SAFETY DATA SHEET

SODIUM METASILICATE PENTAHYDRATE - UNIFLO® 26

North America EN
SDS No.: M5854

Rev. Date: 08-Apr-2026
Rev. Num. 11

SECTION 1. CHEMICAL PRODUCT / COMPANY IDENTIFICATION

Company Identification:	Occidental Chemical Corporation 14555 Dallas Parkway, Suite 400 Dallas, Texas 75254-4300
24-Hour Emergency Telephone Number:	1-800-733-3665 (USA); CANUTEC (Canada): 1-613-996-6666; CHEMTREC (within USA and Canada): 1-800-424-9300; CHEMTREC (outside USA and Canada): +1 703-527-3887; CHEMTREC Contract No: CCN16186
To Request an SDS:	MSDS@oxy.com or 1-972-404-3245
Customer Service:	1-800-752-5151 or 1-972-404-3700
Product Identifier:	**SODIUM METASILICATE PENTAHYDRATE - UNIFLO® 26**
Trade Name:	UNIFLO® 26
Synonyms:	UNIFLO® 26 - SODIUM METASILICATE PENTAHYDRATE; Pentahydrate Metasilicate; PENTAHYDRATE
Product Use:	Cleaning booster, degreaser, corrosion inhibitor, water-treatment aid, and adhesive/ceramics additive
Restrictions on Use (United States):.	- Not for food, drug, pesticide, or biocidal use (i.e., not allowed in regulated applications without separate approvals)
Restrictions on Use (EU):	There are no uses advised against identified in the Chemical Safety Report (CSR).
Other Global Restrictions on Use:	Other restrictions on use based on local, regional, or national regulations may exist and must be determined on a case-by-case basis.
Chemical Family:	Alkali Metal Silicates (Inorganic Salts)

SECTION 2. HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: Health hazard classifications were performed using OSHA Hazard Communication 2024 (1910.1200) Appendix A and/or UN GHS Rev. 8 (2019). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

HEALTH CANADA HPR REGULATORY STATUS: This material is considered hazardous by the Health Canada Hazardous Products Act's Hazardous Products Regulations (HPR) (SOR/2015-17).

EMERGENCY OVERVIEW:

Color: White to faintly colored
Physical State: Solid
Appearance: Granules, Powder
Odor: Odorless

Signal Word: **DANGER**

MAJOR HEALTH HAZARDS: CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE. HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY IRRITATION.

PHYSICAL HAZARDS: MAY BE CORROSIVE TO METALS. Spilled solutions of sodium metasilicate may pose a slipping hazard.

PRECAUTIONARY STATEMENTS: Do not breathe dusts or mists. Wash hands and exposed skin thoroughly after handling. Do not touch eyes. Do not eat, drink, or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, eye, and face protection. Keep only in original container. If removed from original container, store only in a corrosive resistant and NON-ALUMINUM 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).

ADDITIONAL HAZARD INFORMATION: Toxicity may be delayed and may not be readily visible. Significant exposures must be referred for medical attention immediately. There is no specific antidote. This material is not a crystalline silica, and it does not cause pulmonary silicosis.

HAZARD CLASSIFICATION:

GHS: PHYSICAL HAZARDS:	Corrosive to Metals - Category 1: May be corrosive to metals
GHS: CONTACT HAZARD - SKIN:	Category 1B - Causes severe skin burns and eye damage
GHS: CONTACT HAZARD - EYE:	Category 1 - Causes serious eye damage
GHS: ACUTE TOXICITY - ORAL:	Category 4 - Harmful if swallowed

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE (SE):	Category 3 - May cause respiratory tract irritation

UNKNOWN ACUTE TOXICITY:

Unknown Acute Oral Toxicity:
100% of this product consists of ingredient(s) of known acute oral toxicity.

Unknown Acute Dermal Toxicity:
56 - 59% of this product consists of ingredient(s) of unknown acute dermal toxicity.

Unknown Acute Inhalation Toxicity:
56 - 59% of this product consists of ingredient(s) of unknown acute inhalation toxicity.

