESHOLD: NOT AVAILABLE

PH: NOT APPLICABLE.

MELTING POINT: NOT AVAILABLE

BOILING POINT: NOT AVAILABLE

FLASH POINT: NOT APPLICABLE.

BURNING TIME: NOT AVAILABLE

BURNING RATE: NOT AVAILABLE

EVAPORATION RATE: 1

FLAMMABILITY (SOLID, GAS): NOT AVAILABLE

LOWER AND UPPER EXPLOSIVE (FLAMMABLE) LIMITS:
LOWER: NOT APPLICABLE.
UPPER: NOT APPLICABLE.

VAPOR PRESSURE: NOT APPLICABLE.

VAPOR DENSITY: NOT APPLICABLE.

RELATIVE DENSITY: 1.04

DENSITY: 1.04 G/CM3

SOLUBILITY: SOLUBLE IN TOLUENE

SOLUBILITY IN WATER: INSOLUBLE

PARTITION COEFFICIENT N-OCTANOL/WATER: NOT AVAILABLE

AUTO-IGNITION TEMPERATURE: NOT AVAILABLE

DECOMPOSITION TEMPERATURE: NOT AVAILABLE

SADT: NOT AVAILABLE

VISCOSITY:
DYNAMIC: NOT AVAILABLE
KINEMATIC: NOT AVAILABLE

VOLATILE ORGANIC CONTENT:
1.5 % (W/W)
20 G/L

OTHER INFORMATION: NO ADDITIONAL INFORMATION.

SECTION 10. STABILITY AND REACTIVITY

top

REACTIVITY: STABLE UNDER NORMAL CONDITIONS.

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: NO SPECIFIC DATA.

HAZARDOUS DECOMPOSITION PRODUCTS:
UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS DECOMPOSITION PRODUCTS SHOULD NOT BE PRODUCED.

SECTION 11. TOXICOLOGICAL INFORMATION

top

INFORMATION ON TOXICOLOGICAL EFFECTS:

ACUTE TOXICITY:

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	DOSE	EXPOSURE
OCTAMETHYLCYCLOTETRA-SILOXANE	LD50 ORAL	RAT	4,800 MG/KG OECD-GUIDELINE 401 (ACUTE ORAL TOXICITY)	
	LC50 INHALATION	RAT	>12.1 MG/L	4 H
	LC50 INHALATION	RAT	36 MG/L OECD TEST GUIDELINE	4 H

			403		
	LD50 DERMAL	RAT	>2,400 MG/KG OECD TEST GUIDELINE 402		

CONCLUSION/SUMMARY: NOT DETERMINED

IRRITATION/CORROSION:

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	SCORE	EXPOSURE	OBSERVATION
OCTAMETHYLCYCLOTETRA-SILOXANE	SKIN OECD-GUIDELINE 404 (ACUTE DERMAL IRRITATION/ CORROSION)	RAT			
REMARKS:	NON-IRRITATING TO THE SKIN.				
	EYES OECD-GUIDELINE 405 (ACUTE EYE IRRITATION/ CORROSION)	RABBIT			
REMARKS:	NON-IRRITATING TO THE EYES.				

CONCLUSION/SUMMARY:
SKIN: NOT DETERMINED
EYES: NOT DETERMINED
RESPIRATORY: NOT DETERMINED

SENSITIZATION:

PRODUCT/INGREDIENT NAME	ROUTE OF EXPOSURE	SPECIES	RESULT
OCTAMETHYLCYCLOTETRA-SILOXANE		GUINEA PIG	NOT SENSITIZING OECD-GUIDELINE 406 (SKIN SENSITISATION)

CONCLUSION/SUMMARY:
SKIN: NOT DETERMINED
RESPIRATORY: NOT DETERMINED

MUTAGENICITY:

PRODUCT/INGREDIENT NAME	TEST	EXPERIMENT	RESULT
OCTAMETHYLCYCLOTETRA-SILOXANE	OECD-GUIDELINE 471 (GENETIC TOXICOLOGY: SALMONELLA TYPHIMURIUM, REVERSE MUTATION ASSAY)	IN VITRO	NEGATIVE
	MOUSE LYMPHOMA	IN VITRO	NEGATIVE

	ASSAY (OECD GUIDLINE 476)		
	OECD-GUIDELINE 474 (GENETIC TOXICOLOGY: MICRONUCLEUS TEST)	IN VITRO	NEGATIVE

CONCLUSION/SUMMARY: NOT DETERMINED

CARCINOGENICITY:

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	DOSE	EXPOSURE
OCTAMETHYLCYCLOTETRA-SILOXANE	INHALATION - OECD 453	RAT - FEMALE	150 MG/KG	24 MONTHS
REMARKS:	NOAEC			
	INHALATION - OECD 453	RAT - MALE	>700 MG/KG	24 MONTHS
REMARKS:	NOAEC			

CONCLUSION/SUMMARY: NOT DETERMINED

REPRODUCTIVE TOXICITY:

PRODUCT/INGREDIENT NAME	MATERNAL TOXICITY	FERTILITY	DEVELOPMENT TOXIN
OCTAMETHYLCYCLOTETRASILOXANE			
REMARKS:	NOAEL PARENTS		
REMARKS:	NOAEL F1		

PRODUCT/INGREDIENT NAME	SPECIES	DOSE	EXPOSURE
OCTAMETHYLCYCLOTETRASILOXANE	RAT	INHALATION: 300 MG/KG OECD 416	
	RAT	INHALATION: 300 MG/KG OECD 416	

CONCLUSION/SUMMARY: NOT DETERMINED

TERATOGENICITY:

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	DOSE	EXPOSURE
OCTAMETHYLCYCLOTETRA-SILOXANE	- INHALATION OECD TEST GUIDELINE 414	RABBIT	500 MG/KG	18 DAYS
REMARKS:	NOAEL			
	- INHALATION OECD TEST GUIDELINE 414	RABBIT	300 MG/KG	18 DAYS
REMARKS:	NOAEL MATERNITY			

CONCLUSION/SUMMARY: NOT DETERMINED

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE):

PRODUCT/INGREDIENT NAME	CATEGORY	ROUTE OF EXPOSURE	TARGET ORGANS
SILANETRIOL, 1-METHYL-1,1,1- TRIACETATE	CATEGORY 3		RESPIRATORY TRACT IRRITATION

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): NOT AVAILABLE

ASPIRATION HAZARD: NOT AVAILABLE

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE: NOT AVAILABLE

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: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:

EYE CONTACT: NO SPECIFIC DATA.

INHALATION:

ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING:
REDUCED FETAL WEIGHT
INCREASE IN FETAL DEATHS
SKELETAL MALFORMATIONS

SKIN CONTACT:

ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING:
REDUCED FETAL WEIGHT
INCREASE IN FETAL DEATHS
SKELETAL MALFORMATIONS

INGESTION:

ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING:
REDUCED FETAL WEIGHT
INCREASE IN FETAL DEATHS
SKELETAL MALFORMATIONS

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE:

SHORT TERM EXPOSURE:
POTENTIAL IMMEDIATE EFFECTS: NOT AVAILABLE
POTENTIAL DELAYED EFFECTS: NOT AVAILABLE

LONG TERM EXPOSURE:
POTENTIAL IMMEDIATE EFFECTS: NOT AVAILABLE
POTENTIAL DELAYED EFFECTS: NOT AVAILABLE

POTENTIAL CHRONIC HEALTH EFFECTS:

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	DOSE	EXPOSURE
OCTAMETHYLCYCLOTETRA-SILOXANE	NOAEC INHALATION	RAT	150 MG/KG OECD 453	24 MONTHS
REMARKS:	NOAEC			
	NOAEL DERMAL	RABBIT	>1 MG/KG OECD 410	3 WEEKS
REMARKS:	NOAEL			

CONCLUSION/SUMMARY: NOT DETERMINED

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: SUSPECTED OF DAMAGING FERTILITY.

NUMERICAL MEASURES OF TOXICITY:

ACUTE TOXICITY ESTIMATES:

ROUTE	ATE VALUE
ORAL	181,426.5 MG/KG

OTHER INFORMATION:

OCTAMETHYLCYCLOTETRASILOXANE (D4) INGESTION:
RODENTS GIVEN LARGE DOSES VIA ORAL GAVAGE OF OCTAMETHYLCYCLOTETRASILOXANE (1600 MG/KG/DAY, 14 DAYS), DEVELOPED INCREASED LIVER WEIGHTS RELATIVE TO UNEXPOSED CONTROL ANIMALS DUE TO HEPATOCELLULAR HYPERPLASIA (INCREASED NUMBER OF LIVER CELLS WHICH APPEAR NORMAL) AS WELL AS HYPERTROPHY (INCREASED CELL SIZE).

INHALATION:
IN INHALATION STUDIES, LABORATORY RODENTS EXPOSED TO OCTAMETHYLCYCLOTETRA-SILOXANE (300 PPM FIVE DAYS/WEEK, 90 DAYS) DEVELOPED INCREASED LIVER WEIGHTS IN FEMALE ANIMALS RELATIVE TO UNEXPOSED CONTROL ANIMALS. WHEN THE EXPOSURE WAS STOPPED, LIVER WEIGHTS RETURNED TO NORMAL. MICROSCOPIC EXAMINATION OF THE LIVER CELLS DID NOT SHOW ANY EVIDENCE OF PATHOLOGY. THIS RESPONSE IN RATS, WHICH DOES NOT AFFECT THE ANIMAL'S HEALTH, IS WELL-DOCUMENTED AND WIDELY RECOGNIZED. IT IS RELATED TO AN INCREASE OF LIVER ENZYMES THAT METABOLIZE AND ELIMINATE A MATERIAL FROM THE BODY. THE INCREASED LIVER WEIGHT REVERSES EVEN WHILE THE D4 EXPOSURE CONTINUES. THE FINDING IS NOT ADVERSE, BUT IS CONSIDERED A NATURAL ADAPTIVE CHANGE IN RATS, AND DOES NOT REPRESENT A HAZARD TO HUMANS. INHALATION STUDIES UTILIZING LABORATORY RABBITS AND GUINEA PIGS SHOWED NO EFFECTS ON LIVER WEIGHTS. INHALATION EXPOSURES TYPICAL OF INDUSTRIAL USAGE (5-10 PPM) SHOWED NO TOXIC EFFECTS IN RODENTS. RANGE FINDING REPRODUCTIVE STUDIES WERE CONDUCTED (WHOLE BODY INHALATION, 70 DAYS PRIOR TO MATING, THROUGH MATING, GESTATION AND LACTATION), WITH D4. RATS WERE EXPOSED TO 70 AND 700 PPM. IN THE 700 PPM GROUP, THERE WAS A STATISTICALLY SIGNIFICANT REDUCTION IN MEAN LITTER SIZE AND IN IMPLANTATION SITES. NO D4 RELATED CLINICAL SIGNS WERE OBSERVED IN THE PUPS AND NO EXPOSURE RELATED PATHOLOGICAL FINDINGS WERE FOUND. A TWO-YEAR, COMBINED CHRONIC/CARCINOGENICITY STUDY, DURING WHICH RATS WERE EXPOSED TO D4 BY INHALATION, DATA SHOWED A STATISTICALLY SIGNIFICANT INCREASE IN A BENIGN UTERINE TUMOR IN FEMALE RATS EXPOSED AT THE HIGHEST LEVEL--A LEVEL MUCH HIGHER THAN THE LOW LEVELS THAT CONSUMERS OR WORKERS MAY ENCOUNTER. AN EXPERT PANEL OF INDEPENDENT SCIENTISTS WHO HAVE REVIEWED THE RESULTS OF THIS RESEARCH CONCUR THAT THE FINDING SEEN IN THE TWO-YEAR STUDY OCCURRED THROUGH A BIOLOGICAL PATHWAY THAT IS SPECIFIC TO THE RAT AND IS NOT RELEVANT TO HUMANS. THEREFORE, THIS OBSERVED EFFECT DOES NOT INDICATE A POTENTIAL HEALTH HAZARD TO HUMANS. IN DEVELOPMENTAL TOXICITY STUDIES, RATS AND RABBITS WERE EXPOSED TO D4 AT CONCENTRATIONS UP TO 700 PPM AND 500 PPM, RESPECTIVELY. NO TERATOGENIC EFFECTS (BIRTH DEFECTS) WERE OBSERVED IN EITHER STUDY.

SECTION 12. ECOLOGICAL INFORMATION

⚠ top

ECOTOXICITY:

CONCLUSION/SUMMARY: NOT AVAILABLE

PERSISTENCE/DEGRADABILITY:

PRODUCT/INGREDIENT NAME	TEST	RESULT	DOSE	INOCULUM
OCTAMETHYLCYCLOTETRA-SILOXANE	310 READY BIODEGRADABILITY - CO2 IN SEALED VESSELS (HEADSPACE TEST)	3.7 % - 29 D		ACTIVATED SLUDGE
REMARKS:	NOT READILY BIODEGRADABLE.			

CONCLUSION/SUMMARY: NOT AVAILABLE

BIOACCUMULATIVE POTENTIAL:

PRODUCT/INGREDIENT NAME	SPECIES	EXPOSURE	LOGPOW	BCF	POTENTIAL
OCTAMETHYLCYCLOTETRA-SILOXANE	FATHEAD MINNOW	28 D		12.40	LOW

MOBILITY IN SOIL:
SOIL/WATER PARTITION COEFFICIENT (KOC): NOT AVAILABLE
OTHER ADVERSE EFFECTS: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

OTHER INFORMATION:
OCTAMETHYLCYCLOTETRASILOXANE (D4) MEETS THE CURRENT REACH ANNEX XIII CRITERIA FOR PBT AND VPVB. HOWEVER, D4 DOES NOT BEHAVE SIMILARLY TO KNOWN PBT/VPVB SUBSTANCES. THE SILICONES INDUSTRIES INTERPRETATION OF THE AVAILABLE DATA IS THAT THE WEIGHT OF SCIENTIFIC EVIDENCE FROM FIELD STUDIES SHOWS THAT D4 IS NOT BIOMAGNIFYING IN AQUATIC AND TERRESTRIAL FOOD WEBS. D4 IN AIR WILL DEGRADE BY REACTION WITH NATURALLY OCCURRING HYDROXYL RADICALS IN THE ATMOSPHERE. ANY D4 IN AIR THAT DOES NOT DEGRADE BY REACTION WITH HYDROXYL RADICALS IS NOT EXPECTED TO DEPOSIT FROM THE AIR TO WATER, TO LAND, OR TO LIVING ORGANISMS.

SECTION 13. DISPOSAL CONSIDERATIONS

top

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. SEE SECTION 8 FOR INFORMATION ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

SECTION 14. TRANSPORT INFORMATION

top

SPECIAL PRECAUTIONS FOR USER:
THIS PRODUCT IS NOT REGARDED AS DANGEROUS GOODS ACCORDING TO THE NATIONAL AND INTERNATIONAL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS.

SECTION 15. REGULATORY INFORMATION

△ top

UNITED STATES:

U.S. FEDERAL REGULATIONS:

UNITED STATES - TSCA 12(B) - CHEMICAL EXPORT NOTIFICATION:

THE FOLLOWING COMPONENTS ARE LISTED:
CYCLOTETRASILOXANE, 2,2,4,4,6,6,8,8-OCTAMETHYL-

UNITED STATES - TSCA 5(A)2 - FINAL SIGNIFICANT NEW USE RULES:
NOT LISTED

UNITED STATES - TSCA 5(A)2 - PROPOSED SIGNIFICANT NEW USE RULES:
NOT LISTED

UNITED STATES - TSCA 5(E) - SUBSTANCES CONSENT ORDER: NOT LISTED

SARA 311/312:

CLASSIFICATION: DELAYED (CHRONIC) HEALTH HAZARD

CALIFORNIA PROP. 65: NONE REQUIRED.

CANADA:

WHMIS (CANADA):
CLASS D-2A: MATERIAL CAUSING OTHER TOXIC EFFECTS (VERY TOXIC).
CLASS D-2B: MATERIAL CAUSING OTHER TOXIC EFFECTS (TOXIC).

INTERNATIONAL REGULATIONS:

INTERNATIONAL LISTS:
AUSTRALIA INVENTORY (AICS): ALL COMPONENTS ARE LISTED OR EXEMPTED.

CANADA INVENTORY:
AT LEAST ONE COMPONENT IS NOT LISTED IN DSL BUT ALL SUCH COMPONENTS
ARE LISTED IN NDSL. (QUANTITY RESTRICTED)

JAPAN INVENTORY: ALL COMPONENTS ARE LISTED OR EXEMPTED.

CHINA INVENTORY (IECSC): ALL COMPONENTS ARE LISTED OR EXEMPTED.

KOREA INVENTORY: ALL COMPONENTS ARE LISTED OR EXEMPTED.

NEW ZEALAND INVENTORY (NZIOC): NOT DETERMINED.

UNITED STATES INVENTORY (TSCA 8B): ALL COMPONENTS ARE LISTED OR EXEMPTED.

PHILIPPINES INVENTORY (PICCS): ALL COMPONENTS ARE LISTED OR EXEMPTED.

TAIWAN INVENTORY (CSNN): ALL COMPONENTS ARE LISTED OR EXEMPTED.

SECTION 16. OTHER INFORMATION

△ top

LABEL REQUIREMENTS:
CONTAINS OCTAMETHYLCYCLOTETRASILOXANE WHICH MAY CAUSE REPRODUCTIVE
EFFECTS BASED ON ANIMAL DATA.

HAZARDOUS MATERIAL INFORMATION SYSTEM III (U.S.A.):

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARDS	0

CAUTION:
HMIS(R*) 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(R*) RATINGS ARE NOT REQUIRED ON MSDSS UNDER 29 CFR 1910.1200, THE PREPARER MAY CHOOSE TO PROVIDE THEM. HMIS(R*) RATINGS ARE TO BE USED WITH A FULLY IMPLEMENTED HMIS(R*) PROGRAM. HMIS(R*) IS A REGISTERED MARK OF THE NATIONAL PAINT & COATINGS ASSOCIATION (NPCA). HMIS(R*) MATERIALS MAY BE PURCHASED EXCLUSIVELY FROM J. J. KELLER (800) 327-6868. THE CUSTOMER IS RESPONSIBLE FOR DETERMINING THE PPE CODE FOR THIS MATERIAL.

FULL TEXT OF ABBREVIATED H STATEMENTS: NOT APPLICABLE.

HISTORY:

DATE OF PRINTING: 03/09/2016

DATE OF ISSUE/DATE OF REVISION: 09/29/2015

DATE OF PREVIOUS ISSUE: 04/10/2015

VERSION: 1.2

PREPARED BY: PRODUCT SAFETY STEWARDSHIP

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)

RID:
THE REGULATIONS CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY RAIL

UN: UNITED NATIONS

REFERENCES: NOT AVAILABLE

NOTICE TO READER:
UNLESS OTHERWISE SPECIFIED IN SECTION 1, MOMENTIVE PRODUCTS ARE INTENDED FOR INDUSTRIAL APPLICATION ONLY. THEY ARENOT INTENDED FOR SPECIFIC MEDICAL APPLICATIONS, NEITHER FOR LONG-LASTING (>30 DAYS) IMPLANTATION INTO THE HUMAN BODY, INJECTED OR DIRECTLY INGESTED, NOR FOR THE MANUFACTURE OF MULTIPLE USABLE CONTRACEPTIVES KEEP OUT OF THE REACH OF CHILDREN.

FURTHER INFORMATION:
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.

(R*),*, AND TM INDICATE TRADEMARKS OWNED BY OR LICENSED TO MOMENTIVE.

MAR 0 8 2019

SAFETY DATA SHEET

Manufactured for: Ascend Laboratories, LLC Parsippany, NJ 07054
Manufactured by: Crown Laboratories, Inc. Johnson City, TN 37604
Emergency Telephone No.: Contact poison control center
Customer Service No.: 1-877-272-7901 or 1-800-877-8869

SECTION 1: IDENTIFICATION

Product Name:	Silver Sulfadiazine Cream, USP 1%
Synonyms:	Burn Cream.
NDC:	67877-124-20, 67877-124-25, 67877-214-05, 67877-124-50, 67877-124-85, 67877-124-40
CAS #:	Not applicable.
Chemical Family:	Sulfonamide.
Formula:	Silver Sulfadiazine (micronized) 1% in a hydrophilic (water dispersible) base consisting of Purified Water, Stearyl Alcohol, White Petrolatum, Polyoxyl 40 Stearate, Propylene Glycol USP, Isopropyl Myristate NF, Sorbitan Monooleate NF, with 3% Methylparaben NF as a preservative.

SECTION 2: HAZARD IDENTIFICATION

According to Regulations of 2012 OSHA Hazard Communications Standard; 29 CFR Part 1910.1200

lassification of the product
No need for classification according to GHS criteria for this product.

Labeling elements
This product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified
No specific dangers are known, if the directions for use and storage on the label are followed.

Emergency overview
No particular hazards are known. Avoid contact with eyes (could be an irritant to the eyes.)

SECTION 3: COMPOSITION / INGREDIENT INFORMATION

		CARCINOGEN			HAZARD DATA	
NAME	CAS#	IARC	NTP	OSHA	ACGIH TLV	OSHA PEL
Silver Sulfadiazine	22199-08-2	No	No	No	NE	NE
Purified Water	7732-18-5	No	No	No	NE	NE
Stearyl Alcohol	112-92-5	No	No	No	NE	NE
White Petrolatum	8009-03-8	No	No	No	NE	NE
Polyoxyl 40 Stearate	9004-99-3	No	No	No	NE	NE
Propylene Glycol	57-55-6	No	No	No	NE	NE
Isopropyl Myristate	110-27-0	No	No	No	NE	NE
Sorbitan Monooleate	1338-43-8	No	No	No	NE	NE
Methylparaben	99-76-3	No	No	No	NE	NE

NE = Not Established

SECTION 4: FIRST AID PROCEDURES

Eyes:	Flush eyes with plenty of water for at least 15 minutes. If irritation develops, seek medical attention.
Skin:	Wash affected area thoroughly with soap and water. If irritation develops, seek medical attention.
Ingestion:	Contact a Poison Control Center right away
Inhalation:	Not applicable. Product is not an inhalation hazard.
Symptoms & Effects	No hazard is expected under intended use and appropriate handling of this product CALL A PHYSICIAN. CONTACT A POISON CONTROL CENTER.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point:	Not applicable.
Auto-ignition Temperature °F:	Not applicable.
Flammable Limits in Air by Volume LEL:	Not applicable.
UEL:	Not applicable.
Extinguishing Media:	Alcohol foam, Dry chemical, Carbon dioxide.
Special Fire Fighting Procedures:	Use self-contained breathing apparatus and protective clothing.
Unusual Fire and Explosion Hazards:	May react with strong oxidizers and extreme heat.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	White to off white cream with characteristic odor.
Molecular Weight:	Not applicable.
pH:	Not determined.
Refractive Index @ 20 ° C:	Not applicable.
Viscosity @ 25° C:	No applicable.
Boiling Point:	Not determined.
Freezing/Melting Point:	Not determined.
Congealing Point:	Not determined.
Vapor Pressure (mm Hg @ 20°C):	Not determined.
Vapor Density (Air=1):	Not determined.
Solubility in Water:	Disperses.
Solubility in Alcohol:	Partially soluble.
Solubility in Oil:	Partially soluble.
Solubility in Other:	Not applicable.
Specific Gravity (H_2O=1):	Not determined
% Volatile by Volume:	Not determined.
Evaporation Rate (Ether=1):	Not determined.

