

**GHS - Precautionary Statement(s) - Prevention**

Do not breathe mist
 Wear protective gloves, protective clothing, eye, and face protection
 Wash thoroughly after handling
 Do not eat, drink or smoke when using this product
 Keep only in original container
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician
 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower
 Wash contaminated clothing before reuse
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
 Call a POISON CENTER or doctor/physician if you feel unwell
 Specific treatment (see First Aid information on product label and/or Section 4 of the SDS)
 Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant container with a resistant inner liner
 (NOTE: flammable hydrogen gas may be generated if aluminum container and/or aluminum fittings are used with dissolved material)

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
sodium metasilicate	6834-92-0	10-30

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice	Provide this SDS to medical personnel for treatment.
Eye Contact	Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. GET MEDICAL ATTENTION IMMEDIATELY.
Skin Contact	Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing and shoes before reuse. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

Inhalation	Move to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation and/or Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY.
Ingestion	Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. Give water. If vomiting occurs spontaneously, keep airway clear. Give water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.

Most important symptoms and effects

Symptoms	Solutions of sodium metasilicate are alkaline. Depending on the concentration, duration, and nature of the exposure, exposure to alkaline solutions may result in irritation to possible burns to any contacted tissue.
-----------------	---

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat as a corrosive substance. Treat symptoms with supportive care. There is no specific antidote. The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage. It may take 48-72 hours to assess the extent of an ocular burn. Probable mucosal damage may contraindicate the use of gastric lavage.
---------------------------	---

5. FIRE-FIGHTING MEASURES**Fire Hazard:** Negligible fire hazard.**Extinguishing Media:** Use media appropriate for surrounding fire.**Fire Fighting:** Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.**Sensitivity to Mechanical Impact:** Not sensitive.**Sensitivity to Static Discharge:** Not sensitive.**Lower Flammability Level (air):** Not flammable**Upper Flammability Level (air):** Not flammable**Flash point:** Not flammable**Auto-ignition Temperature:** No information available**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

Personal Precautions	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas.
Environmental Precautions	See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

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

Methods for Clean-Up

Flush spill area with water, if appropriate. Liquid material may be removed with a vacuum truck. Wet material is slippery under foot.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Avoid breathing vapors when opening container. Avoid creation of mist. Wash thoroughly after handling. Always add product to large quantities of water. Use clean, dry utensils. Do not add the product to any dispensing device containing residuals of other products.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Store in original container and in a dry area where temperatures do not exceed 52 °C (125 °F) for 24 hours. Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Store containers on pallets. Keep away from food, drink and animal feed. Keep separated from incompatible substances (see Section 10 of the Safety Data Sheet). Product has an indefinite shelf life if stored in original container in a cool, dry place.

Incompatible Materials

Can generate heat when mixed with acids, When wet avoid prolonged contact with alkali sensitive metals such as: aluminum, brass, bronze, copper, lead, tin, zinc because flammable hydrogen gas can be generated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Regulatory Exposure Limit(s): None

Non-Regulatory Exposure Limit(s): None

Appropriate engineering controls

Engineering Controls

Use only in well-ventilated areas. Provide local exhaust ventilation where mist may be generated. Ensure compliance with applicable exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Goggles or safety glasses with side shields. If eye contact is likely, wear chemical resistant safety goggles. Wear chemical safety goggles and/or a face-shield to protect against skin and eye contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and Body Protection

Neoprene or rubber gloves with cuffs. Coveralls, apron or other equipment should be worn to minimize skin contact. When potential for contact with wet material exists, wear Tychem or similar chemical protective suit. Contaminated clothing should be removed and laundered before reuse.