GHS SYMBOL: Corrosive, Exclamation mark



GHS SIGNAL WORD: DANGER

GHS HAZARD STATEMENTS:

GHS - Physical Hazard Statement(s)
• May be corrosive to metals

GHS - Health Hazard Statement(s)
• Harmful if swallowed
• Causes severe skin burns and eye damage
• May cause respiratory irritation

GHS - Precautionary Statement(s) - Prevention
• Keep only in original container
• Do not breathe dusts or mists
• Wash hands and exposed skin thoroughly after handling. Do not touch eyes
• Do not eat, drink, or smoke when using this product
• Use only outdoors or in a well-ventilated area
• Wear protective gloves, protective clothing, eye, and face protection

GHS - Precautionary Statement(s) - Response
• IF SWALLOWED: Get medical help
• IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
• IF ON SKIN: Get emergency medical help immediately
• Specific treatment for skin contact (see "Notes to Physician" in Section 4 of the SDS)
• IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes
• Wash contaminated clothing before reuse
• IF INHALED: Remove person to fresh air and keep comfortable for breathing
• IF INHALED: Get medical help if you feel unwell
• IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
• IF IN EYES: Get medical help

• Absorb spillage to prevent material damage

GHS - Precautionary Statement(s) - Storage
• Store locked up

GHS - Precautionary Statement(s) - Disposal
• Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

Persistent, Bioaccumulative, and Toxic (PBT) and Very Persistent and Very Bioaccumulative (vPvB) Assessment:
Inorganic substances do not require PBT assessment.

Component	U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing	EU - PBT / vPvB Status
Sodium Metasilicate	Not listed	PBT/PvBT assessment does not apply Considered not to be an EU PBT
Sodium Metasilicate Pentahydrate	Not listed	PBT/PvBT assessment does not apply Considered not to be an EU PBT

Endocrine Disruptor Assessment:
Based on available data, no endocrine system-related effects have been identified with consumption of Sodium Metasilicate. In addition, there is no evidence to suggest that Sodium Metasilicate functions in a manner similar to any known hormone.

Component	Endocrine Screening List	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation
Sodium Metasilicate	Not listed	Not Listed as SVHC
Sodium Metasilicate Pentahydrate	Not listed	Not Listed as SVHC

See Section 11: TOXICOLOGICAL INFORMATION

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Systematic Chemical Name	Common name	CAS Number	Percent [%]
Sodium Metasilicate 6834-92-0	Disodium Metasilicate	Sodium Silicate	6834-92-0	56-59
Water	Dihydrogen monoxide	Water	7732-18-5	41-44

7732-18-5	(H_2O)			
Sodium Metasilicate Pentahydrate 10213-79-3	Silicic acid (H2SiO3), disodium salt, pentahydrate	Sodium Silicate Hydrate	10213-79-3	100

Notes: *Sodium Metasilicate Pentahydrate, CAS 10213-79-3, is the hydrated form of CAS 6834-92-0, Anhydrous Sodium Metasilicate. The two chemical compounds are fundamentally the same substance, Sodium Metasilicate (Na2SiO3) does not contain the water molecule, while Sodium Metasilicate Pentahydrate contains five water molecules per formula unit ($Na2SiO3 \cdot 5H2O$).*

SECTION 4. FIRST AID MEASURES

EYE CONTACT: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF IN EYES: Get medical help.

SKIN CONTACT: IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. Wash contaminated clothing before reuse. IF ON SKIN: Get emergency medical help immediately. See specific treatment for skin contact below in this Section Under "Notes to Physicians".

INHALATION: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF INHALED: Get medical help if you feel unwell.

INGESTION: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Get medical help.

MOST IMPORTANT SYMPTOMS/EFFECTS (ACUTE AND CHRONIC [DELAYED]):
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. This material is not a crystalline silica, and it does not cause pulmonary silicosis.