SECTION 10: STABILITY AND REACTIVITY

Stability:	(X) Stable ( ) Unstable
Conditions and Chemicals to Avoid:	Avoid strong oxidizers, strong acids, bases and sources of heat.
ızardous Combustion or Decomposition Products:	May emit toxic fumes.
Hazardous Polymerization:	( ) May Occur (X) Will Not Occur

SECTION 11: TOXICOLOGICAL INFORMATION

See Section 4 for First Aid Measures for specific routes of exposure
See Section 3 for ingredient information. No numerical measures of toxicity are available

SECTION 12: ECOLOGICAL INFORMATION

Aquatic Toxicity: Not indicated.
Biodegradability: Not indicated.

SECTION 13: DISPOSAL CONSIDERATIONS

Assure disposal is performed in accordance with applicable local, state, and federal regulations.

HALLIBURTON

SAFETY DATA SHEET

Product Trade Name: **SODA ASH**

Revision Date: 24-Apr-2017 **Revision Number:** 42

1. Identification

1.1. Product Identifier

Product Trade Name: SODA ASH
Synonyms None
Chemical Family: Carbonate
Internal ID Code HM001822

1.2 Recommended use and restrictions on use

Application: Buffer
Uses advised against No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier
Halliburton Energy Services, Inc.
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Telephone: 1-281-871-6107

Halliburton Energy Services, Inc.
645 - 7th Ave SW Suite 1800
Calgary, AB
T2P 4G8
Canada

Prepared By Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number: 1-866-519-4752 or 1-760-476-3962
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Serious Eye Damage/Irritation	Category 2 - H319

2.2. Label Elements

Hazard Pictograms

None known.

5.2 Specific hazards arising from the substance or mixture

Special exposure hazards in a fire

Decomposition in fire may produce harmful gases.

5.3 Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid creating and breathing dust. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Scoop up and remove.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store away from acids. Store in a cool, dry location. Product has a shelf life of 60 months.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Sodium carbonate	497-19-8	Not applicable	Not applicable

8.2 Appropriate engineering controls

Engineering Controls Use in a well ventilated area. Localized ventilation should be used to control dust levels.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective

Strong acids.

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide.

11. Toxicological Information

11.1 Information on likely routes of exposure

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Inhalation May cause mild respiratory irritation.

Eye Contact Causes eye irritation.

Skin Contact Not irritating to skin in rabbits.

Ingestion Irritation of the mouth, throat, and stomach.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium carbonate	497-19-8	4090 mg/kg (Rat) 2800 mg/kg (Rat)	2210 mg/kg (Mouse) > 2000 mg/kg (Rabbit)	2.3 mg/L (Rat) 2h

Substances	CAS Number	Skin corrosion/irritation
Sodium carbonate	497-19-8	Non-irritating to the skin

Substances	CAS Number	Serious eye damage/irritation
Sodium carbonate	497-19-8	Irritating to eyes

Substances	CAS Number	Skin Sensitization
Sodium carbonate	497-19-8	Not classified

Substances	CAS Number	Respiratory Sensitization
Sodium carbonate	497-19-8	No information available

Substances	CAS Number	Mutagenic Effects
Sodium carbonate	497-19-8	In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Sodium carbonate	497-19-8	No information available

Substances	CAS Number	Reproductive toxicity
Sodium carbonate	497-19-8	Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Sodium carbonate	497-19-8	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Sodium carbonate	497-19-8	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Sodium carbonate	497-19-8	Not applicable

12. Ecological Information

Packing Group: Not applicable
Environmental Hazards: Not applicable

IATA/ICAO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable
Special Precautions for User None

15. Regulatory Information

US Regulations

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Sodium carbonate	497-19-8	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Sodium carbonate	497-19-8	Not applicable

EPA SARA (311,312) Hazard Class
Acute Health Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Sodium carbonate	497-19-8	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Sodium carbonate	497-19-8	Not applicable

EPA RCRA Hazardous Waste Classification
If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

Substances	CAS Number	California Proposition 65
Sodium carbonate	497-19-8	Not applicable

U.S. State Right-to-Know Regulations

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Sodium carbonate	497-19-8	Not applicable	Not applicable	Not applicable

NFPA Ratings: Health 2, Flammability 0, Reactivity 0
HMIS Ratings: Health 2, Flammability 0, Physical Hazard 0 , PPE: B

Canadian Regulations

Canadian Domestic Substances List (DSL) All components listed on inventory or are exempt.

SAFETY DATA SHEET

Based upon Regulation (EC) No. 1907/2006, as amended by Regulation (EC) No. 453/2010

sodium carbonate

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

1.1 Product identifier:

Product name	: sodium carbonate
Synonyms	: carbonic acid disodium salt; carbonic acid sodium salt; CASWELL NO. 752; chrystol carbonate; crystol carbonate (=sodium carbonate); disodium carbonate; natural ash; Na-X; snowlite 1; soda ash; soda, crystals; soda (=sodium carbonate); anhydrous soda; ash; bisodium carbonate; calcined soda(=sodium carbonate); sodium carbonate, anhydrous; sodium carbonate, anhydrous ASTM D458; sodium carbonate, anhydrous GE materials D4D5; sodium carbonate, anhydrous powder; sodium carbonate, crude; sodium carbonate, granular; Solvay soda; synthetic ash; washing soda (= sodiumcarbonate)
Registration number REACH	: 01-2119485498-19-0011
Product type REACH	: Substance/mono-constituent
CAS number	: 497-19-8
EC Index number	: 011-005-00-2
EC number	: 207-838-8
RTECS number	: VZ4050000
Molecular mass	: 105.99 g/mol
Formula	: Na2CO3

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

1.2.1 Relevant identified uses

Chemical raw material
Glass production: raw material
Detergent: component
Acidity regulator
Paper production: auxiliary substance

1.2.2 Uses advised against

No uses advised against known

1.3 Details of the supplier of the safety data sheet:

Supplier of the safety data sheet

OCI Chemical Corporation
Five Concourse Parkway - Suite 2500
USA GA 30328-6111 Atlanta

Manufacturer of the product

OCI Wyoming L.P.
254 County Road 4-6
USA - WY 82935 Green River

1.4 Emergency telephone number:

24h/24h:

CHEMTREC : +1 703 527 38 87

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation EC No 1272/2008

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Eye Irrit.	category 2	H319: Causes serious eye irritation.

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC

Xi; R36 - Irritating to eyes.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

5.1.1 Suitable extinguishing media:

Adapt extinguishing media to the environment.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2 Special hazards arising from the substance or mixture:

Upon combustion: CO and CO2 are formed. Reacts on exposure to water (moisture) with (some) metals.

5.3 Advice for firefighters:

5.3.1 Instructions:

No specific fire-fighting instructions required.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Prevent dust cloud formation, e.g. by wetting. No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.

Suitable protective clothing

See heading 8.2

6.2 Environmental precautions:

Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Violent exothermic reaction with (some) acids: release of harmful gases/vapours (carbon dioxide). Carbon dioxide is heavier than air and will collect in ducts, drains and low lying areas.

6.3 Methods and material for containment and cleaning up:

Prevent dust cloud formation. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4 Reference to other sections:

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1 Precautions for safe handling:

Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed.

7.2 Conditions for safe storage, including any incompatibilities:

7.2.1 Safe storage requirements:

Store in a cool area. Store in a dry area. Keep container in a well-ventilated place. Keep out of direct sunlight. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, (strong) acids, metals, water/moisture.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

Aluminium, zinc.

7.3 Specific end use(s):

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

Relative vapour density	Not applicable
Solubility	water ; 212.5 g/l ; 20 °C
Relative density	2.52-253 ; 20 °C
Decomposition temperature	1600 °C
Auto-ignition temperature	>400 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	11.6 ; 5.0 %

Physical hazards

No physical hazard class

9.2 Other information:

Absolute density	2530 kg/m³

SECTION 10: Stability and reactivity

10.1 Reactivity:

Substance has basic reaction.

10.2 Chemical stability:

Hygroscopic.

10.3 Possibility of hazardous reactions:

Reacts on exposure to water (moisture) with (some) metals. Violent exothermic reaction with (some) metals. Reacts with (strong) oxidizers.

10.4 Conditions to avoid:

Avoid raising dust. Keep away from naked flames/heat.

10.5 Incompatible materials:

(strong) acids, metals, water/moisture, aluminium, zinc.

10.6 Hazardous decomposition products:

Violent exothermic reaction with (some) acids: release of harmful gases/vapours (carbon dioxide). Upon combustion: CO and CO2 are formed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

11.1.1 Test results

- Toxicokinetics: summary

Toxicokinetics (absorption, metabolism, distribution and elimination)

The toxicokinetics of sodium carbonate are well understood. When sodium carbonate comes into contact with body fluids it will dissociate into carbonate and sodium. The carbonate could potentially increase the pH of the blood.

The major extracellular buffer in the blood and the interstitial fluid of vertebrates is the bicarbonate buffer system, described by the following equation:
H2O + CO2 _ H2CO3 _ H+ + HCO3

Carbon dioxide from the tissues diffuses rapidly into red blood cells, where it is hydrated with water to form carbonic acid. This reaction is accelerated by carbonic anhydrase, an enzyme present in high concentrations in red blood cells. The carbonic acid formed dissociates into bicarbonate and hydrogen ions. Most of the bicarbonate ions diffuse into the plasma. Since the ratio of H2CO3 to dissolved CO2 is constant at equilibrium, pH may be expressed in terms of bicarbonate ion concentration and partial pressure of CO2 by means of the Henderson-Hasselbach equation:
pH = pk + log [HCO3-]/aPCO2

The blood plasma of man normally has a pH of 7.40. Should the pH fall below 7.0 or rise above 7.8, irreversible damage may occur. Compensatory mechanisms for acid-base disturbances function to alter the ratio of HCO3 to PCO2, returning the pH of the blood to normal. Thus, metabolic acidosis may be compensated for by hyperventilation and increased renal absorption of HCO3. Metabolic alkalosis may be compensated for by hypoventilation and the excess of HCO3- in the urine (Johnson and Swanson, 1987). Renal mechanisms are usually sufficient to restore the acid-base balance (McEvoy, 1994). The uptake of sodium, via exposure to sodium carbonate, is much less than the uptake of sodium via food. Therefore, sodium carbonate is not expected to be systemically available in the body. Furthermore it should be realised that an oral uptake of sodium carbonate will result in a neutralisation in the stomach due to the gastric acid.

Acute toxicity

sodium carbonate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination
Oral	LD50		2800 mg/kg		Rat	Male/female	Experimental value
Dermal	LD50		>2000 mg/kg		Rabbit		Experimental value
Inhalation	LC50		2.30 mg/l	2 h	Rat	Male	Experimental value

Conclusion

Reproductive toxicity

sodium carbonate

	Parameter	Method	Value	Exposure time	Species	Gender	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Other	≥ 245 mg/kg		Rat		No effect		Experimental value
Effects on fertility									Not determined, exemption according to REACH

Conclusion CMR

Not classified for carcinogenicity

Not classified for mutagenic or genotoxic toxicity

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

sodium carbonate

No (test)data available

Chronic effects from short and long-term exposure

sodium carbonate

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Tingling/irritation of the skin. Affection of the nasal septum.

SECTION 12: Ecological information

12.1 Toxicity:

sodium carbonate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Other	300 mg/l	96 h	Lepomis macrochirus	Static system	Fresh water	Experimental value
Acute toxicity invertebrates	EC50	Other	200 - 227 mg/l	48 h	Ceriodaphnia sp.	Semi-static	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50		242 mg/l	5 day(s)	Algae			Experimental value

Conclusion

Slightly harmful to fishes (LC50(96h) 100-1000 mg/l)

Practically non-toxic to algae (EC50 >100 mg/l)

Slightly harmful to invertebrates (EC50 (48h): 100 - 1000 mg/l)

pH shift

Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2 Persistence and degradability:

Biodegradability: not applicable

12.3 Bioaccumulative potential:

sodium carbonate

Log Kow

Method	Remark	Value	Temperature	Value determination
		-6.19		Estimated value

Conclusion

Low potential for bioaccumulation (Log Kow < 4)

12.4 Mobility in soil:

Low potential for adsorption in soil

12.5 Results of PBT and vPvB assessment:

The criteria of PBT and vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006 do not apply to inorganic substances.

12.6 Other adverse effects:

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Class	
Classification code	

14.4 Packing group:

Packing group	
Labels	

14.5 Environmental hazards:

Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	
Limited quantities	

Sea (IMDG/IMSBC)

14.1 UN number:

Transport	Not subject

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Class	

14.4 Packing group:

Packing group	
Labels	

14.5 Environmental hazards:

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	
Limited quantities	

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Annex II of MARPOL 73/78	

Air (ICAO-TI/IATA-DGR)

14.1 UN number:

Transport	Not subject

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Class	

14.4 Packing group:

Packing group	
Labels	

14.5 Environmental hazards:

Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	

SECTION 15: Regulatory information

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

European legislation:

European drinking water standards

Maximum concentration in drinking water: 200 mg/l (sodium) (Directive 98/83/EC)

Volatile organic compounds (VOC)

Not applicable (inorganic)

National legislation The Netherlands

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 05
Waterbezwaarlijkheid	11

National legislation Germany

TA-Luft	TA-Luft Klasse 5.2.1
WGK	1; Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2)

Natrium Products Inc.

SODIUM BICARBONATE

Safety Data Sheet

1. IDENTIFICATION

Product name: Sodium bicarbonate

Synonyms: Baking soda; Bicarbonate of soda; Sodium acid carbonate; Carbonic acid, monosodium salt.

Manufacturer:

Natrium Products, Inc.
58 Pendleton Street
Cortland, NY 13045
USA

Telephone numbers:

General inquiries: (607) 753-9829
Emergencies (US and Canada):
CHEMTREC (Customer Number 724993)
(800) 424-9300 or 703-527-3887 (collect)

Recommended uses:

Food additive; pharmaceutical ingredient; water treatment; raw material for paper and chemical manufacturing; animal feed additive; pH control.

2. HAZARD IDENTIFICATION

There are no appreciable health or environmental effects associated with this material.

Hazard classification: Not classified

Label elements: No applicable labeling

Other potential health effects:

Eyes: Direct contact may cause irritation due to abrasion.

Skin: Not a skin irritant.

Inhalation: No known effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name: Sodium hydrogen carbonate

Chemical formula: $NaHCO_3$

Synonyms: Baking soda; Bicarbonate of soda; Sodium acid carbonate; Carbonic acid, monosodium salt.

CAS Number: 144-55-8

Concentration (% by Weight): 100%

4. FIRST AID MEASURES

Eye contact: Irrigate with flowing water immediately and continuously for 15 minutes. Consult a physician if necessary.

Skin contact: Wash off in flowing water or shower. If necessary, consult physician.

Ingestion: Do not induce vomiting. Seek medical attention immediately if overdose is taken.

Note to physician: Large doses, particularly in patients with renal insufficiency, have produced systemic alkalosis and/or expansion in the extra-cellular fluid volume with edema.

Inhalation: Remove to fresh air. Seek medical attention if discomfort persists.

5. FIRE-FIGHTING MEASURES

Product is non-combustible. Thermal decomposition products are carbon dioxide and sodium carbonate (soda ash). Carbon dioxide is an asphyxiant, and soda ash is an irritant.

Protective equipment: Self- contained breathing apparatus is necessary if large quantities are involved.

Extinguishing media: Use extinguishing material that is appropriate for fire in the surrounding area.

11. TOXICOLOGICAL INFORMATION

Acute Oral: LD_{50} (rat) > 4000 mg/kg. **Acute Inhalation:** LC_{50} (rat) > 4.74 mg/L.

Eyes: Minimally irritating (rabbit, EPA TSCA 40 CFR 798.4500); Irritating (rabbit, Draize test, dose of 220 mg).

Skin: Slightly irritating (rabbit).

Carcinogenicity: Not listed as a carcinogen or potential carcinogen by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or the U.S. Occupational Safety and Health Administration (OSHA).

12. ECOLOGICAL INFORMATION

Aquatic toxicity:

Fish: LC50 = 7700 mg/L (Rainbow trout, 96-hr. exposure).
Fish: LC50 = 7100 mg/L (Bluegill sunfish, 96-hr. exposure).
Invertebrates: EC50 > 1000 mg/L *(Daphnia magna,* 48-hr. exposure).

Persistence/Bioaccumulation potential: Not expected to persist or bioaccumulate in the environment.

Biodegradation: Not applicable.

Mobility: High potential for movement from soil to groundwater is expected based on aqueous solubility.

13. DISPOSAL CONSIDERATIONS

Not a hazardous material. Dispose in a landfill in accordance with pertinent federal, state and local regulations. Empty containers may be incinerated or discarded as ordinary waste.

14. TRANSPORT INFORMATION

Not regulated by the U.S. Department of Transportation.

15. REGULATORY INFORMATION

CERCLA (40 CFR 302.4): Not a hazardous substance.

RCRA (40 CFR 261): Not a hazardous waste.

TSCA (40 CFR 710): Listed.

OSHA (29 CFR 1910.1200): Not hazardous.

SARA. Title III Sections 302 (40 CFR 355), 313 (40 CFR 372): Not a hazardous or toxic chemical.

European Inventory (EINECS): 205-633-8.

Japanese Inventory (MITI): 1-164.

U.S. Food and Drug Administration: Generally recognized as safe (GRAS) direct food additive (21 CFR 184.1736).

16. OTHER INFORMATION

Maximum use level for drinking water corrosion and scale control: 100mg/L per NSF/ANSI 60 – 2014a.

Issue Date: 5/1/2015 **Supersedes:** 1/9/2012

Revision Number: 002.0

Issue date: 03/17/2015

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product identifier used on the label: Soft Scrub® Advanced Surface Cleaner
Soft Scrub® Total All Purpose Cleaner - Low VC

Other means of identification: 1722768 (Advanced Surface); 1671542 (Total APC)

Recommended use of the chemical and restrictions on use: Kitchen cleaners, Do not mix with other products.

Name, address and telephone number of the chemical manufacturer:
The Dial Corporation, a Henkel Company
7201 E. Henkel Way
Scottsdale AZ 85255

CHEMTREC: 1-800-424-9300 (24 hours daily)
Internet: www.henkelna.com

Emergency telephone number: Medical Emergencies: 1-888-689-9082

2. HAZARDS IDENTIFICATION

The hazards described in this OSHA Globally Harmonized System Safety Data Sheet (SDS) are not intended for consumers, and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Classification of the substance or mixture in accordance with paragraph (d) of §1910.1200

HAZARD CLASS	HAZARD CATEGORY
None	None

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200

Signal word: Not prescribed
Hazard Statement(s):
Not prescribed

Symbol(s): None

Precautionary Statements:

Prevention: Not prescribed
Response: Not prescribed
Storage: Not prescribed
Disposal: Not prescribed

Hazards not otherwise classified: Not available.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

The following chemicals are classified as health hazards in accordance with paragraph (d) of § 1910.1200.

7. HANDLING AND STORAGE

Precautions for safe handling

Do not get in eyes. Do not take internally. Use with adequate ventilation. Avoid generating aerosols and mists.

Conditions for safe storage, including any incompatibilities

Store in original containers in a cool dry area. Storage areas for large quantities (warehouse) should be well ventilated. Keep the containers tightly closed when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Dipropylene glycol monobutyl ether	None	None	None	None

Appropriate engineering controls

Provide local exhaust or general dilution ventilation to keep exposure to airborne contaminants below the permissible exposure limits where mists or vapors may be generated.

Individual protection measures

Respiratory: Air contamination monitoring should be carried out where mists or vapors are likely to be generated, to assure that the employees are not exposed to airborne contaminants above the permissible exposure limits.

Eye: Splash-proof safety glasses are required to prevent eye contact where splashing of product may occur.

Hand/Body: Protective gloves are required where repeated or prolonged skin contact may occur. Protective clothing is required where repeated or prolonged skin contact may occur.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	gel
	Clear
Odor:	floral, woody, fougere
Odor threshold:	Not available.
pH:	10.5 - 11.5
Melting point/ range:	Not available.
Boiling point/range:	Not available.
Flash point:	Not available.
Evaporation rate:	Not available.
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Vapor pressure:	Not available.
Vapor density:	Not available.
Solubility in water:	Soluble
Partition coefficient (n-octanol/water):	Not available.
Autoignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	700 - 1,400 mPa.s
VOC content:	Not available.

Toxicity to algae:

The aquatic toxicity profile of this product has not been determined.

Persistence and degradability

Hazardous substances CAS-No.	Result value	Route of application	Species	Method
2-Propanol, 1-(2-butoxy-1-methylethoxy)-29911-28-2	readily biodegradable	aerobic	95 %	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)

Bioaccumulative potential

The bioaccumulation potential of this product has not been determined.

Mobility in soil

The mobility of this product (in soil and water) has not been determined.

13. DISPOSAL CONSIDERATIONS

Description of waste residues:

Hazardous waste number: Not regulated

Safe handling and disposal methods:

Recommended method of disposal: This product is not a RCRA hazardous waste and can be disposed of in accordance with federal, state and local regulations.

Disposal of uncleaned packages: Place in trash.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper shipping classification may vary by packaging, properties, and mode of transportation.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

Occupational safety and health act: Hazard Communication Standard, 29 CFR 1910.1200(g) Appendix D: The Occupational Safety and Health Administration (OSHA) require that the Safety Data Sheets (SDSs) are readily accessible to employees for all hazardous chemicals in the workplace. Since the use pattern and exposure in the workplace are generally not consistent with those experienced by consumers, this SDS may contain health hazard information not relevant to consumer use.

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

GHS SAFETY DATA SHEET

Spears® Blue-75 Thread Sealant

Date Revised: FEB 2015
Supersedes: DEC 2014

SDS ID: Stock Code SB75

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Spears Blue 75 Thread Sealant
Synonyms: None
Chemical family: Pipe Thread Hydrocarbon Mixture
Producer: Spears Manufacturing Company
15853 Olden Street
Sylmar, CA 91342

Telephone: **800-862-1499 Available during normal business hours**

Emergency: **CHEMTREC 800-424-9300 Available 24 hours**

Section 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Harmful if swallowed. Prolonged or repeated skin contact may cause drying, cracking, or irritation. High vapor concentrations may cause drowsiness and result in irritation of the eyes, nose, and throat and central nervous system (CNS) depression.