Respiratory Protection

A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Clear and colorless liquid	Odor	none
Color	colorless	Odor Threshold	Not determined
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	12-13		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	Not Determined		
Flash Point	Not determined		
Evaporation Rate	<1		(Water = 1)
Flammability (Solid, Gas)	NA		
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapor Pressure	NA		
Vapor Density	NA		
Specific Gravity	1.95		(Water = 1)
Water Solubility	fully miscible		
Solubility in other solvents	Not determined		
Partition Coefficient	Kow = 0		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	486 F		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined	Oxidizing Properties	Not determined

10. STABILITY AND REACTIVITY

Reactivity Not reactive under normal conditions.

Chemical Stability Stable.

Possibility of Hazardous Reactions Contact with acids will cause evolution of heat. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces. When wet, may react with alkali sensitive metals to form flammable hydrogen gas.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Can generate heat when mixed with acids. Avoid prolonged contact with alkali sensitive metals such as: aluminum, brass, bronze, copper, lead, tin, zinc because flammable hydrogen gas can be generated.

Incompatible Materials

Can generate heat when mixed with acids. When wet avoid prolonged contact with alkali sensitive metals such as: aluminum, brass, bronze, copper, lead, tin, zinc because flammable hydrogen gas can be generated.

Hazardous Decomposition Products

none known

11. TOXICOLOGICAL INFORMATION

IRRITATION DATA:

PRIMARY SKIN IRRITATION: Severe Irritation, Corrosive (rabbit, 24 hr)

PRIMARY EYE IRRITATION: Severe Irritation, Corrosive (rabbit, 24 hr)

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium metasilicate	1280 mg/kg (Rat)	no data	no data

TOXICITY:

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

MUTAGENIC DATA: Not mutagenic in 5 salmonella strains and 1 E. coli strain with or without mammalian microsomal activation.

REPRODUCTIVE TOXICITY: There are no known or recorded effects on reproductive function or fetal development.

Symptoms

Solutions of sodium metasilicate are alkaline. Exposure to alkaline solutions may result in irritation to any contacted tissue, including possible burns, depending on the concentration, duration, and nature of the exposure. This material is not a crystalline silica, and it does not cause pulmonary silicosis.

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

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

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

STOT - single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity**ECOTOXICITY DATA:**

This material has exhibited moderate toxicity to aquatic organisms.

FATE AND TRANSPORT:**BIODEGRADATION:**

This material is inorganic and not subject to biodegradation.

BIODEGRADATION: This material is inorganic and not subject to biodegradation

PERSISTENCE: This material is believed to persist in the environment.

BIOCONCENTRATION: This material is not expected to bioconcentrate in organisms.

ADDITIONAL ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

Other Adverse Effects Not determined

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes Use or reuse if possible. Dispose in accordance with all applicable regulations. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. May be subject to disposal regulations.

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

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

Status: Non-Bulk Packaging: Not Regulated under DOT unless transported by Vessel Bulk Packaging or Shipment by Vessel: Regulated

UN NUMBER: UN3253

PROPER SHIPPING NAME: Disodium trioxosilicate solution

HAZARD CLASS/ DIVISION: 8 PACKING GROUP: III

LABELING REQUIREMENTS: 8 MARINE POLLUTANT

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

Status: Non-Bulk packaging: Not Regulated unless transported by vessel Bulk Packaging or Shipment by vessel: Regulated

UN NUMBER: UN3253

SHIPPING NAME: disodium tioxsilicate, Marine Pollutant

HAZARD CLASS/ DIVISION: 9 PACKING GROUP: III

CAN. Marine Pollutant: disodium trioxosilicate

15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) CERCLA SECTIONS 102a/103

HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.

EPCRA EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10): Acute Health Hazard

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

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

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt. TSCA 12(b): This product is not subject to export notification

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

STATE REGULATIONS

California Proposition 65: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

US Federal Regulations**16. OTHER INFORMATION****NEPA**

Health Hazards	3
Flammability	0
Instability	0
Special Hazards	Not determined

HMIS

Health Hazards	3
Flammability	0
Physical Hazards	0
Personal Protection	Not determined

Issue Date: 10 Jan. 2017 **Revision Date:** 10 Jan. 2017

Disclaimer

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

End of Safety Data Sheet