Acute Symptoms/Effects:

Eye: Eye exposure may lead to rapid onset of corrosive injury including corneal and conjunctival epithelial loss, stromal and endothelial necrosis, hyperemia of the iris, conjunctival and limbal edema and ischemia, corneal opacification and ulceration. Additional complications may include perforation and staphyloma of the cornea, symblepharon, persistent iritis, and secondary glaucoma or cataract.
Skin: Skin irritation is unlikely following brief contact with dry solid, whereas wet solid and aqueous solutions may cause severe irritation, and corrosive injury with permanent scarring in severe cases, depending on the degree of dilution and resultant pH.
Inhalation (Breathing): Inhalation of dust, and vapor or mists from aqueous solutions may result in effects ranging from transient nasal and throat irritation and cough in mild exposures to dyspnea, chest tightness/pain, laryngospasm, respiratory distress, pneumonitis, and pulmonary edema in severe cases.
Ingestion (Swallowing): Ingestion may result in corrosive injury to the upper gastrointestinal tract. Signs and symptoms commonly include vomiting, hematemesis, drooling, odynophagia, dysphagia, with oropharyngeal, esophageal, epigastric, and abdominal pain. Hoarseness, cough, stridor, dyspnea, tachypnea, respiratory distress, and respiratory failure are indications of serious complications. Local effects can range in severity from mucosal erythema and/or edema, to ulceration, erosion, necrosis, and esophageal perforation leading to mediastinitis, pneumonia, mediastinal contamination, and severe sepsis. Esophageal injury may occur in the absence of oral

burns.

Chronic (Delayed) Symptoms/Effects:
• Repeated and prolonged skin contact may cause a dermatitis

PROTECTION OF FIRST-AID RESPONDERS: Avoid contact with skin and eyes. Do not breathe dust. Use personal protective equipment (PPE). Refer to Section 8 for specific PPE recommendations. At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.

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.

Interaction with Other Chemicals Which Enhance Toxicity: No information available.

Medical Conditions Aggravated by Exposure: May aggravate preexisting conditions such as eye disorders that decrease tear production or have reduced integrity; skin disorders that compromise the integrity of the skin such as psoriasis, rashes, eczema, and skin infections; and/or pulmonary disorders that compromise the integrity of the lungs such as asthma.

SECTION 5. FIRE FIGHTING MEASURES

Fire Hazard: Fire or extreme heat may cause the substance to decompose and release corrosive and toxic vapors, including sodium oxides and silicon dioxide.

Explosive properties: Not explosive.

Extinguishing Media: Use media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Avoid using straight streams or high-pressure water jets, as these can cause the corrosive material to splash or spread the fire.

Specific Hazards: Corrosive to metals.

Unusual Hazards: When wet avoid prolonged contact with alkali sensitive metals such as aluminum, brass, bronze, copper, lead, tin, or zinc because flammable hydrogen gas can be generated.

Fire Fighting: Move container from the 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. Dike runoff water from fire control for later disposal; do not allow it to enter drains or waterways, as it will be highly alkaline.

Component	U.S. EPA - Acute Exposure Guidelines	U.S. EPA - Acute Exposure Guidelines	U.S. EPA - Acute Exposure Guidelines	Immediately Dangerous to Life/ Health (IDLH)

	(AEGL-1) - Final	(AEGL-2) - Final	(AEGL-3) - Final	
Sodium Metasilicate 6834-92-0	Not established	Not established	Not established	
Sodium Metasilicate Pentahydrate 10213-79-3	Not established	Not established	Not established	

Hazardous Combustion Products:
Specific thermal decomposition products when the material is subjected to extreme heat:
- Sodium Oxides: Highly corrosive and irritating fumes
- Silicon Oxides (Silica): Irritating particulates released during thermal breakdown.

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.

GHS: PHYSICAL HAZARDS:
Corrosive to Metals - Category 1: May be corrosive to metals

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Do not get in eyes, on skin or on clothing. Do not breathe dust, fumes, gas, mist, vapors, or spray. Wash hands and exposed skin and clothing thoroughly after handling. Do not touch eyes. Do not eat, drink, or smoke when using this product. Spilled or wet material may pose a slipping hazard on some surfaces. Use only outdoors or in a well-ventilated area. Take any precaution to avoid mixing with combustibles or incompatible materials. Ensure adequate ventilation, especially in confined areas. Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.

Personal Protective Equipment: Wear protective gloves, protective clothing, eye, and face protection.

Emergency Procedures: All transfer facilities should have a documented spill prevention and containment program for all hazardous materials. Consideration must be given to the containment of spills and leaks to comply with applicable federal, state, and local regulations.

Environmental Precautions: Keep out of water supplies and sewers. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.