GHS Hazard and precautionary statements

WARNING — Serious Eye Irritation (category 2A), H319
Skin Irritation (category 2), H315
Acute oral toxicity (category 4), H302
Acute inhalation toxicity (category 4), H332
May cause drowsiness or dizziness (category 3), H336

Precautionary Statements

P264: Wash skin thoroughly after handling. P280: Wear protective gloves and eye protection. P303 + P361: IF ON SKIN, immediately remove all contaminated clothing and wash before reuse. P305 + P351: IF IN EYES, Remove contact lenses if present and easy to do so, rinse with water for several minutes. P337 + P313: If eye or skin irritation persists – get medical advice/attention. P403 + P223: Store in a cool, well-ventilated place. Keep container tightly closed.

Inhalation: May cause irritation to mucous membranes and upper respiratory tract. In high concentrations, vapors and aerosol mists have a narcotic effect and may cause headache, central nervous system depression, fatigue, dizziness, and nausea. Severe overexposure may cause red blood cell damage.
Chronic: Repeated or prolonged exposure may result in blood, liver, or kidney damage. See Section 11 (Toxicological Information) for additional information.

Ingestion: May cause irritation of the digestive tract, stomach pain, nausea, and vomiting.

Skin contact: May be absorbed through the skin during prolonged or repeated contact, causing irritation, dermatitis, weakness, headache and nausea.

Eye contact: Exposure to vapors or liquid may cause eye irritation.

Carcinogenic The IARC and ACGIH designate Ethylene glycol butyl ether (2-Butoxy-ethanol) and Isopropyl alcohol (2-Propanol) as category 3 – confirmed animal carcinogen with unknown relevance to humans. The ACGIH designates Ethylene glycol butyl ether (2-Butoxyethanol) as category A3– confirmed animal carcinogen with unknown relevance to humans.

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Material information:

Name	CAS No.	Weight %
Ethylene glycol butyl ether Synonym: 2-Butoxyethanol	111-76-2	12-17
Isopropyl alcohol Synonym: 2-Propanol	67-63-0	10-15

**Note:* *The above weight percentages are represented in ranges as estimates. Due to variation among production batches, component percentages may vary.*

Section 4. FIRST AID MEASURES

Inhalation: Move exposed persons to fresh air. If the person is not breathing or breathing is irregular, provide artificial respiration or oxygen by trained personnel. Seek medical attention.

Skin contact: Quickly remove contaminated clothing and shoes. Wash affected skin with soap and water. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. If conscious and alert, rinse the mouth with water. Call a physician or poison control center immediately.

Eye contact: Check for and remove any contact lenses. Immediately consult physician after flushing eyes with tepid water for 15 minutes.

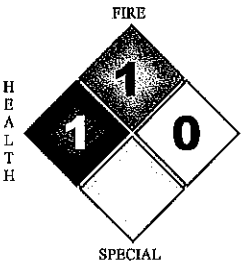
Section 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Small fires — Class B fire-extinguishing media including water spray, foam, CO_2 or dry powder. Do not use a water stream, as this will spread the fire.

Specific hazards: Fire or intense heat may cause violent rupture of product containers. Vapors may form explosive mixtures with air. Application of extinguishing media to hot surfaces requires special precautions. During emergency conditions, overexposure to decomposition products including carbon oxides may cause a health hazard. Symptoms may not be immediately apparent.

Special protective equipment for firefighters: Full protective equipment including self-contained breathing apparatus should be used. Do not allow run-off from fire-fighting to enter drains or water courses.

	NFPA rating:	HMIS rating:
Health:	1*	1
Flammability:	1	1
Instability/reactivity:	0	0
Other:	N/A	H (PPE)



REACTIVITY
Hazardous
F.P. above 100 F
Stable
N/A

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Immediately contact emergency personnel. Evacuate any potentially affected area and isolate personnel from entry. Ventilate closed spaces before entering them. Vapor can collect in lower areas.
Large Spill:	Personnel must have appropriate training, per Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment (Section 8).
Methods for Containment and Clean up	Shut off source if possible and if safe. Eliminate all ignition sources. Prevent entry into waterways, sewers, basements or confined areas. Advise applicable authorities if material has entered sewers or water courses.

Section 7. HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapors. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling. Launder soiled clothing thoroughly before re-use.
Storage:	Keep all containers tightly closed when not in use. Store out of direct sunlight and on an impermeable floor. Do not store with incompatible materials. See Section 10, Stability and Reactivity.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

Name	CAS No.	ACGIH® TLV® Exposure Limits:	Federal OSHA PELs	OSHA PELs 1989 [C]
Ethylene glycol butyl ether Synonym: 2-Butoxyethanol	111-76-2	20 ppm [A]	50 ppm [A]	25 ppm [A]
Isopropyl alcohol Synonym: 2-Propanol	67-63-0	200 ppm [A] 400 ppm [B]	400 ppm [A]	400 ppm [A] 500 ppm [B]

All exposure limits listed are 8-hour time weighted average (TWA) — except where noted otherwise.

[A] Time Weighted Average (TWA) is an average exposure over the course of an 8-hour work shift.
[B] A Short Term Exposure Limit TWA over the course of 15 minutes.
PEL — Permissible Exposure Limit is the maximum 8-hour TWA concentration of a chemical that a worker may be exposed to under Occupational Safety and Health Administration (OSHA) regulations.
[C] Federal OSHA 1989 PELs were vacated but are in use and enforced by many state OSHA plans.

Engineering measures: Local exhaust ventilation is preferable. General ventilation is acceptable if exposure to materials in this section is maintained below applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: When engineering controls are not sufficient to reduce exposure to levels below applicable exposure limits, seek professional advice prior to respirator selection and use. For concentrations less than 10 times the exposure limits, wear a properly fitted NIOSH/ MSHA-approved respirator with organic vapor cartridges.

Skin and body protection: Wear impervious clothing and gloves to prevent contact. Use the manufacturer's degradation and permeation data for protective material selection.

Eye protection: Wear safety spectacles with unperforated sideshields, or goggles.

Hygiene measures: Avoid repeated or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove contaminated clothing and launder before reuse.

Other precautions: Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Blue paste
Physical state (solid/liquid/gas):	Paste
Substance type (pure/mixture):	Mixture
Color:	Blue
Odor:	Mild odor
Molecular weight:	Not Available
pH:	Not Applicable
Boiling point/range (5-95%):	Not Available
Melting point/range:	Not Available
Decomposition temperature:	Not Available
Specific gravity:	1.41
Vapor density:	(AIR = 1) <1
Vapor pressure:	0.88 mm Hg at 68°F
Evaporation rate (Butyl acetate= 1):	0.6
Flash point, method used:	Above 200 °F; UN test N.1
Water solubility:	Slight
VOC Content:	310 grams/liter (SCAQMD Rule 1168 Test Method316A)
Auto-ignition temperature:	921°F; 494°C
Flammable limits in air — lower (%):	1.1
Flammable limits in air — upper (%):	12.7

Section 10. STABILITY AND REACTIVITY

Reactivity: No data available

Stability: Stable under recommended storage conditions.

Possibly hazardous reactions: Vapors may form an explosive mixture with air

Conditions to avoid: Heat, flames, sparks, temperature extremes, and direct sunlight.

Incompatible Materials: Strong oxides, chlorine, acids, alkalies, peroxides.

Hazardous decomposition products: By fire, Carbon dioxide, Carbon monoxide

Polymerization: Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

Acute toxicity: Excessive exposure leads to depression of the central nervous system. Causes eye irritation, moderate skin irritation.

Product information:

Name	CAS No.	Inhalation:	Dermal:	Oral:
Ethylene glycol butyl ether Synonym: 2-Butoxyethanol	111-76-2	LC_{50} (Rat): ~700 ppm, 7 hours; LC_{50} (Guinea pig): ~932 ppm, 4 hours;	LD_{50} (Rat) >2,000 mg/kg LD_{50} (Guinea pig) >2,000 mg/kg	Acute LD_{50} (Rat):1,746 mg/kg Acute LD_{50} (Guinea pig):1,414 mg/kg
Isopropyl alcohol Synonym: 2-Propanol	67-63-0	LC_{50} (Rat): 16,000 ppm, 8 hours	LD_{50} (Rabbit) 12,800 mg/kg	LD_{50} (Rat) 5,000 to 5,045 mg/kg

LC_{50} — The concentration of the chemical in air that kills 50% of the test animals in a given time (usually four hours).

Chronic toxicity: The IARC and ACGIH designates Ethylene glycol butyl ether (2-Butoxy-ethanol) and Isopropyl alcohol (2-Propanol) as category 3 – confirmed animal carcinogen with unknown relevance to humans. Repeated or prolonged exposure in excess of exposure limits in Section 8 may cause damage to the lungs, liver, blood, and kidney.

Sensitization: Not known to cause sensitization in humans.

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity effects: LC_{50} Harlequinfish, Red rasbora 96-hour 4,200 mg/l.
LC_{50} Fathead minnow 96-hour 9,640 to 10,000 mg/l.
EC_{50} Water flea 48-hour 1,550 mg/l.

Persistence The estimated half-life (2-Butoxyethanol) in groundwater ranges from 14 days to 8 weeks; and in soil 7 days to 4 weeks.

Degradability: Expected to be readily biodegradable.

Section 13. DISPOSAL CONSIDERATIONS

Cleanup considerations: This product is not a hazardous waste as defined under RCRA 40 CFR 261. Do not incinerate a closed container. Disposal of this material must be done in accordance with federal, state and/or local regulations. The material destined for disposal must be characterized properly and may differ from the product described in this SDS if mixed with other wastes.

Section 14. TRANSPORT INFORMATION

Please refer to DOT regulation 49 CFR 172.101:

Transport information: This material is not regulated under DOT when transported via U.S. commerce routes: and IATA, and IMO via international routes

Hazardous Materials Description: (DOT and IATA):

UN/identification no.: Not Applicable
Proper shipping name: Not Applicable
Hazard class: Not Applicable
Packing group: Not Applicable
DOT reportable quantity (lbs.): Not Applicable

Section 15. REGULATORY INFORMATION

U.S. federal regulatory information:

U.S. RCRA (40 CFR 261)
This product is not a hazardous waste as defined under RCRA 40 CFR 261.

State and community right-to-know regulations:
The following component(s) of this material are identified on the regulatory lists below:

U.S. TSCA Chemical inventory Section 8(b)
OSHA — This product is determined to be hazardous as defined in the OSHA Hazard Communications Standard (29 CFR 1910.1200)

CERCLA Sections 102a/103 (40 FR 302.4):
No ingredients are listed.

Some Components of this product are listed in the following sections of **SARA**:
SARA Title III Section 302 — N/A
SARA Title III Section 304 — N/A
SARA Title III Section 313 — Ethylene glycol butyl ether (2-Butoxyethanol) 1% reporting threshold
Isopropyl alcohol (2-Propanol) 100 % reporting threshold
SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute health hazard:	Yes
Chronic health hazard:	Yes
Fire hazard:	No
Reactive Hazard:	No
Pressure Hazard:	No

California Proposition 65 Components
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

WHMIS (Canada)
Class D-2B: Material causing other toxic effects

NOTE: *User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.*

Section 16. OTHER INFORMATION

Standards and Certification Listings:

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, Spears Manufacturing Company does not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. Spears assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.

Baxter

SAFETY DATA SHEET

Issuing Date: 02/27/2015 **Revision Date:** 02/27/2015

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier
MSDS Number: 1266502
Product Name: 0.9% Sodium Chloride Injection, USP

Other means of identification
Product Codes: 1A1322, 1A1323, 2B0042, 2B0043, 2B1300, 2B1301, 2B1302, 2B1306, 2B1307, 2B1308, 2B1309, 2B1321, 2B1322Q, 2B1323Q, 2B1324, 4R2180T, 4R2182, 4R2310, 4R2312, 6E1322, 6E1323, 6E1324, FE1323, FE1324D
Synonyms: None

Recommended use of the chemical and restrictions on use
Product Use: Pharmaceutical.
Product Type: Injectable solution
Uses advised against: No information available

Details of the supplier of the safety data sheet
BAXTER HEALTHCARE CORPORATION
DEERFIELD, ILLINOIS 60015
(800) 422-9837 or (224) 948-4770

Emergency telephone number
Rocky Mountain Poison and Drug Center: USA (888) 990-0996
OUTSIDE USA (303) 389-1422
CHEMTREC: USA (800) 424-9300 OUTSIDE USA (743)741-6089

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label Elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Hazards not otherwise classified (HNOC)
Other Information
Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Sodium Chloride	7647-14-5	<1

Water	7732-18-5	>99

4. FIRST AID MEASURES

First Aid Measures

General Advice: Treat symptomatically and supportively.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops.

Skin contact: Wash contaminated skin with soap and water. Get medical attention if irritation develops.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

Most important symptoms and effects, both acute and delayed
No information available.

Indication of any immediate medical attention and special treatment needed
Treat symptomatically. See patient package insert in shipping carton for complete information.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:
Water.

Specific hazards arising from the chemical
No information available.

Special protective equipment for firefighters:
Fire fighters should wear proper protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).

Environmental Precautions
See Section 12 for environmental precautions.

Methods and material for containment and cleaning up
Methods for Containment:
If emergency personnel are unavailable, contain spilled material.
Methods for cleaning up:
For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Technical measures/precautions: None

Conditions for safe storage, including any incompatibilities

Technical measures/conditions: Keep containers tightly closed in a cool, well-ventilated place. Store at room temperature 25 °C (77 °F). Avoid excessive heat.

Incompatible products: No special restrictions on storage with other products.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

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

Component	OSHA- Time Weighted Average:	OSHA- Short Term Exposure Limit:	OSHA- Ceiling Limits	ACGIH- Time Weighted Average:	ACGIH- Short Term Exposure Limit:	ACGIH- Ceiling Limit Value:
Sodium Chloride 7647-14-5	None	None	None	None	None	None
Water 7732-18-5	None	None	None	None	None	None

Appropriate engineering controls

Engineering measures: No special containment is required.

Individual protection measures, such as personal protective equipment

Eye protection: Eye protection not required for normal final product use. Safety glasses with side-shields are recommended for laboratory and manufacturing use.

Hand protection: Not required.

Skin and body protection: Not required.

Respiratory protection: No personal respiratory protective equipment normally required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Liquid
Appearance: Aqueous solution
Color: Clear, Colorless.
Odor: No information available.
Odor Threshold: No information available.
pH: 4.5-7.0
Melting point/range: No information available.
Boiling point/range: No information available.
Flash point: No information available.
Evaporation rate: No information available.
Flammability (solid, gas): No information available.
Flammable limits in air-upper (%): No information available.
Flammable limits in air-lower (%): No information available.
Vapor pressure: No information available.
Vapor Density: No information available.
Density: No information available.
Solubility: No information available.

Partition coefficient (n-octanol/water):	No information available.
Autoignition temperature:	No information available.
Decomposition Temperature:	No information available.
Viscosity:	No information available.
Explosive Properties:	No information available.
Oxidizing Properties:	No information available.

Other Information

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 freeze.

Incompatible materials
None known

Hazardous Decomposition Products
No data available.

11. TOXICOLOGICAL INFORMATION

Component	LC50 Inhalation	LD50 Dermal	LD50 Oral
Sodium Chloride 7647-14-5	> 42 g/m³ (Rat) 1 h	-	= 3 g/kg (Rat)
Water 7732-18-5	-	-	-

Information on likely routes of exposure

Inhalation: Inhalation not likely under normal use conditions.

Eye contact: Not expected to cause eye irritation.

Skin contact: Not expected to cause skin irritation.

Ingestion: Not expected to be hazardous by ingestion.

Information on Toxicological Effects

Symptoms: No information available.

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

Irritation: Not classified.

Corrosivity: Not classified.

Sensitization: Not classified.

Mutagenic effects: No mutagenicity studies have been conducted.

Carcinogenic effects: Not classified

Component	ACGIH	IARC	NTP	OSHA
Sodium Chloride 7647-14-5	-	-	-	-
Water 7732-18-5	-	-	-	-

Reproductive toxicity: Reproductive studies have not been conducted on the product itself.

STOT - single exposure: Not classified.

STOT - repeated exposure: Not classified.

Aspiration Hazard: Not classified.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Component	Ecotoxicity - Water Flea Data	Fish Species Ecotoxicity	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Microtox Data
Sodium Chloride 7647-14-5	340.7 - 469.2 mg/L EC50 48 h 1000 mg/L EC50 48 h	5560 - 6080 mg/L LC50 Lepomis macrochirus 96 h 12946 mg/L LC50 Lepomis macrochirus 96 h 6020 - 7070 mg/L LC50 Pimephales promelas 96 h 7050 mg/L LC50 Pimephales promelas 96 h 6420 - 6700 mg/L LC50 Pimephales promelas 96 h 4747 - 7824 mg/L LC50 Oncorhynchus mykiss 96 h	None.	None.
Water 7732-18-5	None.	None.	None.	None.

Ecotoxicity
No information available
0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulative potential

No information available

Mobility in soil
No information available.

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues / unused products: In accordance with local and national regulations.

Contaminated Packaging: In accordance with local and national regulations.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

U.S. Regulations:

TSCA Inventory List - The product is exempt from TSCA, it is FDA Regulated

OTHER REGULATIONS:

Component	Weight %	RCRA Status:	CERCLA Reportable Quantity:	CERCLA/SARA - 302 Ext. haz. substances:	Listed as Sara 313 title III:
Sodium Chloride 7647-14-5	<1	Not Listed	Not Listed	Not Listed	Not Listed
Water 7732-18-5	>99	Not Listed	Not Listed	Not Listed	Not Listed

STATE REGULATIONS:

Component	California Prop. 65	Minnesota Right-To -Know:	Florida Right-to-Know Reporting List:	Rhode Island Right-to-Know List:	Massachusetts Right-to-Know List:	Pennsylvania Right-to-Know:	New Jersey Right-to-Know:
Sodium Chloride 7647-14-5	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Water 7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

CANADIAN REGULATIONS:

Canada DSL Inventory List - This product complies with DSL

16. OTHER INFORMATION

This data sheet contains changes from the previous version in section(s):
New GHS format.

Additional information:
Not Available.

Prepared by: Baxter Research & Development
Issuing Date: 02/27/2015
Revision Date: 02/27/2015

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.

End of Safety Data Sheet

SAFETY DATA SHEET

Be Right™

1. IDENTIFICATION

Product identifier
Product Name Sodium Chloride Standard Solution, 85.47 ± 0.85 mg

Other means of identification
Product Code(s)
2307542

Safety data sheet number M00374

Component of Kits or Sets 2886800; 2886800CN; 2886900; 2886900CN

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory reagent. Standard solution.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information
Chemical Name Not applicable
Formula Not applicable
CAS No Not applicable
Alternate CAS Number Not applicable
NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not Hazardous Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Flammable properties
Substance does not burn.

Specific hazards arising from the chemical
This product will not burn or explode.

Hazardous combustion products This material will not burn.

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

U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

EC Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

WHMIS Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Do not touch or walk through spilled material. Ventilate affected area. Use personal protective equipment as required.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Avoid release to the environment. 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. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Neutralize spill if necessary. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Dispose of in accordance with local, state and federal regulations or laws.

Emergency Response Guide Number Not applicable

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

pH	7.0
Melting point/freezing point	0 °C / 32 °F
Boiling point / boiling range	100 °C / 212 °F
Evaporation rate	1 (water = 1)
Vapor pressure	17.477 mm Hg / 2.33 kPa at 20 °C / 68 °F
Vapor density (air = 1)	1
Specific gravity (water = 1 / air = 1)	0.99
Partition Coefficient (n-octanol/water)	Not applicable
Soil Organic Carbon-Water Partition Coefficient	Not applicable
Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity	0.99 cP (mPa s) at 20 °C / 68 °F
Kinematic viscosity	1 cSt (mm^2/s) at 20 °C / 68 °F

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	No information available	No data available	No information available

Other Information

Metal Corrosivity	Not classified as corrosive to metal according to GHS criteria
Steel Corrosion Rate	No data available
Aluminum Corrosion Rate	No data available
Bulk density	Not applicable
Explosive properties	Not classified according to GHS criteria.
Explosion data	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Flammable properties	Not classified as flammable according to GHS criteria.
Flammability Limit in Air	

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.
Aggravated Medical Conditions	None known.
Toxicologically synergistic products	None known.
Toxicokinetics, metabolism and distribution	No information available.

Product Acute Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Acute Toxicity Data

Oral Exposure Route	
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Product Skin Corrosion/Irritation Data
No data available.

Ingredient Skin Corrosion/Irritation Data
Toxicological data for ingredients is not indicative of likely harm.

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data
Toxicological data for ingredients is not indicative of likely harm.

Sensitization Information

Product Sensitization Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Product Germ Cell Mutagenicity *invitro* Data
No data available.

Ingredient Germ Cell Mutagenicity *invitro* Data	No data available
Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Germ Cell Mutagenicity *invivo* Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available
Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Bioaccumulation Data No data available

Additional Information

Product Information

Partition Coefficient (n-octanol/water) Not applicable

Ingredient Information

Mobility
Mobility in soil: High mobility. If available, see ingredient data below.

Product Information

Soil Organic Carbon-Water Partition Coefficient Not applicable

Ingredient Information No data available

Additional information

Water solubility

Product Information

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Ingredient Information

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 Working in a well-ventilated area,. Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Special instructions for disposal Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water.

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 Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA and HMIS Classifications

NFPA	**Health hazards** - 0	**Flammability** - 0	**Instability** - 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** - 0	**Flammability** - 0	**Physical hazards** - 0	**Personal protection** - X - See section 8 for more information

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

NIOSH IDLH	*Immediately Dangerous to Life or Health*
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	*no data*

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

SAFETY DATA SHEET

Be Right™

1. IDENTIFICATION

Product identifier
Product Name Sodium Hydroxide 1.600 ± 0.008 N

Other means of identification
Product Code(s)
1437901

Safety data sheet number M00382

UN/ID no UN1824

Component of Kits or Sets 2064000; 2064000RGT; 2272800; 243001; 243001RGT; 243003; 243003RGT; 251232; 251232K; 251233; 251233K; 251239; 251239K; 2687900K; 2690600; 2690800; 2691700; 2922400; 2922400K; 2922401; 2922401K; 2922600; 2922600K; 2922601; 2922601K; 2923200

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory reagent.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information
Chemical Name Not applicable
Formula Not applicable
CAS No Not applicable
Alternate CAS Number Not applicable
NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

Inhalation IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.

Ingestion IF SWALLOWED: Rinse Mouth. Do NOT induce vomiting. Call a physician immediately.

Self-protection of the first aider Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

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 Caution: Use of water spray when fighting fire may be inefficient.

Flammable properties
Not flammable.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products This material will not burn.

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

U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

EC Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special

Sodium hydroxide 3 - 7	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Sodium hydroxide 3 - 7	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Sodium hydroxide 3 - 7	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear tight sealing safety goggles and/or face protection shield.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls
Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

Gas Under Pressure Not classified according to GHS criteria

Appearance aqueous solution **Color** colorless

Odor None **Odor threshold** No data available

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	14	
Melting point/freezing point	~ -6 °C / 21 °F	Estimation based on theoretical calculation

Upper flammability limit:	No data available
Lower flammability limit:	No data available
Flash point	No data available
Method	No information available
Oxidizing properties	Not classified according to GHS criteria.
Reactivity propeties	Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

10. STABILITY AND REACTIVITY

Reactivity propeties
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Chemical stability
Stable under recommended storage conditions.

Special dangers of the product
None reported

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid
Heating to decomposition. Evaporation. Exposure to air or moisture over prolonged periods.

Incompatible materials
Strong acids. Oxidizers. halogenated organic compounds. Aluminum. nitro compounds. Flammable liquids. tin. Zinc. Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosive properties
Not classified according to GHS criteria.

Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature
No data available

Sensitivity to Static Discharge
None reported

Sensitivity to Mechanical Impact
None reported

11. TOXICOLOGICAL INFORMATION

						sources for data
Sodium hydroxide (3 - 7) CAS#: 1310-73-2	Patch test	Human	20 mg	24 hours	Corrosive to skin	RTECS (Registry of Toxic Effects of Chemical Substances)

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (3 - 7) CAS#: 1310-73-2	Standard Draize Test	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS (Registry of Toxic Effects of Chemical Substances)

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Chronic Toxicity Information

Product Repeat Dose Toxicity Data

Oral Exposure Route No data available.

Dermal Exposure Route No data available.

Inhalation (Dust/Mist) Exposure Route No data available.

Inhalation (Vapor) Exposure Route No data available.

Inhalation (Gas) Exposure Route No data available.

Ingredient Repeat Dose Toxicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Water	7732-18-5	-	-	-	-

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data

Aquatic toxicity

Fish	No data available
Crustacea	No data available
Algae	No data available

Terrestrial toxicity

Soil	No data available
Vertebrates	No data available
Invertebrates	No data available

Ingredient Ecological Data

Aquatic toxicity

Fish

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (3 - 7) CAS#: 1310-73-2	96 hours	*Oncorhynchus mykiss*	LC_{50}	45.4 mg/L	IUCLID (The International Uniform Chemical Information Database)

Crustacea

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (3 - 7)	48 Hours	*Daphnia sp.*	EC_{50}	40.4 mg/L	IUCLID (The International Uniform Chemical Information

Ingredient Information

No data available

Additional information

Water solubility

Product Information

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Ingredient Information

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Water (50 - 100) CAS#: 7732-18-5	Soluble	> 1000 mg/L	25 °C	77 °F
Sodium hydroxide (3 - 7) CAS#: 1310-73-2	Completely soluble	420000 mg/L	0 °C	32 °F

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.

US EPA Waste Number D002

Special instructions for disposal If permitted by regulation,. Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Dispose of material in an E.P.A. approved hazardous waste facility.

14. TRANSPORT INFORMATION

DOT

UN/ID no UN1824
Proper shipping name Sodium Hydroxide Solution
Hazard Class 8
Packing Group II
Emergency Response Guide Number 154

TDG

UN/ID no UN1824
Proper shipping name Sodium Hydroxide Solution

Chronic Health Hazard	Yes
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)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb	-	-	X

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

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 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
Water 7732-18-5	-	-	X
Sodium hydroxide 1310-73-2	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA and HMIS Classifications

NFPA	**Health hazards** - 3	**Flammability** - 0	**Instability** - 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** - 3	**Flammability** - 0	**Physical hazards** - 0	**Personal protection** - X - See section 8 for more information

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

NIOSH IDLH	*Immediately Dangerous to Life or Health*
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)

SAFETY DATA SHEET

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1. IDENTIFICATION

Product identifier
Product Name Sodium Hydroxide 0.3636 ± 0.0020 N

Other means of identification
Product Code(s)
1437800

Safety data sheet number M00588

UN/ID no UN1824

Component of Kits or Sets

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory reagent. Standard solution.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information
Chemical Name Not applicable
Formula Not applicable
CAS No Not applicable
Alternate CAS Number Not applicable
NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

Hazards not otherwise classified (HNOC)
Not applicable

4. FIRST AID MEASURES

Description of first aid measures

General advice	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.
Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.
Ingestion	IF SWALLOWED: Rinse Mouth. Do NOT induce vomiting. Call a physician immediately.
Self-protection of the first aider	Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms	See Section 11: TOXICOLOGICAL INFORMATION.

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 Caution: Use of water spray when fighting fire may be inefficient.

Flammable properties
Substance does not burn.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products This material will not burn.

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

U.S. Notice	Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.
EC Notice	Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special

1 - 5%					

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Sodium hydroxide 1 - 5%	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Sodium hydroxide 1 - 5%	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear tight sealing safety goggles and/or face protection shield.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls
Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

Gas Under Pressure Not classified according to GHS criteria

Appearance aqueous solution **Color** colorless

Odor Odorless **Odor threshold** No data available

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	13.5	
Melting point/freezing point	~ -1 °C / 30 °F	Estimation based on theoretical calculation
Boiling point / boiling range	~ 100 °C / 212 °F	Estimation based on theoretical

Upper flammability limit:	No data available
Lower flammability limit:	No data available
Flash point	No data available
Method	No information available
Oxidizing properties	Not classified according to GHS criteria.
Reactivity propeties	Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

10. STABILITY AND REACTIVITY

Reactivity propeties
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Chemical stability
Stable under recommended storage conditions.

Special dangers of the product
None reported

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid
Heat. Evaporation. Freezing. Contact with acid or acid fumes. Incompatibles. Exposure to air or moisture over prolonged periods.

Incompatible materials
Strong acids. Strong bases. alkali metals. Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosive properties
Not classified according to GHS criteria.

Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature
No data available

Sensitivity to Static Discharge
None reported

Sensitivity to Mechanical Impact
None reported

11. TOXICOLOGICAL INFORMATION

Sodium hydroxide (1 - 5%) CAS#: 1310-73-2	Patch test	Human	20 mg	24 hours	Corrosive to skin	RTECS (Registry of Toxic Effects of Chemical Substances)

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (1 - 5%) CAS#: 1310-73-2	Standard Draize Test	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS (Registry of Toxic Effects of Chemical Substances)

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Chronic Toxicity Information

Product Repeat Dose Toxicity Data

Oral Exposure Route No data available.

Dermal Exposure Route No data available.

Inhalation (Dust/Mist) Exposure Route No data available.

Inhalation (Vapor) Exposure Route No data available.

Inhalation (Gas) Exposure Route No data available.

Ingredient Repeat Dose Toxicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium hydroxide	1310-73-2	-	-	-	-

Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data

Aquatic toxicity

Fish	No data available
Crustacea	No data available
Algae	No data available

Terrestrial toxicity

Soil	No data available
Vertebrates	No data available
Invertebrates	No data available

Ingredient Ecological Data

Aquatic toxicity

Fish

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (1 - 5%) CAS#: 1310-73-2	96 hours	*Oncorhynchus mykiss*	LC_{50}	45.4 mg/L	IUCLID (The International Uniform Chemical Information Database)

Crustacea

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (1 - 5%) CAS#: 1310-73-2	48 Hours	*Daphnia sp.*	EC_{50}	40.4 mg/L	IUCLID (The International Uniform Chemical Information Database)

Additional information

Water solubility

Product Information

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Ingredient Information

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Sodium hydroxide CAS#: 1310-73-2	Completely soluble	420000 mg/L	0 °C	32 °F

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.

US EPA Waste Number D002

Special instructions for disposal Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. If permitted by regulation. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

14. TRANSPORT INFORMATION

DOT

UN/ID no	UN1824
Proper shipping name	Sodium Hydroxide Solution
Hazard Class	8
Packing Group	II
Emergency Response Guide Number	154

TDG

UN/ID no	UN1824
Proper shipping name	Sodium Hydroxide Solution
Hazard Class	8
Packing Group	II

IATA

UN/ID no	UN1824
Proper shipping name	Sodium Hydroxide Solution
Hazard Class	8

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
Sodium hydroxide 1310-73-2	1000 lb	-	-	X

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

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 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
Sodium hydroxide 1310-73-2	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA and HMIS Classifications

NFPA	**Health hazards** - 3	**Flammability** - 0	**Instability** - 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** - 3	**Flammability** - 0	**Physical hazards** - 0	**Personal protection** - X - See section 8 for more information

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

NIOSH IDLH	*Immediately Dangerous to Life or Health*
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	*no data*

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value

SAFETY DATA SHEET

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1. IDENTIFICATION

Product identifier
Product Name Sodium Hydroxide 0.1600 ± 0.0007 N

Other means of identification
Product Code(s)
1437700

Safety data sheet number M00864

Component of Kits or Sets

Recommended use of the chemical and restrictions on use
Recommended Use Standard solution.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information
Chemical Name Not applicable
Formula Not applicable
CAS No Not applicable
Alternate CAS Number Not applicable
NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Signal word - Danger

4. FIRST AID MEASURES

Description of first aid measures

General advice Immediate medical attention is required.

Eye contact Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.

Skin contact Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation Remove to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately.

Self-protection of the first aider Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

Indication of any immediate medical attention and special treatment needed

Note to physicians pressure may occur with moist rales, frothy sputum, and high pulse pressure. 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 Caution: Use of water spray when fighting fire may be inefficient.

Flammable properties
Substance does not burn.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products This material will not burn.

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

U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

Chemical Name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick OEL	New Foundland & Labrador OEL
Sodium hydroxide 0.1 - 1	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Sodium hydroxide 0.1 - 1	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Sodium hydroxide 0.1 - 1	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear chemical resistant clothing such as gloves, apron, boots or whole bodysuits made from neoprene, as appropriate.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse.

Environmental exposure controls
Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

Gas Under Pressure Not classified according to GHS criteria

Appearance aqueous solution

Color colorless

Odor Odorless

Odor threshold No data available

Property	Values	Remarks • Method
Molecular weight	No data available	

Flammability Limit in Air

Upper flammability limit:	No data available
Lower flammability limit:	No data available
Flash point	No data available
Method	No information available
Oxidizing properties	Not classified according to GHS criteria.
Reactivity propeties	Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

10. STABILITY AND REACTIVITY

Reactivity propeties
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Chemical stability
Stable under recommended storage conditions.

Special dangers of the product
None reported

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization	Hazardous polymerization does not occur.

Conditions to avoid
Heat. Evaporation. Exposure to air or moisture over prolonged periods.

Incompatible materials
Strong acids. Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosive properties
Not classified according to GHS criteria.

Upper explosion limit	No data available
Lower explosion limit	No data available

Autoignition temperature
No data available

Sensitivity to Static Discharge
None reported

Sensitivity to Mechanical Impact
None reported

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (0.1 - 1) CAS#: 1310-73-2	Patch test	Human	20 mg	24 hours	Corrosive to skin	RTECS (Registry of Toxic Effects of Chemical Substances)

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (0.1 - 1) CAS#: 1310-73-2	Standard Draize Test	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS (Registry of Toxic Effects of Chemical Substances)

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Chronic Toxicity Information

Product Repeat Dose Toxicity Data

Oral Exposure Route No data available.

Dermal Exposure Route No data available.

Inhalation (Dust/Mist) Exposure Route No data available.

Inhalation (Vapor) Exposure Route No data available.

Inhalation (Gas) Exposure Route No data available.

Ingredient Repeat Dose Toxicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available
Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data

Aquatic toxicity

Fish	No data available
Crustacea	No data available
Algae	No data available

Terrestrial toxicity

Soil	No data available
Vertebrates	No data available
Invertebrates	No data available

Ingredient Ecological Data

Aquatic toxicity

Fish

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (0.1 - 1) CAS#: 1310-73-2	96 hours	*Oncorhynchus mykiss*	LC_{50}	45.4 mg/L	IUCLID (The International Uniform Chemical Information Database)

Crustacea

Chemical Name	Exposure	Species	Endpoint	Reported	Key literature references and

Product Information

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Ingredient Information

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Sodium hydroxide (0.1 - 1) CAS#: 1310-73-2	Completely soluble	420000 mg/L	0 °C	32 °F

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.

US EPA Waste Number D002

Special instructions for disposal Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG Not regulated

Note: No special precautions necessary.

Additional information
There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.
If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

National Inventories
TSCA Complies
DSL/NDSL Complies

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide 1310-73-2	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA and HMIS Classifications

NFPA	**Health hazards** - 3	**Flammability** - 0	**Instability** - 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** - 3	**Flammability** - 0	**Physical hazards** - 0	**Personal protection** - X - See section 8 for more information

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

NIOSH IDLH	*Immediately Dangerous to Life or Health*
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	*no data*

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By Hach Product Compliance Department

Issue Date 09-Aug-2016

Revision Date 09-Aug-2016

Revision Note None

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site

SAFETY DATA SHEET

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1. IDENTIFICATION

Product identifier
Product Name Sodium Hydroxide 3.636 ± 0.020 N

Other means of identification
Product Code(s) 1438000

Safety data sheet number M00554

UN/ID no UN1824

Recommended use of the chemical and restrictions on use
Recommended Use Standard solution.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information
Chemical Name Not applicable
Formula Not applicable
CAS No Not applicable
Alternate CAS Number Not applicable
NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Signal word - Danger

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

Inhalation IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.

Ingestion IF SWALLOWED: Rinse Mouth. Do NOT induce vomiting. Call a physician immediately.

Self-protection of the first aider Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

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 Caution: Use of water spray when fighting fire may be inefficient.

Flammable properties
Substance does not burn.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products This material will not burn.

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

U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

EC Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Sodium hydroxide 7 - 13%	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Sodium hydroxide 7 - 13%	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear tight sealing safety goggles and/or face protection shield.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls
Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

Gas Under Pressure Not classified according to GHS criteria

Appearance aqueous solution **Color** colorless

Odor Odorless **Odor threshold** No data available

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	> 14	
Melting point/freezing point	~ 0 °C / 32 °F	Estimation based on theoretical calculation
Boiling point / boiling range	~ 100 °C / 212 °F	Estimation based on theoretical calculation

Flash point	No data available
Method	No information available
Oxidizing properties	Not classified according to GHS criteria.
Reactivity propeties	Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

10. STABILITY AND REACTIVITY

Reactivity propeties
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Chemical stability
Stable under recommended storage conditions.

Special dangers of the product
None reported

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid
Heat. Evaporation. Extreme temperatures. Exposure to air or moisture over prolonged periods.

Incompatible materials
Strong acids. Flammable liquids. Aluminum. tin. Zinc. nitromethane. nitro compounds. halogenated organic compounds. Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosive properties
Not classified according to GHS criteria.

Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature
No data available

Sensitivity to Static Discharge
None reported

Sensitivity to Mechanical Impact
None reported

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

CAS#: 1310-73-2						Chemical Substances)

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (7 - 13%) CAS#: 1310-73-2	Standard Draize Test	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS (Registry of Toxic Effects of Chemical Substances)

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Chronic Toxicity Information

Product Repeat Dose Toxicity Data

Oral Exposure Route No data available.

Dermal Exposure Route No data available.

Inhalation (Dust/Mist) Exposure Route No data available.

Inhalation (Vapor) Exposure Route No data available.

Inhalation (Gas) Exposure Route No data available.

Ingredient Repeat Dose Toxicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium hydroxide	1310-73-2	-	-	-	-

Legend

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data

Aquatic toxicity

Fish No data available

Crustacea No data available

Algae No data available

Terrestrial toxicity

Soil No data available

Vertebrates No data available

Invertebrates No data available

Ingredient Ecological Data

Aquatic toxicity

Fish

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (7 - 13%) CAS#: 1310-73-2	96 hours	*Oncorhynchus mykiss*	LC_{50}	45.4 mg/L	IUCLID (The International Uniform Chemical Information Database)

Crustacea

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (7 - 13%) CAS#: 1310-73-2	48 Hours	*Daphnia sp.*	EC_{50}	40.4 mg/L	IUCLID (The International Uniform Chemical Information Database)

Algae No data available

Water solubility

Product Information

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Ingredient Information

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Sodium hydroxide CAS#: 1310-73-2	Completely soluble	420000 mg/L	0 °C	32 °F

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.

US EPA Waste Number D002

Special instructions for disposal Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. If permitted by regulation. Open cold water tap completely, slowly pour the reacted material to the drain. Flush system with plenty of water. Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

14. TRANSPORT INFORMATION

DOT

UN/ID no	UN1824
Proper shipping name	Sodium Hydroxide Solution
Hazard Class	8
Packing Group	II
Emergency Response Guide Number	154

TDG

UN/ID no	UN1824
Proper shipping name	Sodium Hydroxide Solution
Hazard Class	8
Packing Group	II

IATA

UN/ID no	UN1824
Proper shipping name	Sodium Hydroxide Solution
Hazard Class	8
Packing Group	II
ERG Code	154

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb	-	-	X

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

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 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
Sodium hydroxide 1310-73-2	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA and HMIS Classifications

NFPA	**Health hazards** - 3	**Flammability** - 0	**Instability** - 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** - 3	**Flammability** - 0	**Physical hazards** - 0	**Personal protection** - X - See section 8 for more information

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

NIOSH IDLH	*Immediately Dangerous to Life or Health*
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	*no data*

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those

SAFETY DATA SHEET

Be Right™

1. IDENTIFICATION

Product identifier
Product Name Sodium Hydroxide Solution 5.0 N

Other means of identification
Product Code(s)
245026

Safety data sheet number M00438

UN/ID no UN1824

Component of Kits or Sets 001-H09159.88; 2243100; 2243100K; 2243101

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory Use. Standard solution.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information
Chemical Name Not applicable
Formula Not applicable
CAS No Not applicable
Alternate CAS Number Not applicable
NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

Hazards not otherwise classified (HNOC)
Not applicable

4. FIRST AID MEASURES

Description of first aid measures

General advice

See section 8 for PPE that may be required during handling. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If no local exhaust use approved fume hood and/or respirator. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Remove from exposure, lie down. Immediate medical attention is required. IF IN EYES: Flush eyes for at least 15 minutes. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Eye contact

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Skin contact

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately flush skin with plenty of water for at least 15 (30 or 60) minutes. Immediate medical attention is required. Call a physician immediately. Removal of solidified molten material from skin requires medical assistance. In case of contact with Hydrogen fluoride, anhydrous (UN1052), flush skin and eyes with water for 5 minutes; then, for skin exposures rub on a calcium/jelly combination; for eyes flush with a water/calcium solution for 15 minutes. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Ingestion

IF SWALLOWED: Rinse Mouth. Do NOT induce vomiting. Call a physician immediately.

Self-protection of the first aider

First aider: Pay attention to self-protection. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms and effects, both acute and delayed

Symptoms

See Section 11: TOXICOLOGICAL INFORMATION.

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 Caution: Use of water spray when fighting fire may be inefficient.

Flammable properties
Substance does not burn.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products

This material will not burn.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 10 - 30	Ceiling: 2 mg/m³	TWA: 2 mg/m³ (vacated) Ceiling: 2 mg/m³	IDLH: 10 mg/m³ Ceiling: 2 mg/m³

Chemical Name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick OEL	New Foundland & Labrador OEL
Sodium hydroxide 10 - 30	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Sodium hydroxide 10 - 30	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Sodium hydroxide 10 - 30	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls If no local exhaust use approved fume hood or self-contained breathing apparatus
If no local exhaust use approved fume hood and/or respirator
Showers
Eyewash stations

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Wear tight sealing safety goggles and/or face protection shield.

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection Do not breathe gas/fumes/vapor/spray. If no local exhaust use approved fume hood and/or respirator. In case of inadequate ventilation wear respiratory protection.

General Hygiene Considerations Avoid breathing (dust, vapor, mist, gas). Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear suitable gloves and eye/face protection. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Regular cleaning of equipment, work area and clothing is recommended. Handle in accordance with good industrial hygiene and safety practice. Avoid prolonged or repeated contact with skin. Take off all contaminated clothing and wash it before reuse.

Environmental exposure controls
Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

GHS Metal Corrosivity Classification	Category 1, H290
Steel Corrosion Rate	0 mm/yr / 0 in/yr
Aluminum Corrosion Rate	> 508 mm/yr / > 20 in/yr
Bulk density	Not applicable
Explosive properties	Not classified according to GHS criteria.
Explosion data	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Flammable properties	Not classified as flammable according to GHS criteria.
Flammability Limit in Air	
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Flash point	No data available
Method	No information available
Oxidizing properties	Not classified according to GHS criteria.
Reactivity propeties	Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

10. STABILITY AND REACTIVITY

Reactivity propeties
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Chemical stability
Stable under recommended storage conditions.

Special dangers of the product
None reported

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid
Extreme temperatures. Excessive heat. Freezing conditions. Contact with acid or acid fumes. Exposure to air or moisture over prolonged periods.

Incompatible materials
Acids. Incompatible with strong acids and bases. Incompatible with oxidizing agents.

	type	dose	time		sources for data
Sodium hydroxide (10 - 30) CAS#: 1310-73-2	Rabbit LD_{50}	1350 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Product Skin Corrosion/Irritation Data
No data available.

Ingredient Skin Corrosion/Irritation Data

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (10 - 30) CAS#: 1310-73-2	Patch test	Human	20 mg	24 hours	Corrosive to skin	RTECS (Registry of Toxic Effects of Chemical Substances)

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (10 - 30) CAS#: 1310-73-2	Standard Draize Test	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS (Registry of Toxic Effects of Chemical Substances)

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Chronic Toxicity Information

Product Repeat Dose Toxicity Data

Oral Exposure Route No data available.

Dermal Exposure Route No data available.

Inhalation (Dust/Mist) Exposure Route No data available.

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Germ Cell Mutagenicity *invivo* Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available
Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity — Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data

Aquatic toxicity

Fish	No data available
Crustacea	No data available
Algae	No data available

Terrestrial toxicity

Soil	No data available

Additional information

Product Information

Partition Coefficient (n-octanol/water) Not applicable

Ingredient Information

Chemical Name	Partition Coefficient (n-octanol/water)	Method
Water (50 - 100) CAS#: 7732-18-5	Not applicable	No information available

Mobility
Mobility in soil: High mobility. If available, see ingredient data below.

Product Information

Soil Organic Carbon-Water Partition Coefficient Not applicable

Ingredient Information No data available

Additional information

Water solubility

Product Information

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Ingredient Information

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Water (50 - 100) CAS#: 7732-18-5	Soluble	> 1000 mg/L	25 °C	77 °F
Sodium hydroxide (10 - 30) CAS#: 1310-73-2	Completely soluble	420000 mg/L	0 °C	32 °F

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.