Methods and Materials for Clean-up

Recovery: Reuse or reprocess, if possible. Shovel dry material into suitable container. Vacuum any remaining material into a suitable container.

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

Final Disposal: Shovel dry material into suitable container. Recycle or dispose according to regulations.

Additional Disaster Prevention Measures: Absorbents used for Sodium Metasilicate spills are generally not a significant reactivity issue if appropriate inert materials are chosen. However, the high alkalinity and chemical nature of the substance require specific considerations to ensure safe containment. Recommended Inert Absorbents: For liquid spills, use non-combustible, inert materials such as dry sand, earth, granulated clay, or vermiculite. These materials do not react with the substance and effectively contain the liquid for later disposal.

SECTION 7. HANDLING AND STORAGE

Handling:

Precautions for Safe Handling:

Do not get in eyes, on skin, or on clothing. Avoid creation of dust. Wet material may pose a slipping hazard. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS.

Technical measures/precautions: Absorb spillage to prevent material damage. Avoid generating dust—dust causes respiratory irritation. Keep material handling systems closed as much as possible. Use local exhaust ventilation where dust may be generated.

Other precautions: Sodium Metasilicate dust is highly irritating and corrosive to skin, eyes, and the respiratory system. Minimize dust generation during transfer, unloading, mixing, and weighing. Use local exhaust ventilation (LEV) or handle only in well-ventilated areas to prevent airborne exposure.

Prevention of contact: Do not breathe dust or spray mist. Wash skin and contaminated clothing thoroughly after handling. Wear protective gloves, protective clothing, eye, and face protection. Use only outdoors or in a well-ventilated area.

Storage:

Safe Storage Conditions: Store in original container. Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store dissolved material in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

Technical measures: Moisture must be prevented from entering storage bins; use a desiccator breather on the bin vent. The storage bin discharge opening should have at least a 60-degree slope to facilitate material flow.

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, or zinc because flammable hydrogen gas can be generated.

Packaging or Materials of Construction: Store in corrosive resistant and NON-ALUMINUM 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). Use rubber diaphragm or plug type valves; avoid globe valves and parts made of brass, bronze, copper, or aluminum.

Additional Information:

GHS: PHYSICAL HAZARDS:

• Corrosive to Metals - Category 1: May be corrosive to metals

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

REGULATORY EXPOSURE LIMIT(S):

This product does not contain any components that have regulatory occupational exposure limits (OEL's).

NON-REGULATORY EXPOSURE LIMIT(S):

This product does not contain any components that have advisory (non-regulatory) occupational exposure limits (OEL's); however, the manufacturer has established internal Recommended Exposure Level(s) [REL(s)] as noted below.

Recommended Exposure Limits (REL's) are non-regulatory occupational exposure limits the manufacturer has established based on health effects data.

Manufacturer [OXY] Recommended Exposure Limit (REL):	3 mg/m³ = REL ceiling (internal Occupation Exposure Limit based on data from analogous chemicals)

Component	OXY REL 8 hr TWA	OXY REL STEL	OXY REL Ceiling
Sodium Metasilicate 6834-92-0 (56-59 %)	NA	NA	3 mg/m³ (Ceiling)

Additional Advice: Recommended Exposure Level (REL) Ceiling values indicate the exposure limit, which at no time shall be exceeded. Instantaneous monitoring is the preferred method to determine compliance with Ceiling values. If instantaneous monitoring is not feasible, then the ceiling shall be assessed as a 15-minute time weighted average exposure, which shall not be exceeded at any time during the working day.

ENGINEERING CONTROLS: Use closed systems when possible. Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Eye and Face Protection: Wear chemical safety goggles and/or a face-shield to protect against skin and eye contact when appropriate. When wet mixing, wear safety goggles with a face-shield. Provide an emergency eyewash fountain and quick drench shower in the immediate work area.

Skin and Body Protection: Wear protective clothing to minimize skin contact. When potential for contact with wet material exists, wear Tychem® or similar chemical protective suit. When potential for contact with dry material

exists, wear disposable coveralls suitable for dust exposure, such as Tyvek®. Always place pants legs over boots. Thoroughly clean and dry contaminated clothing before reuse.