US EPA Waste Number D002

TCSI	Complies
AICS	Complies
NZIoC	Complies

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
TCSI - Taiwan Chemical Substances Inventory
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

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	Yes
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)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb	-	-	X

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

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 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
Water 7732-18-5	-	-	X

End of Safety Data Sheet

Protective equipment and precautions for firefighters
Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (self contained breathing apparatus (SCBA)).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Provide adequate ventilation. Wear personal protection equipment (Section 8).
Environmental precautions
Do not allow to enter into surface water or drains. Ensure waste is collected and contained.
Methods and material for containment and cleaning up
Take up mechanically, placing in appropriate containers for disposal or recovery.
Unsuitable material for containment/taking up: Do not absorb in saw-dust or other combustible absorbents.
Other information
None

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid generation of dust. Provide adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Keep away from flammable, combustible and reducing substances.
Conditions for safe storage, including any incompatibilities
Keep/store only in original container. Store in a well-ventilated place. Keep container tightly closed.
Do not store together with: Combustible substance, reducing agents

Perchlorate containing product - Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate and Section 15 for more information regarding California State regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Occupational exposure limits
Sodium nitrate:

OSHA	PEL	Not Established	
	STEL/ceiling	Not Established	
ACGIH	TWA	Not Established	(2012 TLVs® and BEIs®)
	STEL/ceiling	Not Established	(2012 TLVs® and BEIs®)

Derived No-Effect Level (DNEL) suggested by the manufacturer

Workers (industrial/professional):	
DNEL Human, dermal, long term (repeated):	20.8 mg/kg/day (systemic)
DNEL Human, inhalation, long term (repeated):	36.7 mg/m3 (systemic)

Derived No-Effect Level (DNEL) is the level of exposure to the substance above which humans should not be exposed.

Engineering controls
Use exhaust ventilation to keep airborne concentrations below exposure limits.
Personal Protective Equipment

Eye/face protection	Chemical goggles required all the time.
Skin Protection	Nitrile rubber gloves, over 0.11 mm thickness, > 480 min breakthrough time, recommended.
Respiratory Protection	Wear respiratory protection, where airborne concentrations are expected to exceed exposure limits

General Hygiene Considerations
Avoid contact with eyes and skin. Wash hands thoroughly after handling. Have eye-wash facilities immediately available.

Information on toxicological effects from short and long term exposure

Acute toxicity			Species:	Method:
Acute oral toxicity	LD50:	> 2000 mg/kg bw Data obtained by analogy conclusion	Rat.	OECD Guideline 425
Acute dermal toxicity	LD50:	> 5000 mg/kg bw Data obtained by analogy conclusion	Rat.	OECD Guideline 402
Acute inhalation toxicity	LC50:	> 0.527 mg/L (4-h) (maximum achievable concentration) Data obtained by analogy conclusion	Rat.	OECD Guideline 403
Assessment / classification:		Based on available data, the classification criteria are not met		

Irritant and corrosive effects

Irritation to the skin	Result	Species:	
Equivalent/similar to OECD guideline 404	non-irritant.	Rabbit.	Data obtained by analogy conclusion

Primary dermal irritation index (PDII): 0 of max. 5 (mean) (Time point: 1, 24, 48, 72h)

Irritation to eyes	Result	Species:
OECD Guideline 437	non-irritant.	In vitro study
OECD Guideline 405	Irritant	Rabbit.
Assessment / classification:	Mildly irritating to eyes, category 2B: Causes eye irritation.	

Respiratory or skin sensitisation

Skin sensitization	Result	Species:
OECD Guideline 429	not sensitising.	Mouse.
Respiratory sensitisation	No information available.	
Assessment / classification:	Based on available data, the classification criteria are not met	

Genetic effects

In-vitro genotoxicity	Method	Result	
Gene-mutations microorganisms	Equivalent or similar to OECD 471	negative	(literature information)
Chromosome aberrations mammalian cells	OECD Guideline 473/EU B.10	negative	
In-vivo genotoxicity			
In-vivo unscheduled DNA Synthesis (UDS)	According to Alavantic, D. (1988)	negative	(literature information)
In-vivo micronucleus assay		equivocal	(literature information)
In-vivo chromosome aberrations		equivocal	(literature information)

Assessment / classification:

Overall assessment of data, indicates that sodium nitrate is not genotoxic *in vitro* and *in vivo* .

Based on available data, the classification criteria are not met

Reproductive toxicity

No reliable data available for sodium nitrate. Data obtained from chemically related substance.

Adverse effects on sexual function and fertility

OECD guideline 422.	NOAEL(C):	1500 mg/kg/d	Rat.

Adverse effects on developmental toxicity

OECD guideline 422.	NOAEL(C):	1500 mg/kg/d	Rat.

At the highest dose tested, no effects on fertility or development were observed in this repeated dose toxicity study. Data from other nitrate substances are in line with this study.

Assessment / classification: Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure)

Practical experience / human evidence

No relevant effect have been observed after single exposure to sodium nitrate.

Assessment / classification: Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure)

Several oral repeated dose studies with sodium nitrate are available, however, most of them lack of reliability.

A reliable study with potassium nitrate did not show effects at highest dose tested.

OECD guideline 422.	Effect dose:	Organs affected:
NOAEL(C):	1500 mg/kg bw/day	None

14. TRANSPORTATION INFORMATION

US DOT (49CFR part 172)

UN-No.	1498
UN Proper Shipping Name	SODIUM NITRATE
Hazard class	5.1
Packing group	III
Hazard label(s)	5.1 (oxidizer)
Special marking	No
Special Provision	A1; A29; IB8; IP3; T1; TP33; W1

International Maritime Organization (IMDG Code)

UN-No.	1498
UN Proper Shipping Name	SODIUM NITRATE
Hazard class	5.1
Packing group	III
Marine pollutant	No
Hazard label(s)	5.1 (oxidizer)
Special marking	No
Special Provision	964

International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA)

UN-No.	1498
UN Proper Shipping Name	SODIUM NITRATE
Hazard class	5.1
Packing group	III
Hazard label	5.1 (oxidizer)
Special marking	No

Special handling procedure

None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Other special precautions

None

15. REGULATORY INFORMATION

US Federal

SARA Title III Rules

Section 311/312 Hazard Classes

Acute Health Hazard	Yes (Irritant)
Chronic Health Hazard	No
Fire Hazard	Yes (Oxidizer)
Release of Pressure	No
Reactive Hazard	No

Section 313 Toxic Chemicals

N511 Nitrate compounds (water dissociable; reportable only when in aqueous solution)

Section 302 Extremely Hazardous Substances (EHS)/CERCLA Hazardous Substances

Sodium nitrate is not listed

DHS - Chemical of Interest (Appendix A to 6CFR Part 27)

Sodium nitrate is listed (ACG)

AMERICAN ELEMENTS
THE MATERIALS SCIENCE MANUFACTURER®

SAFETY DATA SHEET

Date Printed: 11/01/2016
Date Revised: 05/15/2015

SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Sodium Nitroferricyanide(III) Dihydrate

Product Code: NA-NFEICY-05-C.2HYD

CAS Number:13755-38-9

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements

1093 Broxton Ave. Suite 2000

Los Angeles, CA 90024

Tel: +1 310-208-0551

Fax: +1 310-208-0351

Emergency telephone number:

Domestic, North America +1 800-424-9300

International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
GHS06 Skull and crossbones
Acute Tox. 3 H301 Toxic if swallowed.
GHS07
Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 4 H332 Harmful if inhaled.
Hazards not otherwise classified No information known.
Label elements
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms
GHS06

Information for doctor
Most important symptoms and effects, both acute and delayed No further relevant information available.
Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Hydrogen cyanide (HCN)
Sodium oxide
Nitrogen oxides (NOx)
Iron oxides
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions: Do not allow product to reach sewage system or any water course.
Methods and material for containment and cleaning up:
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
Prevention of secondary hazards: No special measures required.
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.

SECTION 7. HANDLING AND STORAGE

Handling
Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires: No information known.
Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility:
Store away from water/moisture.
Store away from oxidizing agents.

Change in condition
Melting point/Melting range: Not determined
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined
Flammability (solid, gaseous) Not determined.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Auto igniting: Not determined.
Danger of explosion: Not determined.
Explosion limits:
Lower: Not determined
Upper: Not determined
Vapor pressure: Not applicable.
Density at 20 °C (68 °F): 1.72 g/cm³ (14.353 lbs/gal)
Relative density Not determined.
Vapor density Not applicable.
Evaporation rate Not applicable.
Solubility in / Miscibility with
Water at 20 °C (68 °F): 400 g/l
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not applicable.
kinematic: Not applicable.
Other information No further relevant information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity No information known.
Chemical stability Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions Reacts with strong oxidizing agents
Conditions to avoid No further relevant information available.
Incompatible materials:
Water/moisture
Oxidizing agents
Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Sodium oxide
Nitrogen oxides
Iron oxides
Hydrogen cyanide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Harmful if inhaled.
Harmful in contact with skin.
Toxic if swallowed.
Danger through skin absorption.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

Label 6.1
IMDG, IATA
Class 6.1 Toxic substances.
Label 6.1
Packing group
DOT, IMDG, IATA III
Environmental hazards: Not applicable.
Special precautions for user Warning: Toxic substances
EMS Number: F-A,S-A
Segregation groups Cyanides
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
Transport/Additional information:
DOT
Marine Pollutant (DOT): No
UN "Model Regulation": UN1588, Cyanides, inorganic, solid, n.o.s. (Sodium pentacyanonitrosylferrate(III) dihydrate), 6.1, III

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms
GHS06
Signal word Danger
Hazard statements
H301 Toxic if swallowed.
H312+H332 Harmful in contact with skin or if inhaled.
Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings)
13755-38-9 Sodium pentacyanonitrosylferrate(III) dihydrate
California Proposition 65
Prop 65 - Chemicals known to cause cancer Substance is not listed.
Prop 65 - Developmental toxicity Substance is not listed.
Prop 65 - Developmental toxicity, female Substance is not listed.
Prop 65 - Developmental toxicity, male
13755-38-9 Sodium pentacyanonitrosylferrate(III) dihydrate
Information about limitation of use: For use only by technically qualified individuals.
Other regulations, limitations and prohibitive regulations
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the
market and use must be observed.
Substance is not listed.

SAFETY DATA SHEET

Be Right™

1. IDENTIFICATION

Product identifier
Product Name Sodium Periodate

Other means of identification
Product Code(s) 2107769

Safety data sheet number M00021

UN/ID no UN1479

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory Use.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids	Category 2
Acute toxicity - Oral	Category 3

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Signal word - Danger

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, call a physician.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician.

Inhalation IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED: Rinse Mouth. Call a physician immediately.

Self-protection of the first aider Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Flammable properties
Oxidizer. Contact with combustible material may cause fire. May cause fire.

Specific hazards arising from the chemical
May react violently with. strong reducers.

Hazardous combustion products Iodine. Iodine compounds. Sodium monoxide.

Protective equipment and precautions for firefighters
Wear fire/flame resistant/retardant clothing.

Special protective equipment for fire-fighters
Wear fire/flame resistant/retardant clothing

6. ACCIDENTAL RELEASE MEASURES

U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

EC Notice Only persons properly qualified to respond to an emergency involving hazardous

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	In case of insufficient ventilation, wear suitable respiratory equipment.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls
Do not allow into any sewer, on the ground or into any body of water.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid
Gas Under Pressure	Not classified according to GHS criteria

Appearance	powder	**Color**	white
Odor	None	**Odor threshold**	No data available

Property	Values	Remarks • Method
Molecular weight	213.89 g/mole	
pH	4.5	5% Solution
Melting point/freezing point	300 °C / 572 °F	
Boiling point / boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable at 20 °C / 68 °F	
Vapor density (air = 1)	Not applicable	
Specific gravity (water = 1 / air = 1)	3.865	
Partition Coefficient (n-octanol/water)	No data available	
Soil Organic Carbon-Water Partition Coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature	> 300 °C	
Dynamic viscosity	Not applicable	

10. STABILITY AND REACTIVITY

Reactivity propeties
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Chemical stability
Stable under recommended storage conditions.

Special dangers of the product
None reported

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid
Contact with heat, sparks, open flames or other ignition sources.

Incompatible materials
Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products
Iodine. Iodine compounds. Sodium monoxide.

Explosive properties
Not classified according to GHS criteria. Strong oxidizer. Contact with combustible materials may cause a fire.

Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature
No data available

Sensitivity to Static Discharge
None reported

Sensitivity to Mechanical Impact
None reported

11. TOXICOLOGICAL INFORMATION

NIOSH (RTECS) Number SD4550000

Information on Likely Routes of Exposure

Product Information	Toxic by ingestion.
Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin contact	No known effect based on information supplied.
Ingestion	Toxic if swallowed.
Aggravated Medical Conditions	None known.

Substance. If available, see ingredient data below.

Ingredient Sensitization Data

Skin Sensitization Exposure Route — No data available.

Respiratory Sensitization Exposure Route — No data available.

Chronic Toxicity Information

Product Repeat Dose Toxicity Data

Oral Exposure Route — If available, see ingredient data below.

Dermal Exposure Route — If available, see ingredient data below.

Inhalation (Dust/Mist) Exposure Route — If available, see ingredient data below.

Inhalation (Vapor) Exposure Route — If available, see ingredient data below.

Inhalation (Gas) Exposure Route — If available, see ingredient data below.

Ingredient Repeat Dose Toxicity Data

Oral Exposure Route — No data available

Dermal Exposure Route — No data available

Inhalation (Dust/Mist) Exposure Route — No data available

Inhalation (Vapor) Exposure Route — No data available

Inhalation (Gas) Exposure Route — No data available

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium m-Periodate	7790-28-5	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of Labor)	X - Present

Product Carcinogenicity Data — This Product is by Weight 100% an Individual Pure Chemical Substance

Oral Exposure Route — If available, see ingredient data below

Dermal Exposure Route — If available, see ingredient data below

Inhalation (Dust/Mist) Exposure Route — If available, see ingredient data below

Inhalation (Vapor) Exposure Route — If available, see ingredient data below

Inhalation (Gas) Exposure Route — If available, see ingredient data below

Ingredient Carcinogenicity Data

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data This Product is by Weight 100% an Individual Pure Chemical Substance

Aquatic toxicity

Fish If available, see ingredient data below

Crustacea If available, see ingredient data below

Algae If available, see ingredient data below

Terrestrial toxicity

Soil If available, see ingredient data below

Vertebrates If available, see ingredient data below

Invertebrates If available, see ingredient data below

Ingredient Ecological Data

Aquatic toxicity

Fish No data available

Crustacea No data available

Algae No data available

Terrestrial toxicity

Soil No data available

Vertebrates No data available

Invertebrates No data available

Other Information

Chemical Name	CAS No	Category	Persistent	Bioaccumulation	Inherently Toxic to Aquatic Organisms
Sodium m-Periodate	7790-28-5	-	-	-	-

Persistence and degradability
None known.

Product Biodegradability Data
This Product is by Weight 100% an Individual Pure Chemical Substance.

Ingredient Biodegradability Data

rinsate and dispose of according to local, state, or federal regulations. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P.A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

US EPA Waste Number D001

Special instructions for disposal Work in an approved fume hood. Working in a large container, cautiously add small portions of the material to cold water with agitation. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Verification should be made that such disposal is not inconsistent with any pretreatment agreement your facility may have with the wastewater treatment facility. Dispose of material in an E.P.A. approved hazardous waste facility.

14. TRANSPORT INFORMATION

DOT

UN/ID no	UN1479
Proper shipping name	Oxidizing Solid, N.O.S.
DOT Technical Name	(Sodium Periodate)
Hazard Class	5.1
Packing Group	II
Emergency Response Guide Number	140

TDG

UN/ID no	UN1479
Proper shipping name	Oxidizing Solid, N.O.S.
TDG Technical Name	(Sodium Periodate)
Hazard Class	5.1
Packing Group	II

IATA

UN/ID no	UN1479
Proper shipping name	Oxidizing Solid, N.O.S.
IATA Technical Name	(Sodium Periodate)
Hazard Class	5.1
Packing Group	II
ERG Code	140

IMDG

UN/ID no	UN1479
IMDG Technical Name	(Sodium Periodate)
Hazard Class	5.1
Packing Group	II

Additional information
There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.
If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. State Right-to-Know Regulations

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA and HMIS Classifications

NFPA	**Health hazards** - 2	**Flammability** - 0	**Instability** - 0	**Physical and Chemical Properties** OX
HMIS	**Health hazards** - 2	**Flammability** - 0	**Physical hazards** - 0	**Personal protection** - X - See section 8 for more information

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

NIOSH IDLH	*Immediately Dangerous to Life or Health*
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	*no data*

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By	Hach Product Compliance Department
Issue Date	08-Aug-2016
Revision Date	28-Sep-2016
Revision Note	None

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

SAFETY DATA SHEET

PRODUCT NAME **SODIUM NITRATE**
Product Code: 002/07-US
Date of issue: January 2014 Supersedes: October 2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Sodium Nitrate / Niterox
QSodium Nitrate
Sodium Nitrate Technical Grade
Sodium Nitrate Industrial Grade
Sodium Nitrate Standard Grade
Sodium nitrate Refined Grade - Thermosolar - Crystals

Recommended uses:
Industrial use in formulation of preparations, intermediate use and end-use in industrial settings.
Industrial end-use as energy storage salt.

Restrictions on uses:
Food additive, reagent in water treatment, ingredient in drain cleaners, professional and consumer end-use as fertilizer, formulation of preparations with an end-use as fertilizer.

Supplier
SQM North America
2727 Paces Ferry Rd, Building Two, Suite 1425
Atlanta, GA 30339

Company Telephone/Fax (770) 916 9400 / (770) 916 9404
Emergency Telephone Number (800) 424 9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification of the chemical in accordance with 29CFR §1910.1200

Hazard classes and Hazard categories	Hazard statements
Oxidizing solid, Cat. 3	May intensify fire; oxidizer
Midly irritating to eyes, cat. 2B	Causes eye irritation.

Label elements
Hazard pictograms

Signal word Warning
Hazard Statements
May intensify fire; oxidizer
Causes eye irritation.

Precautionary Statements
Keep away from flammable / combustible / reducing materials.
Wear eye protection. Wash hands thoroughly after handling.
In case of fire: use any suitable mean for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water.
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.
Dispose of contents/container according to local/state/federal regulations.

Other hazards
None

General Chemical

SODIUM THIOSULFATE

Material Safety Data Sheet

A. PRODUCT INFORMATION

TRADE NAME (PRODUCT IDENTIFIER):
SODIUM THIOSULFATE, ANHYDROUS
SODIUM THIOSULFATE, CRYSTAL

CLASSIFICATION & SYMBOL:
Class D2B

CHEMICAL NAME AND/OR SYNONYM:
Sodium Thiosulfate (Sodium thiosulfate pentahydrate)

FORMULA:
$Na_2S_2O_3$
$Na_2S_2O_3 \cdot 5H_2O$

CAS NO:
7772-98-7 (anhydrous)
10102-17-7 (pentahydrate)

PRODUCT USE:
As an "antichlor" in bleaching paper, pulp; as fixer in photography; extraction of silver from ores; as mordant in dyeing; manufacturing leather.

MANUFACTURER/IMPORTER:
General Chemical Performance Products Ltd.
201 City Centre Drive
Mississauga, Ontario L5B 3A3

SUPPLIER/DISTRIBUTOR:
General Chemical Performance Products Ltd.
201 City Centre Drive
Mississauga, Ontario L5B 3A3

EMERGENCY TELEPHONE NO: 866-543-3896

B. PREPARATION INFORMATION

PREPARED BY:
General Chemical Corporation
Product Safety Department
973-515-1840

PREVIOUS ISSUE DATE: 5/2001

CURRENT ISSUE DATE: 03-18-04

C. TOXICOLOGICAL PROPERTIES

INHALATION:
Inhalation of dust or mist may irritate respiratory tract. If heated to the point where sulfur dioxide gas is driven off, then this gas is highly irritating to the respiratory tract.

INGESTION:
May irritate gastrointestinal tract causing purging if large quantity ingested. Generally considered low toxicity.

SKIN:
Dust or mist may cause irritation from prolonged contact. Aqueous solutions may cause irritation from repeated or prolonged contact.

EYES:
Dust, mist or solutions may irritate or burn the eyes and cause temporary conjunctivitis.

ACUTE TOXICITY:
Low toxicity.
Doses of 8 g/kg (oral, rat) were non-toxic.

EXPOSURE LIMITS:
None established for product.

TLV: 5 mg/m^3 for SO_2
STEL: 10 mg/m^3 for SO_2

CHRONIC TOXICITY:
Not available.

OTHER:
Not available.

BIOLOGICAL EXPOSURE INDICES (BEI):
Not available.

G. HAZARDOUS INGREDIENTS (MIXTURES ONLY)

MATERIAL OR COMPONENT/C.A.S. #	CONCENTRATION	HAZARD DATA
Not applicable		

H. PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION:
For dusty or misty conditions wear a NIOSH-approved dust or mist respirator. If sulfur dioxide should be released wear a NIOSH-approved self-contained breathing apparatus or supplied-air respirator or alternate choice approved for this gas.

EYES AND FACE:
For dusty or misty exposure, wear chemical safety goggles and hard hat (or other head covering). Do not wear contact lenses. Eyes must be protected if dissolving this material in water.

HANDS, ARMS, AND BODY:
Wear full work clothing, including long sleeved shirt, trousers and cotton gloves for dry product handling. These should be exchanged for impervious ones for solutions or where contact is repeated.

STORAGE:
Store in a cool, dry area, away from acids or oxidizers.
Keep container closed when not in use.

NORMAL HANDLING:
Avoid contact with skin, eyes and clothing. Avoid breathing dust or mist. Use good personal hygiene and housekeeping.

ENGINEERING CONTROLS:
Provide local exhaust if dusty or misty conditions prevail or if there is release of sulfur dioxide gas. Keep incompatible materials out of hood, ducts, etc. Provide eye-wash facilities convenient to areas of use or handling..

ENVIRONMENTAL:

DEGRADABILITY:
Not applicable.

AQUATIC TOXICITY:
24,000 mg/l / 96 hr. / mosquito fish / TL_m / turbid water @ 22-24C

SPILL OR LEAK (ALWAYS WEAR PERSONAL PROTECTIVE EQUIPMENT):
Promptly shovel or sweep up dry chemical with a minimum of dusting and place in empty container with cover. Cautiously spray residue with plenty of water to complete clean-up.

WASTE DISPOSAL:
Dispose of waste consistent with the requirements of local and/or provincial waste disposal authorities.

STI
STIA

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Sodium thiosulfate
HCI PRODUCT ID NUMBER:	02842
SYNONYMS:	none
CHEMICAL FAMILY NAME:	Inorganic, salt
	NFPA HAZARD RATINGS (H-F-R): 1-0-0
	HMIS HAZARD RATINGS (H-F-R): 1-0-0
DISTRIBUTOR:	HCI U.S.A. DISTRIBUTION COMPANIES, INC. TECHNICAL RESOURCE CENTER 6529 S. BROADWAY ST. LOUIS, MO 63111 (314) 353-6500

IN CASE OF EMERGENCY CALL: CHEMTREC 1-800-424-9300

2. COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT	CAS No.	PERCENT
Sodium thiosulfate	007772-98-7	>99

Trace impurities and additional material names not listed above may also appear in the Regulatory Information Section (Section 15) towards the end of the MSDS. These materials may be listed for local "Right to Know" compliance and for other reasons.

3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********

Caution!
Contact with the eyes and skin can cause irritation.
Harmful if inhaled.

Continued

****

POTENTIAL HEALTH EFFECTS

SKIN: Contact with the skin may cause irritation.

EYES: Contact with the eyes may cause irritation, tearing or burns.

protective clothing when fighting chemical fires.
Cool fire-exposed containers with water spray.
Use water spray to disperse vapors and to provide protection persons attempting to stop leak.

FIRE HAZARDS: None known

---

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS: Contain spill and ventilate area. Sweep up and containerize disposal.

LARGE SPILLS: Contain spill and ventilate area. Permit only trained person wearing full protective equipment to enter the spill area. C the spill in a waste container or remove with a vacuum truck. Prevent spill from entering natural watercourses.

Wear complete protective clothing when cleaning up chemical spills.

Spills and releases may have to be reported to federal and/or local authorities. See the Regulatory Information section (section 15) regarding reporting requirements.

Continued

7. HANDLING AND STORAGE INFORMATION

HANDLING: Avoid contact with skin, eyes, and clothing.
Avoid breathing product dust.
Do not take internally.
Wash thoroughly after handling this material.

STORAGE: Keep container closed when not in use.
Store in a cool, dry place.
Protect against physical damage.

---

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Special ventilation is not required under normal use. Use local exhaust ventilation where dust, mist, or spray may be generated.

PERSONAL PROTECTIVE EQUIPMENT

POLYMERIZATION: Polymerization will not occur.

---

11. TOXICOLOGICAL INFORMATION

IMMEDIATE EFFECTS

LD50: 5200 mg/kg - intraperitoneal - mouse
LDLo: 4 gm/kg - subcutaneous - rabbit
LDLo: 6 gm/kg - subcutaneous - frog

Continued

DELAYED EFFECTS (CHRONIC AND SUBCHRONIC)

CARCINOGENICITY: No data available

MUTAGENICITY: No data available

EPIDEMIOLOGY: No data available

TERATOGENICITY: No data available

REPRODUCTIVITY: No data available

NEUROTOXICITY: No data available

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12. ECOLOGICAL INFORMATION

Fish toxicity: 2000 ug/L 5 month(s) LETH (mortality) Spotfin shiner (Notropis spilopterus)
Invertebrate toxicity: <520000 ug/L 48 month(s) LTCN (Immobilization) Water flea (Daphnia magna)
Algal toxicity: 22000 ug/L 1-1.5 year(s) (Photosynthesis) Blue-green algae (Spirulina labyrinthiformis)

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13. DISPOSAL CONSIDERATIONS

RCRA WASTE:	Yes
RCRA ID NUMBER:	N/AP
VOC CONTENT (lbs/gal):	N/AP

MASSACHUSETTS SUBSTANCE LIST:
Not listed

Continued

NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST:
Not listed

PENNSYLVANIA HAZARDOUS SUBSTANCE LIST:
Not listed

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16. OTHER INFORMATION

CREATION DATE: 06/11/1997
REVISION DATE: 06/11/1997

The information herein is presented in good faith and is believed to be correct as of the date hereof. However, HCI makes no representation as to the completeness and accuracy thereof. Users must make there own determination as to the suitability of the product for their purposes prior to use.

No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature with respect to the product or to the information herein is made hereunder. HCI shall in no event be responsible for any damages of whatsoever nature directly or indirectly resulting from the publication, or use of, or reliance upon the information contained herein.

End of Document

World Headquarters
Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Sodium Thiosulfate 0.2000 ± 0.0010 N
Catalog Number: 2267500

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M03181
Chemical Name: Not applicable
CAS Number: Not applicable
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Intended Use: Laboratory Reagent Standard solution Laboratory reagent

2. HAZARDS IDENTIFICATION

This mixture is not classified as hazardous per GHS (UN publication ST/SG/AC.10/36/Add.3)
GHS Classification:
Hazard categories: Not applicable
GHS Label Elements:
Not applicable

Hazard statements: Not applicable
Precautionary statements: Not applicable
HMIS:
Health: 0
Flammability: 0
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.
NFPA:
Health: 0
Flammability: 0
Reactivity: 0
Symbol: Not applicable
WHMIS Hazard Classification: Not applicable
WHMIS Symbols: Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:
Sodium Thiosulfate

CAS Number: 7772-98-7
Chemical Formula: $Na_2S_2O_3$ $5H_2O$
GHS Classification: Skin Irrit 2, H315; Eye Irrit 2, H319, STOT SE 3, H335
Percent Range (Trade Secret): 1.0 - 5.0
Percent Range Units: weight / weight
PEL: 15 mg/m^3 as total dust; 5 mg/m^3 as respirable dust
TLV: 10 mg/m^3 as inhalable dust

Ingestion (First Aid): Do not induce vomiting. Give large quantities of water. Call physician immediately. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.
Extinguishing Media: Use media appropriate to surrounding fire conditions
Extinguishing Media NOT To Be Used: Not applicable
Fire / Explosion Hazards: None reported
Hazardous Combustion Products: None reported

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:
Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.
Containment Technique: Stop spilled material from being released to the environment.
Clean-up Technique: If permitted by regulation, Absorb spilled liquid with non-reactive sorbent material. Place material in a plastic bag. Mark bag 'Non-hazardous trash', and dispose of as normal refuse. Otherwise, Pick up spill for disposal and place in a closed container Dispose of in accordance with local, state and federal regulations or laws.
Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.
DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.
Storage: Keep container tightly closed when not in use.
Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment:
Eye Protection: safety glasses with top and side shields
Skin Protection: lab coat
Inhalation Protection: adequate ventilation
Precautionary Measures: Avoid contact with: eyes Wash thoroughly after handling.
TLV: Not established
PEL: Not established
For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless
Physical State: Liquid
Molecular Weight: Not applicable
Odor: None
Odor Threshold: Not applicable
pH: 7.9
Metal Corrosivity:

This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.
This product does NOT contain any OSHA listed carcinogens.

Symptoms/Effects:
Ingestion: None reported
Inhalation: No effects anticipated
Skin Absorption: No effects anticipated
Chronic Effects: No effects anticipated Not applicable
Medical Conditions Aggravated: None reported

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product. Mobility in soil: No data available Based on classification principles, not classified as hazardous to the environment.
Ingredient Ecological Information: Sodium Carbonate: Lepomis macrochirus 96 hr LC50 = 300 mg/L; Daphnia magna 48 hr EC50 = 265 mg/L. Tetrasodium EDTA: Bluegill LC50 96hr = 410 mg/l; Lepomis macrochirus 96 hr LC50 = 157-2070 mg/L; Daphnia magna LC50 24 hr = 625 mg/L
Sodium Thiosulfate: Gambusia affinis 96 hr LC50 = 24000 mg/L; Ankistrodesmus falcatus 1 hr 64 mg/L. CEPA Statement: Persistent, not bioaccumulative or inherently toxic to aquatic organisms.
Toluene: 96 hr Oncorhynchus mykiss LC50 = 5.8 mg/L; 48 hr Daphnia magna EC50 = 11.5 mg/L; 72 hr Selenastrum capriconutum ErC50 = 12.5 mg/L

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: U220
Special Instructions (Disposal): Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water. If permitted by regulation, Otherwise, Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.
Empty Containers: Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.
NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:
D.O.T. Proper Shipping Name: Not Currently Regulated
Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
T.D.G.:
Proper Shipping Name: Not Currently Regulated
Hazard Class: NA
Subsidiary Risk: NA
UN Number/PIN: NA
Packing Group: NA
I.C.A.O.:
I.C.A.O. Proper Shipping Name: Not Currently Regulated
Hazard Class: NA
Subsidiary Risk: NA

irritation. H336 May cause drowsiness or dizziness. H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. H401 Toxic to aquatic life.
Revision Summary: . Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).
Date of MSDS Preparation:
Day: 03
Month: December
Year: 2014
MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350
CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

COLGATE-PALMOLIVE Company
SAFETY DATA SHEET

SOFTSOAP ANTIBACTERIAL LIQUID HAND SOAP

This industrial Safety Data Sheet provides health and safety information for occupational use only.

Version 1.0 | SDS Number: 660000000608 | Revision Date: 06/09/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : SOFTSOAP ANTIBACTERIAL LIQUID HAND SOAP

Product code : 200000045435

: B02960040001

Manufacturer or supplier's details

Company : Colgate-Palmolive Co
300 Park Avenue
New York, NY 10022

Telephone : US: Consumer Affairs - 1-800-468-6502

Emergency telephone number : For emergencies involving spill, leak, fire, exposure or accident call CHEMTREC (24hr) at (800) 424-9300 or (703) 527-3887.

Medical Emergency (24HR): For MEDICAL EMERGENCIES involving this product call: (888) 489-3861

Recommended use of the chemical and restrictions on use

Recommended use : A formulated fragrance for consumer products.

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Physical state	liquid
Colour	colourless

GHS Classification

Skin irritation : Category 2

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :

Signal word : Warning

Hazard statements : H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements	:	**Prevention:** P264 Wash skin thoroughly after handling. P280 Wear eye protection/ face protection. P280 Wear protective gloves. **Response:** P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332 + P313 If skin irritation occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse.

Potential Health Effects

Inhalation	:	Overexposure may cause respiratory tract irritation.
Skin	:	Causes skin irritation. Prolonged contact may cause allergic dermatitis.
Eyes	:	Causes eye irritation on direct contact.
Ingestion	:	May be harmful if swallowed in large quantities.
Aggravated Medical Condition	:	None known.

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.
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.
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.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
CETRIMONIUM CHLORIDE	112-02-7	>= 1 - < 5

GLYCERIN	56-81-5	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

If inhaled	: Remove victim to fresh air. Get medical attention, if symptoms persist.
In case of skin contact	: Flush skin with large amounts of water. If irritation develops and persists, get medical attention.
In case of eye contact	: Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
If swallowed	: Drink 8 ounces of clear water. Get medical attention.
Most important symptoms and effects, both acute and delayed	: Causes skin irritation. Causes serious eye irritation.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Hazardous combustion products	: No hazardous combustion products are known
Special protective equipment for firefighters	: Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protection recommended in Section 8 of the SDS.
Methods and materials for containment and cleaning up	: Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

SECTION 7. HANDLING AND STORAGE

Conditions for safe storage	: Store at controlled room temperature at 20-25°C (68-77°F).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis

		(Form of exposure)	ters / Permissible concentration	
GLYCERIN	56-81-5	TWA (mist, respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (mist, total dust)	15 mg/m3	OSHA Z-1
		TWA (Mist - total dust)	10 mg/m3	OSHA P0
		TWA (Mist - respirable fraction)	5 mg/m3	OSHA P0

Engineering measures : In an industrial work environment, no special precautions or control measures are required.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Protective measures : In an industrial work environment, if a splash is likely, chemical goggles may be needed. Prolonged skin contact may require protective gloves. For consumer use, no unusual precautions are necessary.

Hygiene measures : In an industrial work environment, avoid eye and prolonged skin contact.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : colourless

pH : 8.6

Flash point : > 200 °F

Density : > 0.0000 g/cm3

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

Components:

CETRIMONIUM CHLORIDE:

Acute oral toxicity	:	LD50 (Rat): 450 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	LD50 (Rabbit): 429 mg/kg Method: OECD Test Guideline 402

GLYCERIN:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Method: No information available.

Skin corrosion/irritation

Causes skin irritation.

Components:

CETRIMONIUM CHLORIDE:
Result: Corrosive after 1 to 4 hours of exposure

GLYCERIN:
Result: No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

CETRIMONIUM CHLORIDE:
Result: Irreversible effects on the eye

GLYCERIN:
Remarks: No data available

Respiratory or skin sensitisation

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

Components:

CETRIMONIUM CHLORIDE:
Exposure routes: Inhalation
Result: Does not cause respiratory sensitisation.

Exposure routes: Dermal
Result: Does not cause skin sensitisation.

GLYCERIN:
Exposure routes: Inhalation
Remarks: No data available

Exposure routes: Dermal
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

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: This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the SDS.

SECTION 12. ECOLOGICAL INFORMATION

The product has not been tested as a whole for environmental toxicity. However, environmental information on the ingredients in this product have been reviewed by the Environmental, Health and Safety group of Colgate-Palmolive and determined to have an acceptable environmental profile. This evaluation is based on available information on individual ingredients, interactions of ingredients, and similar ingredients. Biodegradability claims are supported by data on ingredients (i.e., surfactants are biodegradable) or testing conducted on the final product (i.e., This product is biodegradable).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environment agency for specific rules). Do not dump in sewers, any body of water or on the ground.

SECTION 14. TRANSPORT INFORMATION

DOT : Not regulated.

TDG : Not regulated.

IATA : Not regulated.

IMDG : Not regulated.

ADR :

International Regulation

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Toxic by ingestion, Moderate skin irritant, Severe eye irritant

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)
HYDROGEN PEROXIDE	7722-84-1	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

GLYCERIN	56-81-5

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

GLYCERIN	56-81-5
HYDROGEN PEROXIDE	7722-84-1

Pennsylvania Right To Know

WATER	Water
GLYCERIN	56-81-5

New Jersey Right To Know

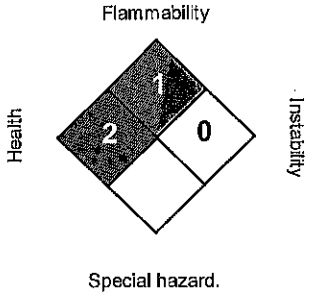
WATER	Water
CETRIMONIUM CHLORIDE	112-02-7
GLYCERIN	56-81-5
LAURAMIDOPROPYLDIMETHYLAMINE OXIDE	61792-31-2

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.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Disclaimer: The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

SAFETY DATA SHEET

Be Right™

1. IDENTIFICATION

Product identifier
Product Name SPADNS Reagent for Fluoride

Other means of identification
Product Code(s) 44417

Safety data sheet number M00481

UN/ID no UN1789

Component of Kits or Sets

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory Use. Determination of fluoride.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information
Chemical Name Not applicable
Formula Not applicable
CAS No Not applicable
Alternate CAS Number Not applicable
NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

4. FIRST AID MEASURES

Description of first aid measures

General advice Immediate medical attention is required. Do not breathe dust/fume/gas/mist/vapors/spray. 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. Do not get in eyes, on skin, or on clothing. Call a POISON CENTER or doctor if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Call a physician immediately.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash hands thoroughly after handling.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a POISON CENTER or doctor if you feel unwell.

Ingestion IF SWALLOWED. Immediate medical attention is required. Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Call a POISON CENTER or doctor/physician if you feel unwell.

Self-protection of the first aider Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. 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.

Flammable properties
During a fire, this product decomposes to form toxic gases. Contact with metals may evolve flammable hydrogen gas. During a fire, irritating and highly toxic gases may be generated by thermal decomposition.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products This material will not burn.

container tightly closed.

Flammability class Not applicable

Incompatible materials May react violently in contact with:. Strong bases. OXIDIZERS. Incompatible with:. Metals. Incompatible with strong acids and bases. Incompatible with oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrochloric Acid (10 - 20%) CAS#: 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
Sodium Arsenite (0 - 10%) CAS#: 7784-46-5	TWA: 0.01 mg/m³	TWA: 10 µg/m³	IDLH: 5 mg/m³ As Ceiling: 0.002 mg/m³ As 15 min
Zirconium Oxychloride (0 - 10%) CAS#: 7699-43-6	STEL: 10 mg/m³ TWA: 5 mg/m³	TWA: 5 mg/m³ (vacated) TWA: 5 mg/m³ (vacated) STEL: 10 mg/m³	IDLH: 25 mg/m³ Zr TWA: 5 mg/m³ except Zirconium tetrachloride Zr STEL: 10 mg/m³ Zr

Chemical Name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick OEL	New Foundland & Labrador OEL
Hydrochloric Acid (10 - 20%) CAS#: 7647-01-0	Ceiling: 2 ppm Ceiling: 3 mg/m³	Ceiling: 2 ppm	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7.5 mg/m³	Ceiling: 2 ppm
Sodium Arsenite (0 - 10%) CAS#: 7784-46-5	TWA: 0.01 mg/m³	TWA: 0.01 mg/m³	TWA: 0.01 mg/m³	NDF	TWA: 0.01 mg/m³
Zirconium Oxychloride (0 - 10%) CAS#: 7699-43-6	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 5 mg/m³	NDF	TWA: 5 mg/m³

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Hydrochloric Acid (10 - 20%) CAS#: 7647-01-0	Ceiling: 5 ppm Ceiling: 7.5 mg/m³	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7.5 mg/m³	Ceiling: 2 ppm	Ceiling: 2 ppm
Sodium Arsenite (0 - 10%) CAS#: 7784-46-5	NDF	NDF	NDF	TWA: 0.01 mg/m³ STEL: 0.05 mg/m³	TWA: 0.01 mg/m³
Zirconium Oxychloride (0 - 10%) CAS#: 7699-43-6	NDF	NDF	NDF	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 5 mg/m³

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Hydrochloric Acid (10 - 20%) CAS#: 7647-01-0	Ceiling: 5 ppm Ceiling: 7.5 mg/m³	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7 mg/m³
Sodium Arsenite (0 - 10%) CAS#: 7784-46-5	TWA: 0.1 mg/m³	NDF	NDF
Zirconium Oxychloride (0 - 10%) CAS#: 7699-43-6	TWA: 5 mg/m³ STEL: 10 mg/m³	NDF	NDF

Partition Coefficient (n-octanol/water)	Not applicable
Soil Organic Carbon-Water Partition Coefficient	Not applicable
Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity	No data available
Kinematic viscosity	No data available

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

Other Information

Metal Corrosivity	Not classified as corrosive to metal according to GHS criteria
Steel Corrosion Rate	5.2578 mm/yr / 0.207 in/yr
Aluminum Corrosion Rate	
Bulk density	Not applicable
Explosive properties	Not classified according to GHS criteria.
Explosion data	Not Flammable, but reacts with most metals to form flammable hydrogen gas. During a fire, corrosive and toxic gases may be generated by thermal decomposition.
Upper explosion limit	No data available
Lower explosion limit	No data available
Flammable properties	During a fire, this product decomposes to form toxic gases. Contact with metals may evolve flammable hydrogen gas. During a fire, irritating and highly toxic gases may be generated by thermal decomposition.
Flammability Limit in Air	
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Flash point	No data available
Method	No information available
Oxidizing properties	Not classified according to GHS criteria.

Toxicologically synergistic products	None known.
Toxicokinetics, metabolism and distribution	See ingredients information below.

Chemical Name	Toxicokinetics, metabolism and distribution
Hydrochloric Acid (10 - 20%) CAS#: 7647-01-0	Low concentrations of hydrochloric acid solution do not seem to cause adverse effects to animals and its corrosivity may be greatly attributed to any acute deaths, therefore it is not classified for acute toxicity.

Acute Toxicity Information

Acute toxicity Based on the classification principles the classification criteria are not met.

STOT - single exposure May cause respiratory irritation. and/or. May cause drowsiness or dizziness.

Aspiration hazard Based on the classification principles the classification criteria are not met.

Product Acute Toxicity Data Test data reported below

Oral Exposure Route No data available

Key literature references and sources for data
Outside testing

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Other Exposure Routes No data available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (dermal)	34,626.00 mg/kg

Ingredient Acute Toxicity Data

Oral Exposure Route

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium Arsenite (0 - 10%) CAS#: 7784-46-5	Rat LD_{50}	41 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)
Zirconium Oxychloride (0 - 10%) CAS#: 7699-43-6	Rat LD_{50}	2950 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)
Chemical Name	**Endpoint type**	**Reported dose**	**Exposure time**	**Toxicological effects**	**Key literature references and sources for data**
Hydrochloric Acid (10 - 20%) CAS#: 7647-01-0	Man LD_{Lo}	2.857 mg/kg	None reported	**Vascular** BP lowering not characterized in autonomic section **Lungs, Thorax, or Respiration** Respiratory depression **Gastrointestinal** Other changes	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data

Hydrochloric Acid (10 - 20%) CAS#: 7647-01-0	Existing human experience	Human	None reported	None reported	Corrosive to eyes	No information available
Sodium Arsenite (0 - 10%) CAS#: 7784-46-5	Existing human experience	Human	None reported	None reported	Eye irritant	No information available

Sensitization Information

Sensitization Based on the classification principles the classification criteria are not met.

Product Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Chronic Toxicity Information

Chronic toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects.

STOT - repeated exposure Based on the classification principles the classification criteria are not met.

Product Repeat Dose Toxicity Data

Oral Exposure Route No data available.

Dermal Exposure Route No data available.

Inhalation (Dust/Mist) Exposure Route No data available.

Inhalation (Vapor) Exposure Route No data available.

Inhalation (Gas) Exposure Route No data available.

Other Exposure Routes No data available.

Ingredient Repeat Dose Toxicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route

Inhalation (Gas) Exposure Route No data available

Other Exposure Routes No data available

Carcinogenicity

Inhalation (Gas) Exposure Route No data available

Other Exposure Routes No data available

Ingredient Germ Cell Mutagenicity *Invivo* Data

Oral Exposure Route Toxicological data for ingredients is not indicative of likely harm.

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Other Exposure Routes No data available

Reproductive toxicity
Based on the classification principles the classification criteria are not met.

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Other Exposure Routes No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium Arsenite (0 - 10%) CAS#: 7784-46-5	Rat TD_{Lo}	0.05478 mg/kg	None reported	**Effects on Embryo or Fetus** Abortion **Effects on Newborn** Stillbirth	RTECS (Registry of Toxic Effects of Chemical Substances)
Chemical Name	**Endpoint type**	**Reported dose**	**Exposure time**	**Toxicological effects**	**Key literature references and sources for data**
Sodium Arsenite (0 - 10%) CAS#: 7784-46-5	Rat TD_{Lo}	41 mg/kg	None reported	**Effects on Embryo or Fetus** Fetal death Fetotoxicity (except death e.g. stunted fetus)	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Other Exposure Routes No data available

12. ECOLOGICAL INFORMATION

Vertebrates No data available

Invertebrates No data available

Other Information

Canadian Environmental Protection Act (CEPA) - Domestic Substances List (DSL): Environmentally Hazardous Substances Categorizations				
Chemical Name	**Category**	**Persistent**	**Bioaccumulation**	**Inherently Toxic to Aquatic Organisms**
Sodium Arsenite (0 - 10%) CAS#: 7784-46-5	Inorganics	Yes	No	Yes

Persistence and degradability
None known.

Product Biodegradability Data
If available, see ingredient data below.

Ingredient Biodegradability Data
Test data reported below

Chemical Name	Test method	Biodegradation	Exposure time	Results
Hydrochloric Acid (10 - 20%) CAS#: 7647-01-0	None reported	None reported	None reported	Readily biodegradable

Bioaccumulation
If available, see ingredient data below.

Product Bioaccumulation Data Test data reported below. If available, see ingredient data below.

Ingredient Bioaccumulation Data

Chemical Name	Test method	Exposure time	Species	Bioconcentration factor (BCF)	Results
Zirconium Oxychloride (0 - 10%) CAS#: 7699-43-6	None reported	None reported	None reported	None reported	Does not have the potential to bioaccumulate

Additional information

Product Information

Partition Coefficient (n-octanol/water) Not applicable

Ingredient Information

Mobility
Mobility in soil: High mobility. If available, see ingredient data below.