Hand Protection: Wear appropriate chemical resistant gloves. If contact with forearms is likely, wear gauntlet style gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

Protective Material Types: Butyl rubber, Natural rubber, Neoprene, Nitrile, Tychem®, Tyvek®.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate, use a NIOSH approved full-facepiece respirator with an N100, R100, or P100 filter. For an emergency or planned entry into unknown concentrations or IDLH conditions, use any self-contained breathing apparatus (SCBA) that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode OR any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus (e.g. airline with auxiliary escape pack). A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

Other Protective Equipment: An emergency eyewash fountain and quick drench shower is recommended to be provided in the immediate work area.

HYGIENE MEASURES: Do not breathe dust or spray mist. Do not get in eyes, on skin, or on clothing. Wear protective gloves, protective clothing, eye, and face protection. For environmental protection remove and wash all contaminated protective equipment before re-use. Use outdoors or in a well-ventilated area. Keep separated from incompatible substances.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Granules, Powder
Physical State:	Solid
Color:	White to faintly colored
Odor:	Odorless
Odor Threshold [ppm]:	No data available
Melting Point/Range:	162 °F
Freezing Point/Range:	Not applicable to solids
Evaporation Rate (ether=1):	Not applicable
Flammability (solid, gas):	Not flammable
Flammability Limits in Air:	Not applicable
Lower Flammability Level (air):	Not flammable
Upper Flammability Level (air):	Not flammable
Explosion limits:	Not applicable
Flash point:	Not flammable
Auto-ignition Temperature:	No information available.
Decomposition Temperature:	No information available.
pH:	12.4 (1% aqueous solution)
Viscosity:	Not applicable

Kinematic Viscosity:	No data available
Water Solubility:	~610 g/L (≈ 61 g/100 mL) at 30 °C
Partition Coefficient (n-octanol/water):	No data available
Vapor Pressure:	Not applicable
Density:	No data available
Relative Density/Specific Gravity (water=1):	Not applicable
Vapor Density (air=1):	Not applicable
Particle Size Distribution:	U.S. Screen Size Typical Value On 18: 1% max. Thru 10, On 40: 80% min. Thru 40, On 60: 15% max. Thru 60: 3% max

Other Information

Molecular Formula:	$Na_2SiO_35H_2O$
Chemical Family:	Alkali Metal Silicates (Inorganic Salts)
Explosive properties:	Not applicable
Oxidizing properties:	Not applicable
Bulk Density:	54 lbs./ft3 - 60 lbs./ft3
Volatility:	Not applicable
Hygroscopic:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal temperatures and pressures.

Reactivity: Not reactive under normal temperatures and pressures.

Possibility of Hazardous Reactions: Sodium Metasilicate reacts with alkali-sensitive metals—such as aluminum, tin, lead, and zinc—to produce hydrogen gas, which can pose an explosion risk in enclosed areas. Violent heat generation occurs when the substance is mixed with strong acids, which can lead to splattering of the corrosive material. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces. Reaction with ammonium salt solutions can result in the evolution of toxic ammonia gas.

Conditions to Avoid (e.g., static discharge, shock, or vibration): No information available.

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, or zinc because flammable hydrogen gas can be generated

Hazardous Decomposition Products: Hydrogen gas; Carbon monoxide; Sodium oxides
Specific thermal decomposition products when the material is subjected to extreme heat:

- Sodium Oxides: Highly corrosive and irritating fumes
- Silicon Oxides (Silica): Irritating particulates released during thermal breakdown.

Hazardous Polymerization: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE AND POTENTIAL HEALTH EFFECTS:

ACUTE TOXICITY:

Eye contact: Causes serious eye damage. May cause severe irritation, pain and corneal burns (possibly leading to blindness). The full extent of the injury may not be immediately apparent.

Skin contact: Causes severe skin burns. May cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third-degree burns.

Inhalation: May cause irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. Upon contact with moist mucous membranes, sodium metasilicate is highly alkaline and may cause corrosive damage.

Ingestion: Harmful if swallowed. May cause immediate pain and severe burns of the upper and lower gastrointestinal tract with vomiting, nausea, and diarrhea.

CHRONIC TOXICITY:

Chronic Effects: Repeated or prolonged skin contact may result in dermatitis.

SIGNS AND SYMPTOMS OF EXPOSURE:

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.

Inhalation (Breathing): Inhalation of dust, and vapor or mists from aqueous solutions may result in effects ranging from transient nasal and throat irritation and cough in mild exposures to dyspnea, chest tightness/pain, laryngospasm, respiratory distress, pneumonitis, and pulmonary edema in severe cases.

Skin: Skin irritation is unlikely following brief contact with dry solid, whereas wet solid and aqueous solutions may cause severe irritation, and corrosive injury with permanent scarring in severe cases, depending on the degree of dilution and resultant pH.

Eye: Eye exposure may lead to rapid onset of corrosive injury including corneal and conjunctival epithelial loss, stromal and endothelial necrosis, hyperemia of the iris, conjunctival and limbal edema and ischemia, corneal opacification and ulceration. Additional complications may include perforation and staphyloma of the cornea, symblepharon, persistent iritis, and secondary glaucoma or cataract.

Ingestion (Swallowing): Ingestion may result in corrosive injury to the upper gastrointestinal tract. Signs and symptoms commonly include vomiting, hematemesis, drooling, odynophagia, dysphagia, with oropharyngeal, esophageal, epigastric, and abdominal pain. Hoarseness, cough, stridor, dyspnea, tachypnea, respiratory distress, and respiratory failure are indications of serious complications. Local effects can range in severity from mucosal erythema and/or edema, to ulceration, erosion, necrosis, and esophageal perforation leading to mediastinitis, pneumonia, mediastinal contamination, and severe sepsis. Esophageal injury may occur in the absence of oral burns.

Interaction with Other Chemicals Which Enhance Toxicity: No information available.

GHS HEALTH HAZARDS:

GHS: CONTACT HAZARD - SKIN: Category 1B - Causes severe skin burns and eye damage
GHS: CONTACT HAZARD - EYE: Category 1 - Causes serious eye damage
GHS: ACUTE TOXICITY - ORAL: Category 4 - Harmful if swallowed
SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE (SE):
Category 3 - May cause respiratory tract irritation

TOXICITY DATA:

PRODUCT TOXICITY DATA: Product level acute toxicity data for purposes of GHS classifications.

LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
1152 - 1349 mg/kg bw (Rat)	> 5000 mg/kg bw (Rat)	> 2.06 g/m^3 (Rat)

The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

Component	Oral LD50	Dermal LD50	Inhalation LC50
Sodium Metasilicate 6834-92-0	1153 mg/kg (Rat)	No data available	No data available
Sodium Metasilicate Pentahydrate 10213-79-3	847 mg/kg (Rat)	No data available	No data available

EYE IRRITATION/CORROSION: The product is classified as causing serious eye damage (Category 1, H318), according to criteria of the GHS. Causes serious eye damage.

SKIN IRRITATION/CORROSION: This product is classified as causing severe skin burns (Category 1B, H314), according to GHS classification criteria. Causes severe skin burns and eye damage.

Standard Draize (Skin): SODIUM METASILICATE: 250 mg/24 hour(s) skin-human severe; 250 mg/24 hour(s) skin-rabbit severe; 250 mg/24 hour(s) skin-guinea pig moderate

SKIN ABSORBENT/DERMAL ROUTE: NO.
Material is corrosive to the skin and will produce damage to the skin prior to systemic effects being observed. The compound's high-water solubility, low lipophilicity, and relatively large molecular size suggest that dermal absorption is minimal and systemic bioavailability via the skin is likely to be very limited. Thus, toxic effects from dermal exposure are expected to be restricted to local irritation, with little risk of systemic toxicity or accumulation in the body.

RESPIRATORY OR SKIN SENSITIZATION: Not classified as a skin or respiratory sensitizer per GHS criteria.

CARCINOGENICITY: Not classified as a carcinogen per GHS and/or CLP criteria. No reliable data available. Sodium Metasilicate does not carry any structural alerts for carcinogenicity. This product is not classified as a carcinogen by NTP, IARC or OSHA.

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure): Sodium Metasilicate is classified as a respiratory tract irritant due to its extremely high alkalinity, which causes corrosive damage when it reacts with moisture in the respiratory system. Acute exposure can result in coughing, sore throat, inflammation, and potentially pulmonary edema, leading to its regulatory classification as Specific Target Organ Toxicity (STOT) - Single Exposure, Category 3 for respiratory irritation.