Product Information

DOT

UN/ID no	UN1789
Proper shipping name	Hydrochloric Acid Solution
Hazard Class	8
Packing Group	II
Emergency Response Guide Number	157

TDG

UN/ID no	UN1789
Proper shipping name	Hydrochloric Acid Solution
Hazard Class	8
Packing Group	II

IATA

UN/ID no	UN1789
Proper shipping name	Hydrochloric Acid Solution
Hazard Class	8
Packing Group	II
ERG Code	157

IMDG

UN/ID no	UN1789
Proper shipping name	Hydrochloric Acid Solution
Hazard Class	8
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

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 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 (CAS #: 7647-01-0)	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrochloric Acid 7647-01-0	X	X	X
Sodium Arsenite 7784-46-5	X	X	X
Zirconium Oxychloride 7699-43-6	-	X	-

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA and HMIS Classifications

NFPA	**Health hazards** - 3	**Flammability** - 0	**Instability** - 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** - 3	**Flammability** - 0	**Physical hazards** - 0	**Personal protection** - X - See section 8 for more information

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

** = Chronic Health Hazard*
NIOSH IDLH Immediately Dangerous to Life or Health
NDF no data
TWA (time-weighted average)
STEL (Short Term Exposure Limit)
Ceiling - Maximum limit value
Vacated - These values have no official status. The only enforceable contaminant levels are those listed as OSHA Final PELs. These lists are provided as reference only. Please note that some state regulations reference these "vacated" exposure limits in their state regulations.

Prepared By Hach Product Compliance Department

Issue Date 21-Apr-2016

Revision Date 01-Nov-2015

Revision Note New SDS

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

End of Safety Data Sheet

parchem
fine & specialty chemicals

Safety Data Sheet
(Spirulina Powder)
DATE PREPARED: 6/27/2016

Section 1. Product and Company Identification

Product Name Spirulina Powder
CAS Number 724424-92-4

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
(914) 654-6800 **(914) 654-6899**
parchem.com **info@parchem.com**

EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture
Not classified as a hazardous substance or mixture

GHS Label Elements
Pictograms: N/A
Signal word: None

Hazard and precautionary statements
N/A

Hazards not otherwise classified (HNOC) or not covered by GHS: None

Section 3. Composition / Information on Ingredients

Common Name Spirulina Powder
Synonym(s) Botanical Source: Arthrospira platensis
CAS Number 724424-92-4

Section 4. First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin Contact: In case of contact, immediately wash skin with soap and copious amounts of water. Consult a physician.
Eye Contact: Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Body Protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory Protections: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type PI (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure: Do not let product enter drains
Engineering controls: Mechanical exhaust required

Section 9. Physical and Chemical Properties

Appearance: Powder
Physical form: Powder
Color: Dark Green
Odor: Characteristics
Odor threshold: No data available
pH: No data available
Melting point/freezing point: No data available
Initial boiling point and boiling range: No data available
Flash point: No data available
Evaporation rate: No data available
Flammability (solid, gas): No data available
Upper/lower flammability or explosive limits: No data available
Vapor pressure: No data available
Vapor density: No data available
Relative density: No data available
Water solubility: No data available
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available

Section 10. Stability and Reactivity

Reactivity: No data available
Chemical stability: Stable under recommended storage conditions
Possibility of hazardous reactions: No data available
Conditions to avoid: No data available
Incompatible materials: Strong oxidizing agents

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT (US): Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods
IMO: Not dangerous goods
RID: Not dangerous goods
ADR: Not dangerous goods

Section 15. Regulatory Information

Safety, health, and environmental regulations/legislation for the substance or mixture
TSCA (Toxic Substance Control Act): Not Listed
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.

Chemical Safety Assessment
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 311/312 Hazards: No SARA hazards

HMIS Rating
Health: 0
Flammability: 0
Reactivity: 0

NFPA Rating
Health: 0
Flammability: 0
Reactivity: 0

Revision Date: 3/9/2023

Safety Data Sheet

Classified in accordance 29 CFR 1910.1200

1. Product Identification

Product Information:	1000003396
Product Identifier:	SPRAYWAY STAINLESS STEEL CLEANER
Recommended Use:	Cleaner
Manufacturer/Importer/Distributor Information:	PLZ CORP 2651 WARRENVILLE RD, STE 300 DOWNERS GROVE, IL 60515 US 800-332-9000
Emergency Telephone:	866-836-8855

2. Hazard(s) identification

Classification
Flammable Aerosol, category 1
Aspiration Hazard, category 1
Skin Sensitizer, category 1
Eye Irritation, category 2A

Label elements

HAZARD PICTOGRAMS

SIGNAL WORD
Danger

GHS HAZARD STATEMENTS

H222	Extremely flammable aerosol.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

GHS PRECAUTIONARY STATEMENTS

Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing dust, fumes, gas, mist, vapours, or spray.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Use fire-extinguishing media appropriate for surrounding materials.

UNSUITABLE EXTINGUISHING MEDIA: Do not use water jet as an extinguisher, as this will spread the fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Extremely flammable aerosol. Contents under pressure. Keep away from ignition sources and open flames. Prolonged exposure to temperatures above 120°F may cause cans to burst. Vapors may travel considerable distance to a source of ignition and flash back. Combustion may produce carbon dioxide and carbon monoxide.

SPECIAL FIREFIGHTING PROCEDURES: No data available

6. Accidental Release Measures

PERSONAL PRECAUTIONS : Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP: Leaking cans should be placed in a plastic bag or open pail away from ignition sources until the pressure has dissipated. Collect liquid spill with an inert absorbent material and place into a suitable container for disposal.

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

7. Handling and Storage

HANDLING: Keep away from sources of ignition - No smoking. Keep away from open flames, hot surfaces and sources of ignition. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

SAFE HANDLING ADVICE: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

STORAGE: Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

NFPA 30B: Aerosol Level 3

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

Chemical Name	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING
Distillates (Petroleum), Hydrotreated Light	200 mg/m3	N.E.	N.E.	N.E.
White Mineral Oil	5 mg/m3	N.E.	5 mg/m3	N.E.
Acetone	250 ppm	500 ppm	1000 ppm	N.E.
Propane	N.E.	N.E.	1000 ppm	N.E.
Terpenes and Terpenoids, sweet orange-oil	N.E.	N.E.	N.E.	N.E.
Citral	5 ppm	N.E.	N.E.	N.E.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established

ENGINEERING CONTROLS: No data available

Personal Protection

EYE/FACE PROTECTION: Wear goggles/face shield. Chemical safety goggles should be worn where contact is possible.

SKIN PROTECTION: Wear impervious gloves to prevent skin contact.

RESPIRATORY PROTECTION: Seek advice from local supervisor. In case of inadequate ventilation use suitable respirator.

HYGIENIC PRACTICES: When using do not smoke. Observe good industrial hygiene practices.

The following values are calculated based on chapter 3.1 of the GHS document. The product itself has not been tested.

ATE ORAL	6,068 mg/kg
ATE DERMAL	6,068 mg/kg
ATE INHALATION	Not classified for acute toxicity based on available data.

Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
64742-47-8	Distillates (Petroleum), Hydrotreated Light	5,000 mg/kg	5000 mg/kg	>100 mg/l
8042-47-5	White Mineral Oil	5,000 mg/kg	5000 mg/kg	100 mg/l
67-64-1	Acetone	5,800 mg/kg	7,426 mg/kg	50.1 mg/l
74-98-6	Propane	5,000 mg/kg	5,000 mg/kg	100 mg/l
68647-72-3	Terpenes and Terpenoids, sweet orange-oil	5,000 mg/kg	5,000 mg/kg	100 mg/l
5392-40-5	Citral	6,800 mg/kg	2,000 mg/kg	100 mg/l

N.I. = No Information

Skin Corrosion & Irritation:

Product: No data available

Serious Eye Damage & Irritation:

Product: No data available

Components:

Acetone	67-64-1	Causes serious eye irritation.

Respiratory or Skin Sensitization:

Product: No data available

Components:

Terpenes and Terpenoids, sweet orange-oil	68647-72-3	May cause an allergic skin reaction.
Citral	5392-40-5	May cause an allergic skin reaction.

STOT-Single Exposure:

Product: No data available

STOT-Repeated Exposure:

Product: No data available

Aspiration Hazard:

Product: No data available

Components:

White Mineral Oil	8042-47-5	May be fatal if swallowed and enters airways.
Terpenes and Terpenoids, sweet orange-oil	68647-72-3	May be fatal if swallowed and enters airways.
Distillates (Petroleum), Hydrotreated Light	64742-47-8	May be fatal if swallowed and enters airways.

Carcinogenicity:

Product: No data available

Reproductive Toxicity:

Product: No data available

15. Regulatory Information

CHEMICAL INVENTORY STATUS:

TSCA	On or in compliance with the inventory
DSL	All ingredients in this product are listed on the DSL or are exempt.

CALIFORNIA PROPOSITION 65 CARCINOGENS AND REPRODUCTIVE TOXINS:

No Proposition 65 chemicals present or warning required.

16. Other Information

Revision Date:	3/9/2023
Datasheet produced by:	Regulatory Department

Legend

N/A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined, N.I. - No Information

LV - Threshold Limit Values (TLVs®), as established by the American Conference of Governmental Industrial Hygienists (ACGIH®)

PEL - Permissible Exposure Limit, as established by the U.S. Occupational Safety and Health Administration (OSHA), as amended

TSCA - U.S. Toxic Substance Control Act

DSL - Canada Environmental Protection Act: Domestic Substance List

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where the product use and frequency of exposure exceeds that established for the labeled consumer use.

Further Information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the manufacturer's and seller's control. Purchaser and user are responsible for determining the suitability of the product for a particular purpose, adopting precautions for the protection of property and persons, and compliance with all Federal, State, Provincial, and Local laws.

TECHNICAL DATA

SRT-01

•TRUSTED QUALITY SINCE 1921•
RUST-OLEUM®
STOPS RUST

STOPS RUST ENAMEL SPRAYS

DESCRIPTION AND USES

Rust-Oleum® Stops Rust® Enamel Sprays are designed to provide a durable protective coating with excellent rust prevention, and excellent resistance to abrasion, fading, chipping, and dulling. These sprays apply easily, provide excellent coverage and dry fast to a tough attractive finish. Rust-Oleum Stops Rust Enamel Sprays are ideal for ferrous, non-ferrous metal and wood surfaces. It features a comfort tip with a wider finger pad to reduce fatigue caused by continuous spraying and an any-angle tip which allows you to spray at any angle. Not for use on galvanized metal.

PRODUCTS

SKU (12 ounces)	Description
7721830	Fresh Blue
7722830	Harbor Blue
7723830	Navy
7724830	Sail Blue
7727830	Royal Blue
7731830	Grass Green
7733830	Dark Hunter Green
7738830	Hunter Green
7747830	Sunburst Yellow
7754830	Anodized Bronze
7762830	Sunrise Red
7763830	Carnival Red
7758830	Regal Red
7768830	Burgundy
7770830	Almond
7771830	Sand
7775830	Leather Brown
7776830	Flat Black
7779830	Gloss Black
7783830	Pewter Gray
7784830	Charcoal Gray
7786830	Smoke Gray
7789830	Canvas White
7790830	Flat White
7792830	Gloss White
7794830	Antique White
7797830	Semi-Gloss White
7798830	Semi-Gloss Black
214084	Orange
214085	Flat Brown
214086	Charleston Green
214087	Army Green
241235	Pistachio
241236	Glacier Blue
245897	Burnt Orange
248567	Merlot
248568	Cherry
248569	Emerald
248630	French Roast

PRODUCTS (cont.)

SKU (12 ounces)	Description
248631	Night Tide
249032	Khaki
250702	Pure White
250703	Cobblestone
250704	Lobster Red
250705	Fern
262661	Dark Walnut
267112	Kona Brown
269292	Maui Blue
277239	Lagoon
284678	Gloss Light Turquoise
298537	Gloss Tuscan Sun

PAINTING CONDITIONS

Use outdoors or in a well ventilated area such as an open garage. Apply when temperature is between 50-90°F (10-32°C) and humidity is below 65% to ensure proper drying. Do not apply to surfaces, when heated, exceed 200°F (93°C). Do not apply to galvanized steel. Avoid spraying in very windy and dusty conditions. Cover surrounding area to protect from spray mist.

PRODUCT APPLICATION

SURFACE PREPARATION

Remove all dirt, grease, oil, salt and chemical contaminants by washing the surface with a commercial detergent, or other suitable cleaning method. Rinse with fresh water and allow to thoroughly dry. Remove loose paint and rust with a wire brush or sandpaper. Previously coated surfaces must be sound and in good condition. Smooth, hard, or glossy finishes should be scarified by sanding to create a surface profile.

WARNING! If you scrape, sand or remove old paint from any surface, you may release lead paint dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE; ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

PRIMING

Use of a Rust-Oleum primer provides added corrosion protection, excellent adhesion and hiding and is especially recommended for bare wood and metal. The following primers are recommended.

7769	Rusty Metal Primer
7780	Clean Metal Primer
2081	Light Gray Auto Primer
2067	Red Auto Primer
2089	Dark Gray Auto Primer

Form: GDH-678
Rev.: 101816

STOPS RUST ENAMEL SPRAYS

PRODUCT APPLICATION (cont.

APPLICATION

Shake can vigorously for one minute after the mixing ball begins to rattle. If mixing ball fails to rattle DO NOT STRIKE CAN. Contact Rust-Oleum. Shake often during use. Hold can 10-16" from the surface and spray in a steady back-and-forth motion, slightly overlapping each stroke. Keep the can the same distance from the surface. Keep the can in motion while spraying. Apply 2 or more light coats a few minutes apart to avoid runs and sags. Metallic Sprays are not recommended for outdoor use. Do not use near open flame.

DRY AND RECOAT

Dry and recoat times are based on 70°F and 50% relative humidity. Allow more time at cooler temperatures. Dries tack-free in 2-4 hours, to handle in 5-9 hours, and is fully dry in 24 hours. Apply a second coat within 1 hour or after 48 hours.

PRODUCT APPLICATION (cont.

CLEAN UP

Wipe off tip before storing. Clean-up wet paint with xylene or mineral spirits. Properly discard empty container. Do not burn or place in home trash compactor.

CLOGGING

If the valve clogs, twist and pull off spray tip and rinse in a solvent such as mineral spirits. Do not insert any object into can valve opening.

RUST-OLEUM

TECHNICAL DATA

STOPS RUST ENAMEL SPRAYS

PHYSICAL PROPERTIES

		ENAMEL SPRAY FINISHES
Resin Type		Oil modified Alkyd
Pigment Type		Varies with color
Solvents		Acetone, N-Butyl Acetate, Aromatic Hydrocarbons
MIR		1.4 Max
Fill Weight		12 ounces
Recommended Dry Film Thickness (DFT) Per Coat		1.0-2.0 mils (25-50µ)
Practical Coverage at Recommended DFT (assumes 15% material loss)		6-10 sq.ft./can (0.6-0.9 m^2/can)
Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity	**Touch**	2-4 hours
	Handle	5-9 hours
	Recoat	Before 1 hour or after 48 hours
Dry Heat Resistance		200°F (93°C)
Shelf Life		5 years
Flash Point		-156°F (-104°C)
Safety Information		For additional information, see SDS

RUST-OLEUM BRANDS

Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois 60061

Phone: 877•385•8155
www.rustoleum.com

Form: GDH-678
Rev.: 101816

TECHNICAL DATA SRT-19

•TRUSTED QUALITY SINCE 1921•
RUST-OLEUM®
STOPS RUST®

STOPS RUST
RUST INHIBITOR

DESCRIPTION AND USES

Rust-Oleum® Rust Inhibitor is a clear coating that protects untreated, bare metal surfaces against moisture and other corrosive elements. It is suitable for use on garden tools, bicycles, metal sporting equipment, lawn equipment, iron railings and other metal surfaces.

PRODUCTS

SKU (10.25 fl. oz.)	Description
224284	Rust Inhibitor

PRODUCT APPLICATION

SURFACE PREPARATION

Remove all dirt, grease, oil, salt and chemical contaminants by washing the surface with a commercial detergent, or other suitable cleaning method. Rinse with fresh water and allow to thoroughly dry. Remove all loose rust, scale, and previous coatings with a wire brush, scraper, or Rust-Oleum® Rust Stripper. WARNING! If you scrape, sand or remove old paint from any surface, you may release lead paint dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE; ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

PRODUCT APPLICATION (cont.)

PAINTING CONDITIONS

Use outdoors or in a well ventilated area such as an open garage. Apply when temperature is between 50-90°F (10-32°C) and humidity is below 85% to ensure efficient use of the product. Do not apply to an area that, when heated, will exceed 120°F (49°C). Avoid spraying in windy, dusty conditions. Cover surrounding area to protect from spray mist.

APPLICATION

Shake can well before using and often during use. Hold can upright 12-16" from the surface and apply a light, thin, even coat to cover the surface. Additional coats provide increased protection. Wipe off excess with a clean cloth if the coating is too heavy. Re-apply every 1-2 years for indoor uses and every 6 months for outdoor uses.

PAINTING

If surfaces are to be painted in the future, remove Rust Inhibitor from the surface with a solvent such as acetone or mineral spirits prior to painting.

Form: GDH-09
Rev.: 030613

TECHNICAL DATA

STOPS RUST – RUST INHIBITOR

PHYSICAL PROPERTIES

Physical Properties	RUST INHIBITOR
Composition	Petroleum Distillates
Fill Weight	10.25 ounces
VOC	325 g/l
Shelf Life	1 year from date of manufacture
Flash Point	-156°F (-104°C)
Safety Information	For additional information, see MSDS

RUST-OLEUM BRANDS

Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois 60061
An RPM Company

Phone: 877•385•8155
www.rustoleum.com

Form: GDH-09
Rev.: 030613

Stainless Steel Cleaner Wipes
Safety Data Sheet

TOTAL SOLUTIONS

SECTION 1: Product and company identification

Product name	:	Stainless Steel Cleaner Wipes
Use of the substance/mixture	:	Premoistened wipe
Product code	:	1549
Company	:	Total Solutions P.O. Box 245013 Milwaukee, WI 53224 - USA T (414) 354-6417
Emergency number	:	Chemtrec: (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Skin Sens. 1 H317
Asp. Tox. 1 H304

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : May be fatal if swallowed and enters airways
May cause an allergic skin reaction

Precautionary statements (GHS-US) : Avoid breathing fume
Contaminated work clothing must not be allowed out of the workplace
Wear eye protection, protective gloves
If swallowed: Immediately call a doctor, a POISON CENTER
If on skin: Wash with plenty of water
Do NOT induce vomiting
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse
Store locked up
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	(CAS No) 64742-47-8	30 - 60	Flam. Liq. 4, H227 Asp. Tox. 1, H304
white mineral oil (petroleum)	(CAS No) 8042-47-5	15 - 40	Asp. Tox. 1, H304
(+)-limonene	(CAS No) 5989-27-5	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Comply with applicable regulations.
Storage conditions	:	Store in a well-ventilated place. Keep cool. Store locked up.
Incompatible products	:	Oxidizing agent.
Incompatible materials	:	Sources of ignition. Heat sources.
Prohibitions on mixed storage	:	KEEP SUBSTANCE AWAY FROM: oxidizing agents.
Storage area	:	Meet the legal requirements.
Special rules on packaging	:	meet the legal requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

white mineral oil (petroleum) (8042-47-5)		
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³

8.2. Exposure controls

Personal protective equipment : Safety glasses. Gloves. Use appropriate personal protective equipment when risk assessment indicates this is necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Premoistened wipe.
Odor	:	Citrus scent
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	197 °F Closed cup - Tested using the liquid component of the towelette
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	No data available
Relative vapor density at 20 °C	:	No data available
Specific gravity / density	:	0.81 g/ml - Tested using the liquid component of the towelette
Solubility	:	Liquid component is not soluble in water.
Log Pow	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	< 20 cSt - Tested using the liquid component of the towelette
Viscosity, dynamic	:	No data available
VOC content	:	< 3 % - Tested using the liquid component of the towelette

SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO2 are formed.

(+)-limonene (5989-27-5)	
LC50 fish 2	702 µg/l (96 h; Pimephales promelas)
Threshold limit algae 1	150 mg/l (72 h; Desmodesmus subspicatus; GLP)
Threshold limit algae 2	2.62 mg/l (72 h; Desmodesmus subspicatus)

white mineral oil (petroleum) (8042-47-5)	
LC50 fish 1	> 100 mg/l (96 h; Oncorhynchus mykiss; Nominal concentration)
Threshold limit algae 1	>= 100 mg/l (72 h; Pseudokirchneriella subcapitata; Growth rate)

12.2. Persistence and degradability

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)	
Persistence and degradability	Readily biodegradable in water. Adsorbs into the soil.

(+)-limonene (5989-27-5)	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Adsorbs into the soil.
ThOD	3.29 g O□/g substance

white mineral oil (petroleum) (8042-47-5)	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.

12.3. Bioaccumulative potential

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)	
Log Pow	6 - 8.2
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).

(+)-limonene (5989-27-5)	
BCF fish 1	864.8 - 1022 (Pisces; Fresh weight)
Log Pow	4.38 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

white mineral oil (petroleum) (8042-47-5)	
Bioaccumulative potential	No bioaccumulation data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Do not flush wipes.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT : Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

California Proposition 65 - This product does not contain substances known to the state of California to cause cancer and/or reproductive toxicity

SAFETY DATA SHEET

Confirms to OSHA Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012

Product: Stainless Steel Cleaner & Polish- 76, 76A, 76WMA, 108, 108A

Revision Date: 07-Jan-2020

SECTION 1 – IDENTIFICATION

Product Identifier

Product Name: **Stainless Steel Cleaner & Polish**

Product Code: **76, 76A, 76WMA, 108, 108A**

Recommended Use of the Chemical and Restrictions for Use

Recommended Use: Cleaner and polish

Restrictions for Use: Use only as directed.

Details of the Supplier

Manufacturer: Weiman Products
755 Tri-State Parkway
Gurnee, IL 60031
847-263-3500

Emergency Phone Number

24-Hour Number: 1-800-535-5053

International: 1-352-323-3500

SECTION 2 – HAZARDS IDENTIFICATION

Classification

Hazard Class	Category
Aspiration toxicity	1

bel Elements

Hazard Symbols(s):

Signal Word(s): Danger

Hazard Statement(s): May be fatal if swallowed and enters airways.

Precautionary Statement(s): If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards

4% of the mixture consists of ingredient(s) of unknown toxicity.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Wt %
White mineral oil, petroleum	8042-47-5	10-30

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4 – FIRST AID MEASURES

First Aid Measures

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Eye Contact: In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

gestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor/physician.

Skin: If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. 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.

Skin and Body Protection: Wear suitable protective clothing.

Eye/Face Protection: Safety glasses or goggles are recommended when using product.