SPECIFIC TARGET ORGAN TOXICITY (Repeated or Prolonged Exposure): The substance is not classified as a specific target organ toxicant upon repeated exposure per GHS and/or CLP criteria.

INHALATION HAZARD: Inhalation of Sodium Metasilicate presents serious health risks due to its corrosive properties and high alkalinity. Acute exposure can cause immediate irritation and burns to the respiratory tract, resulting in symptoms such as sore throat, coughing, and breathing difficulties. High concentrations may lead to severe tissue damage, chemical burns, and respiratory emergencies like laryngeal spasm and pulmonary edema, which can be delayed for several hours. Chronic exposure can cause lasting lung damage or respiratory tract ulcers.

INGESTION HAZARD: Acute Toxicity (oral) is 1152 - 1349 mg/kg bw and meets the GHS classification criteria of more than 300 mg/kg and less than or equal to 2000 mg/kg. Therefore, this substance is classified as Category 4 Acute Toxin Oral (harmful if swallowed). Following ingestion, onset of gastrointestinal symptoms are usually rapid and related to local mucosal irritation and development of corrosive injury. In some cases, the onset of vomiting may be delayed for several days or even weeks, usually in association with pyloric obstruction.

GERM CELL/IN-VITRO MUTAGENICITY: Not classified as a mutagen per GHS criteria. Extensive testing of Sodium Metasilicate, including both in vitro and in vivo studies, has shown no evidence of mutagenic or genotoxic effects. The Ames test using various bacterial strains, as well as additional in-vitro assays with mammalian cells, yielded negative results for genetic toxicity, regardless of metabolic activation. Furthermore, in-vivo testing in mice found no induction of chromosome aberrations in bone marrow. Overall, available data indicate that Sodium Metasilicate does not pose a mutagenic risk.

REPRODUCTIVE TOXICITY: Available data on reproductive toxicity for Sodium Metasilicate are limited; however, oral repeated dose studies in rats and mice showed no treatment-related effects on reproductive organs. The NOAELs identified were greater than 237 mg/kg bw/day for female rats, 227 mg/kg bw/day for male rats, and 260–284 mg/kg bw/day for mice.

DEVELOPMENTAL TOXICITY: Not classified as a developmental or reproductive toxin per GHS and/or CLP criteria.

ASPIRATION HAZARD: Not classified as an aspiration hazard per GHS and/or CLP criteria.

TOXICOKINETICS: Sodium Metasilicate is highly water-soluble and exhibits very low systemic bioavailability, with toxicity primarily resulting from its intrinsic alkalinity and local irritation at the site of contact. Oral studies in animals indicate limited absorption, with most of the substance excreted in urine, and no significant accumulation or systemic toxicity observed. The compound is not metabolized in vivo, as confirmed by metabolism simulators and negative genetic toxicity studies, suggesting no formation of reactive metabolites. Inhalation exposure is unlikely due to low vapor pressure and non-respirable particle size, while dermal absorption is considered minimal. Overall, Sodium Metasilicate is rapidly excreted, mainly via the kidneys, and has a low potential for bioaccumulation in biological systems.

METABOLISM: Sodium Metasilicate is not metabolized in vivo, as confirmed by its chemical structure and metabolism simulations, which show no generation of metabolites by liver, skin, or microbial pathways. Toxicity studies further support the absence of reactive metabolites, indicating that its biological effects are primarily due to its intrinsic alkalinity rather than metabolic transformation.

BIOLOGICAL DISTRIBUTION: Sodium Metasilicate is only minimally absorbed following oral exposure, with rapid urinary excretion and negligible bioaccumulation, as confirmed by animal studies. Its biological distribution is limited due to its high-water solubility and polar nature, and both inhalation and dermal absorption are considered unlikely to contribute significantly to systemic uptake.

PATHOGENICITY AND ACUTE INFECTIOUSNESS (ORAL, DERMAL, AND INHALATION): Not applicable.

ENDOCRINE DISRUPTOR: Based on available data, no endocrine system-related effects have been identified with consumption of Sodium Metasilicate. In addition, there is no evidence to suggest that Sodium Metasilicate functions in a manner similar to any known hormone.