General Work/Hygienic Practices: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White liquid emulsion

Odor: Floral

Odor threshold: Not determined

pH: 6.4

Melting point/freezing point: Not determined

Initial boiling point and boiling range: Not determined

Flash point: >93.3°C (>200°F)

Evaporation rate: Not determined

Flammability (solid, gas): Not flammable

Upper/lower flammability or explosive limits: Not determined

Vapor pressure: Not determined

Vapor density: Not determined

Relative density: 0.97

Solubility(ies): Not determined

Partition coefficient (n-octanol/water): Not determined

Auto-ignition temperature: Not determined

Decomposition temperature: Not determined

Viscosity: 10-20 cps @ 20°C (70°F)

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: None under normal use.

Conditions to avoid: Heat.

Incompatible materials: None known.

Hazardous decomposition products: May include and are not limited to: oxides of carbon.

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Likely Routes of Exposure: Inhalation, skin contact, eye contact, ingestion

Information Related to Physical, Chemical, and Toxicological Effects

See section 4 of this SDS.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Carcinogenicity: **NTP:** No **IARC:** No **OSHA:** No

Numerical Measures of Toxicity

SAFETY DATA SHEET

1. Identification

Product identifier STARCH INDICATOR SOLUTION, 1%

Other means of identification

Product code 2537

Recommended use professional, scientific and technical activities: other professional, scientific and technical activities

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	GFS Chemicals, Inc.	
Address	P.O. Box 245 Powell, OH 43065 United States	
Telephone	Phone	740-881-5501
	Toll Free	800-858-9682
	Fax	740-881-5989
Website	www.gfschemicals.com	
E-mail	service@gfschemicals.com	
Emergency phone number	Emergency Assistance	Chemtrec 800-424-9300

2. Hazard(s) 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 None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
WATER		7732-18-5	99
STARCH, SOLUBLE	STARCH INDICATOR POWDER MODIFIED STARCH	9005-84-9	1
SALICYLIC ACID	2-HYDROXYBENZOIC ACID	69-72-7	<0.2%

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Flush eyes with water as a precaution.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
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	
Physical state	Liquid.
Form	Aqueous solution.
Color	Colorless or translucent white.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	32 °F (0 °C) estimated
Initial boiling point and boiling range	212 °F (100 °C) estimated
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
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)	
Solubility (water)	Completely miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.00 g/cm3 estimated
Percent volatile	99 % estimated
Specific gravity	1.00 estimated

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	Hazardous polymerization does not occur.
Conditions to avoid	None known. Contact with incompatible materials.
Incompatible materials	None known.

Components		Species	Test Results
SALICYLIC ACID (CAS 69-72-7)			
Aquatic			
Fish	LC50	Ide, silver or golden orfe (Leuciscus Idus) 90 mg/l	

* Estimates for product may be based on additional component data not shown.

Persistence and degradability None known.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

SALICYLIC ACID	2.26

Mobility in soil No data 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. Offer rinsed packaging material to local recycling facilities.

14. Transport 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 established.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazarc 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.

SARA 304 Emergency release notification

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 listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Identifier

Material Name: Sterile Diluent

Trade Name: Not applicable
Synonyms: Diluent for Vanguard Plus5 L4 and/or Vanguard L4.
Chemical Family: Mixture

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Intended Use: Veterinary Vaccine Diluent
Restrictions on Use: Not for human use

Details of the Supplier of the Safety Data Sheet

Zoetis Inc.
100 Campus Drive, P.O. Box 651
Florham Park, New Jersey 07932 (USA)
Rocky Mountain Poison Control Center Phone: 1-866-531-8896
Product Support/Technical Services Phone: 1-800-366-5288

Emergency telephone number:
CHEMTREC (24 hours): 1-800-424-9300
Contact E-Mail: VMIPSrecords@zoetis.com

Zoetis Belgium S.A.
Mercuriusstraat 20
1930 Zaventem
Belgium

Emergency telephone number:
International CHEMTREC (24 hours): +1-703-527-3887

2. HAZARDS IDENTIFICATION

Appearance: Clear, milky solution

Classification of the Substance or Mixture

GHS - Classification Not classified as hazardous

EU Classification:

EU Indication of danger: Not classified

Label Elements

Hazard Statements: Non-hazardous in accordance with international standards for workplace safety.

Other Hazards

Short Term: In the event of accidental injection, an allergic reaction may occur. If an allergic reaction occurs, the worker should be removed to the nearest emergency room and the appropriate therapy instituted.

Australian Hazard Classification (NOHSC): Non-Hazardous Substance. Non-Dangerous Goods.

Note: This document has been prepared in accordance with standards for workplace safety, which require the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warnings included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure.

Environmental Precautions
Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

Methods and Material for Containment and Cleaning Up

Measures for Cleaning / Collecting:	Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill area thoroughly.
Additional Consideration for Large Spills:	Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Clean up operations should only be undertaken by trained personnel.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid breathing dust, vapor or mist. When handling, use appropriate personal protective equipment (see Section 8). Wash thoroughly after handling. Releases to the environment should be avoided. Review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure or environmental releases. Potential points of process emissions of this material to the atmosphere should be controlled with dust collectors, HEPA filtration systems or other equivalent controls.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions:	Store as directed by product packaging.
Storage Temperature:	2-7°C
Specific end use(s):	No data available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters
Refer to available public information for specific member state Occupational Exposure Limits.

Aluminum hydroxide gel

ACGIH Threshold Limit Value (TWA)	1 mg/m³
Austria OEL - MAKs	5 mg/m³
Germany (DFG) - MAK	4 mg/m³
	1.5 mg/m³
Latvia OEL - TWA	6 mg/m³
Lithuania OEL - TWA	6 mg/m³
Poland OEL - TWA	2.5 mg/m³
	1.2 mg/m³
Slovakia OEL - TWA	1.5 mg/m³
Switzerland OEL -TWAs	3 mg/m³

Exposure Controls

Engineering Controls:	Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or fumes.
Personal Protective Equipment:	Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE).
Hands:	Impervious gloves are recommended if skin contact with drug product is possible and for bulk processing operations.

EXPOSURE GUIDELINES:

COMPONENTS	EXPOSURE LIMIT(S)
FERRIC SUBSULFATE	TWA 1 mg/m3 (as Fe)
ALUMINUM CHLORIDE	TWA 1 mg/m3
AMMONIUM CHLORIDE	TWA 10 mg/m3
BENZOCAINE	NO DATA AVAILABLE

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	YELLOW/ BROWN
PHYSICAL STATE:	POWDER
ODOR:	NEARLY ODORLESS
ODOR THRESHOLD:	NO DATA AVAILABLE
pH AS SUPPLIED:	NO DATA AVAILABLE
BOILING POINT:	NO DATA AVAILABLE
MELTING POINT:	NO DATA AVAILABLE
FREEZING POINT:	NO DATA AVAILABLE
FLAMMABLE LIMITS IN AIR:	NO DATA AVAILABLE
FLASH POINT:	NO DATA AVAILABLE
AUTOIGNITION TEMPERATURE:	NO DATA AVAILABLE
VAPOR PRESSURE (mmHg):	NO DATA AVAILABLE
VAPOR DENSITY (AIR = 1):	NO DATA AVAILABLE
SPECIFIC GRAVITY (H2O = 1): 1.0	NO DATA AVAILABLE
EVAPORATION RATE:	NO DATA AVAILABLE
BASIS (=1):	NO DATA AVAILABLE
SOLUBILITY IN WATER:	PART
PERCENT SOLIDS BY WEIGHT:	NO DATA AVAILABLE
PERCENT VOLATILE: BY WT/ BY VOL @ F: C:	NO DATA AVAILABLE
VOLATILE ORGANIC COMPOUNDS (VOC):	NO DATA AVAILABLE
MOLECULAR WEIGHT:	NO DATA AVAILABLE
VISCOSITY:	NO DATA AVAILABLE

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:	STABLE UNDER RECCOMENDED STORAGE CONDITIONS.
CHEMICAL STABILITY:	NO DECOMPOSITION IF STORED AND APPLIED AS DIRECTED.
CONDITIONS TO AVOID:	NONE KNOWN
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	SULFUR OXIDES

SAFETY DATA SHEET
MSDS DATE: 07/15/2015

311/312 HAZARD CATEGORIES: ACUTE HEALTH HAZARD

313 REPORTABLE INGREDIENTS:

CONTAINS NO CHEMICAL COMPONENETS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

STATE REGULATIONS: N

INTERNATIONAL REGULATIONS: N

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

NFPA HAZARD CLASSIFICATION
HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0 OTHER:

HMIS HAZARD CLASSIFICATION
HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0 PROTECTION:

PREPARATION INFORMATION: PREPARED BY MIRACLECORP PRODUCTS ON JULY 15, 2015

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ALL INFORMATION APPEARING HEREIN IS BASED UPON DATA FROM THE MANUFACTURER AND OR RECOGNIZED TECHNICAL SOURCES. WHILE THE INFORMATION IS BELIEVED TO BE ACCURATE, WE MAKE NO REPRESENTATIONS AS TO ITS ACCURACY OR SUFFICIENCY.

SAFETY DATA SHEET

Sulfamethoxazole / Trimethoprim Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
2.9	04.04.2023	6289825-00011	Date of first issue: 25.08.2020

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Sulfamethoxazole / Trimethoprim Formulation

Manufacturer or supplier's details

Company : MSD

Address : Briahnager - Off Pune Nagar Road
Wagholi - Pune - India 412 207

Telephone : +1-908-740-4000

Emergency telephone number : +1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use :
Not applicable

2. HAZARDS IDENTIFICATION

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

Classification

Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

GHS Classification

Acute toxicity (Oral) : Category 5

Skin corrosion/irritation : Sub-category 1A

Serious eye damage/eye irritation : Category 1

Reproductive toxicity : Category 2

Specific target organ toxicity - repeated exposure : Category 2 (Bone marrow)

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Chemical name	CAS-No.	Concentration (% w/w)
Sulfamethoxazole	723-46-6	>= 30 - < 50
Trimethoprim	738-70-5	>= 5 - < 10
Sodium hydroxide	1310-73-2	>= 5 - < 10

4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention immediately.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention immediately.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention immediately.

If swallowed : If swallowed, DO NOT induce vomiting.
If vomiting occurs have person lean forward.
Call a physician or poison control centre immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : Causes digestive tract burns.
Corrosive to respiratory system.
May be harmful if swallowed.
Causes serious eye damage.
Suspected of damaging the unborn child.
May cause damage to organs through prolonged or repeated exposure.
Causes severe burns.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : None known.

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

sessment
Keep container tightly closed.
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labelled containers.
Store locked up.
Keep tightly closed.
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:
Self-reactive substances and mixtures
Organic peroxides
Oxidizing agents
Explosives

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Sulfamethoxazole	723-46-6	TWA	OEB 2 (>= 100 < 1000 µg/m3)	Internal
Trimethoprim	738-70-5	TWA	400 µg/m3 (OEB 2)	Internal
Sodium hydroxide	1310-73-2	CEIL	2 mg/m3	IN OEL
		C	2 mg/m3	ACGIH

Engineering measures : Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).
All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
Laboratory operations do not require special containment.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Particulates type

Hand protection

Material : Chemical-resistant gloves

Eye protection : Wear safety glasses with side shields or goggles.
If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Skin and body protection : Work uniform or laboratory coat.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye

Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available
Particle size	:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents Acids
Hazardous decomposition products	:	No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

May be harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 3,531 mg/kg
Method: Calculation method

Components:

Sulfamethoxazole:

Acute oral toxicity : LD50 (Mouse): 2,300 mg/kg

Trimethoprim:

Acute oral toxicity : LD50 (Rat): 1,500 - 5,300 mg/kg

LD50 (Mouse): 1,910 - 7,000 mg/kg

Acute toxicity (other routes of administration) : LD50 (Rat): 400 - 500 mg/kg
Application Route: Intraperitoneal

Sodium hydroxide:

Test Type : Human repeat insult patch test (HRIPT)
Exposure routes : Skin contact
Result : negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Sulfamethoxazole:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Humans
Result: negative

Trimethoprim:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosomal aberration
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Rat
Result: negative

Test Type: Chromosomal aberration
Species: Humans
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Sulfamethoxazole:

Species : Mouse
Application Route : Ingestion
Exposure time : 26 weeks

Components:

Trimethoprim:

Target Organs	:	Bone marrow
Assessment	:	Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Trimethoprim:

Species	:	Rat
NOAEL	:	100 mg/kg
LOAEL	:	300 mg/kg
Application Route	:	Oral
Exposure time	:	6 Months
Target Organs	:	Bone marrow, Liver, Pituitary gland, Thyroid

Species	:	Rat
LOAEL	:	300 mg/kg
Application Route	:	Oral
Exposure time	:	3 Months
Target Organs	:	Bone marrow

Species	:	Dog
NOAEL	:	2.5 mg/kg
LOAEL	:	45 mg/kg
Application Route	:	Oral
Exposure time	:	3 Months
Target Organs	:	Blood, Thyroid

Aspiration toxicity

Not classified based on available information.

Experience with human exposure

Components:

Trimethoprim:

Ingestion	:	Target Organs: Bone marrow Symptoms: Abdominal pain, Nausea, Vomiting, skin rash, Dizziness, Headache, mental depression, confusion

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Sulfamethoxazole:

Toxicity to fish	:	LC50 (Oryzias latipes (Japanese medaka)): 562.5 mg/l Exposure time: 96 h

EC50: > 1,000 mg/l
Exposure time: 3 hrs
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 0.157 mg/l
Exposure time: 21 d
Species: Zebrafish

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 6 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Persistence and degradability

Components:

Sulfamethoxazole:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Trimethoprim:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Result: Not inherently biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302B

Bioaccumulative potential

Components:

Sulfamethoxazole:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): < 120

Partition coefficient: n-octanol/water : log Pow: 0.89

Trimethoprim:

Partition coefficient: n-octanol/water : log Pow: 0.91

Mobility in soil

No data available

15. REGULATORY INFORMATION

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

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

DSL	:	not determined
AICS	:	not determined
IECSC	:	not determined

16. OTHER INFORMATION

Revision Date	:	04.04.2023

Further information

Sources of key data used to compile the Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Date format	:	dd.mm.yyyy

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
IN OEL	:	India. Permissible levels of certain chemical substances in work environment.
ACGIH / C	:	Ceiling limit
IN OEL / CEIL	:	ceiling limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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 Substanc-

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

· Product identifier

· Trade name: Sulfamethoxazole
Sulfamethoxazolum

· Article number:
700270
101061
· CAS Number:
723-46-6
· EC number:
211-963-3
· Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
· Application of the substance / the mixture Pharma Active ingredients

· Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
Fagron
2400 Pilot Knob Road
St. Paul, MN 55120
www.fagron.us

· Further information obtainable from:
Tel: 800-423-6967
Fax: 800-339-1596
· Emergency telephone number: 800-423-6967

2 Hazards identification

· Classification of the substance or mixture
· Classification according to Regulation (EC) No 1272/2008

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

· Label elements
· Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

(Contd. on page 2)

FAGRON

Trade name: Sulfamethoxazole
Sulfamethoxazolum

(Contd. of page 2)

5 Firefighting measures

· Extinguishing media
· Suitable extinguishing agents:
Water spray
Foam
· Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide (CO)
Nitrogen oxides (NOx)
Sulphur dioxide (SO2)
· 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
Wear protective equipment. Keep unprotected persons away.
Wear protective equipment. Keep unprotected persons away.
· Environmental precautions: Do not allow product to reach sewage system or any water course.
· Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· 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
Keep receptacles tightly sealed.
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
· Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.

· Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles: No special requirements.
· Information about storage in one common storage facility: Store away from foodstuffs.
· Further information about storage conditions:
Store in cool, dry conditions in well sealed receptacles.
Protect from exposure to the light.

(Contd. on page 4)

FAGRON

Trade name: Sulfamethoxazole
Sulfamethoxazolum

(Contd. of page 4)

Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Danger of explosion:	Product does not present an explosion hazard.
· Density:	Not determined.
· Solubility in / Miscibility with water:	Insoluble.
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity
· Chemical stability
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· Possibility of hazardous reactions No dangerous reactions known.
· Conditions to avoid No further relevant information available.
· Incompatible materials: No further relevant information available.

11 Toxicological information

· Information on toxicological effects
· Acute toxicity:

· LD/LC50 values relevant for classification:		
Oral	LD50	2300 mg/kg (mus) 6200 mg/kg (rat)

· Primary irritant effect:
· on the skin: Irritant to skin and mucous membranes.
· on the eye: Irritating effect.
· Sensitization: Sensitization possible through skin contact.

12 Ecological information

· Toxicity
· Aquatic toxicity: No further relevant information available.
· Persistence and degradability No further relevant information available.
· Behaviour in environmental systems:
· Bioaccumulative potential No further relevant information available.
· Mobility in soil No further relevant information available.
· Additional ecological information:
· General notes: At present there are no ecotoxicological assessments.
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

(Contd. on page 6)

FAGRON

Trade name: Sulfamethoxazole
Sulfamethoxazolum

(Contd. of page 6)

· **Department issuing MSDS:**
Fagron US
Quality Assurance
· **Contact:** martin.erickson@fagron.us
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

FAGRON

SAFETY DATA SHEET

Be Right™

1. IDENTIFICATION

Product identifier
Product Name Sulfide 1 Reagent

Other means of identification
Product Code(s) 181632

Safety data sheet number M00213

UN/ID no UN1830

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory reagent. Determination of sulfides.
Uses advised against None.
Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address
Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Emergency telephone number
(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

Hazards not otherwise classified (HNOC)
Data insufficient for GHS classification but significant enough for mention suggests:
CANCER HAZARD. STRONG INORGANIC ACID MISTS CONTAINING SULFURIC ACID CAN CAUSE CANCER.
Inhalation of low concentrations of sulfuric acid may result in airway irritation such as cough and shortness of breath; high concentrations may result in acute effects such as cough.

Label elements

Signal word - Danger

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

Inhalation IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.

Ingestion IF SWALLOWED: Rinse Mouth. Do NOT induce vomiting. Call a physician immediately.

Self-protection of the first aider Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical. Do NOT use water.

Unsuitable extinguishing media Do NOT use water.

Flammable properties
Substance does not burn.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products This material will not burn. May emit acrid smoke and fumes.

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

U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

EC Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special

50 - 100%	STEL: 3 mg/m³			STEL: 3 mg/m³	

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Sulfuric acid 50 - 100%	TWA: 0.2 mg/m³ STEL: 0.6 mg/m³	TWA: 0.2 mg/m³	TWA: 0.2 mg/m³ STEL: 0.6 mg/m³	TWA: 0.2 mg/m³	TWA: 0.2 mg/m³

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Sulfuric acid 50 - 100%	TWA: 1 mg/m³ STEL: 3 mg/m³	TWA: 0.2 mg/m³ STEL: 0.6 mg/m³	STEL: 1 mg/m³ TWA: 1 mg/m³

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear tight sealing safety goggles and/or face protection shield.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls
Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

Gas Under Pressure Not classified according to GHS criteria

Appearance aqueous solution **Color** colorless

Odor None **Odor threshold** No data available

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	No data available	
Melting point/freezing point	~ -8 °C / 18 °F	Estimation based on theoretical calculation

Flammability Limit in Air	
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Flash point	No data available
Method	No information available
Oxidizing properties	Not classified according to GHS criteria.
Reactivity propeties	Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

10. STABILITY AND REACTIVITY

Reactivity propeties
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Chemical stability
Stable under recommended storage conditions.

Special dangers of the product
None reported

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization	Hazardous polymerization does not occur.

Conditions to avoid
Exposure to light. Extreme temperatures. Heating to decomposition. Exposure to air or moisture over prolonged periods.

Incompatible materials
Acetic acid. Chlorosulfonic acid. Oxidizers. Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosive properties
Not classified according to GHS criteria. Not Flammable, but reacts with most metals to form flammable hydrogen gas. During a fire, corrosive and toxic gases may be generated by thermal decomposition.

Upper explosion limit	No data available
Lower explosion limit	No data available

Autoignition temperature
No data available

Sensitivity to Static Discharge
None reported

Inhalation (Vapor) Exposure Route No data available

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (50 - 100%) CAS#: 7664-93-9	Rat LC_{50}	0.510 mg/L	None reported	None reported	LOLI
Chemical Name	**Endpoint type**	**Reported dose**	**Exposure time**	**Toxicological effects**	**Key literature references and sources for data**
Sulfuric acid (50 - 100%) CAS#: 7664-93-9	Human TD_{Lo}	0.144 mg/L	4 hours	**Lungs, Thorax, or Respiration** Dyspnea	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Gas) Exposure Route No data available

Product Skin Corrosion/Irritation Data
No data available.

Ingredient Skin Corrosion/Irritation Data

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (50 - 100%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to skin	HSDB (Hazardous Substances Data Bank)
1,4-Benzenediamine, N,N-dimethyl-, sulfate (2:1) (0.1 - 1%) CAS#: 60160-75-0	None reported	Guinea pig	None reported	None reported	Mild skin irritant	Vendor SDS

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (50 - 100%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to eyes	HSDB (Hazardous Substances Data Bank)

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Product Germ Cell Mutagenicity *invitro* Data
No data available.

Ingredient Germ Cell Mutagenicity *invitro* Data Toxicological data for ingredients is not indicative of likely harm.

Chemical Name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (50 - 100%) CAS#: 7664-93-9	Cytogenetic analysis	Hamster ovary	4 mmol/L	None reported	Positive test result for mutagenicity	No information available

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Ingredient Germ Cell Mutagenicity *invivo* Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Other Information

Chemical Name	CAS No	Category	Persistent	Bioaccumulation	Inherently Toxic to Aquatic Organisms
Sulfuric acid	7664-93-9	-	-	-	-
1,4-Benzenediamine, N,N-dimethyl-, sulfate (2:1)	60160-75-0	-	-	-	-

Persistence and degradability
None known.

Product Biodegradability Data
No data available.

Ingredient Biodegradability Data
No data available

Bioaccumulation
None known.

Product Bioaccumulation Data Test data reported below.

Ingredient Bioaccumulation Data No data available

Additional information

Product Information

Partition Coefficient (n-octanol/water) Not applicable

Ingredient Information

Mobility
Mobility in soil: High mobility. If available, see ingredient data below.

Product Information

Soil Organic Carbon-Water Partition Coefficient Not applicable

Ingredient Information No data available

Additional information

Water solubility

Product Information

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Ingredient Information

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Sulfuric acid	Soluble	> 1000 mg/L	25 °C	77 °F

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

National Inventories

TSCA	Complies
DSL/NDSL	Complies

TSCA- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL- Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
TCSI	Complies
AICS	Complies
NZIoC	Complies

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
TCSI- Taiwan Chemical Substances Inventory
AICS- Australian Inventory of Chemical Substances
NZIoC- New Zealand Inventory of Chemicals

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 %
Sulfuric acid (CAS #: 7664-93-9)	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
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)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9	1000 lb	-	-	X

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

"liberated" exposure limits in their state regulations.

SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By	Hach Product Compliance Department
Issue Date	07-Jun-2016
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Revision Note	None

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

End of Safety Data Sheet