NEUROTOXICITY: Sodium Metasilicate is not classified as a nervous system toxin (neurotoxin).

IMMUNOTOXICITY: Not Available.

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY (EC, IC, and LC):

Component:	*Freshwater Fish:*	*Invertebrate Toxicity:*	*Algae Toxicity:*	*Other Toxicity:*
Sodium Metasilicate 6834-92-0 (56-59 %)	*LC50 Brachydanio rerio: 210 mg/L 96h semi-static *LC50 Brachydanio rerio: 210 mg/L 96h	No data available	No data available	No data available
Sodium Metasilicate Pentahydrate 10213-79-3 (100 %)	*LC50 Brachydanio rerio: 210 mg/L 96h semi-static *LC50 Brachydanio rerio: 210 mg/L 96h	No data available	No data available	No data available

Aquatic Toxicity:
This material has exhibited moderate toxicity to aquatic organisms.

FATE AND TRANSPORT:

PERSISTENCE: A persistence assessment for Sodium Metasilicate (in all assessed forms) is not applicable, as the substance is inorganic. Silicon and oxygen compounds, such as soluble silicates, are naturally abundant in the environment, being integral components of minerals, soils, plants, animals, and humans. Therefore, persistence in the traditional sense does not apply to these substances.

BIODEGRADATION: Soluble silicates, due to their inorganic chemical structure, are not biodegradable. In an OECD-compliant simulation, spray-dried sodium silicate (molar ratio 2.1) at 25 mg/L showed no adverse effects on sewage treatment plant performance or the biodegradation of other nutrients; almost all of the silicate was detected in the effluent. The study's results also apply to Sodium Metasilicate. Biologically, some organisms like diatoms and sponges continuously remove silica from water by forming amorphous biogenic silica, which can reduce dissolved silica levels below 1 mg/L during blooms.

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

BIOACCUMULATIVE POTENTIAL: Toxicokinetic data on vertebrates revealed a low potential for bioaccumulation.

MOBILITY IN SOIL: Sodium Metasilicate is expected to have low adsorption potential in soils and sediments due to its physicochemical properties. It is highly soluble in water and insoluble in alcohol, making log Kow determination not feasible. Measurements from sewage treatment plants show only minor removal by sedimentation and adsorption (about 10%), indicating most of the substance remains dissolved. The distribution in environmental compartments is difficult to predict precisely because Sodium Metasilicate exists in dynamic equilibrium between various anionic forms, influenced by pH and concentration. Soils and sediments act as buffers through sorption and desorption processes, but the anthropogenic contribution is negligible compared to natural silica levels. Dissolved silica from commercial sources is indistinguishable from natural silica.

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

Persistent, Bioaccumulative, and Toxic (PBT) and Very Persistent and Very Bioaccumulative (vPvB) Assessment:
Inorganic substances do not require PBT assessment.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from material:
Reuse or recycle if possible. Keep out of water supplies and sewers. May be subject to disposal regulations. Dispose in accordance with all applicable regulations.

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

Contaminated Material:
Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

LAND TRANSPORT

U.S. DOT 49 CFR 172.101:

UN NUMBER:	UN3253
PROPER SHIPPING NAME:	Disodium trioxosilicate
HAZARD CLASS/ DIVISION:	8
PACKING GROUP:	III
LABELING REQUIREMENTS:	8

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

UN NUMBER:	UN3253
SHIPPING NAME:	Disodium trioxosilicate

CLASS OR DIVISION: 8
PACKING/RISK GROUP: III
LABELING REQUIREMENTS: 8

MARITIME TRANSPORT (IMO / IMDG)

UN NUMBER: UN3253
PROPER SHIPPING NAME: Disodium trioxosilicate
HAZARD CLASS / DIVISION: 8
Packing Group: III
LABELING REQUIREMENTS: 8

AIR TRANSPORT (ICAO / IATA)

Status - ICAO/IATA: Regulated

Special Instructions CAO: IATA Certificate for shipping personnel is required

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: The product is not listed in annex II to the Marpol 73/78 Convention and IBC Code.

SECTION 15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:
Health hazard classifications were performed using OSHA Hazard Communication 2024 (1910.1200) Appendix A and/or UN GHS Rev. 8 (2019). 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.

SARA EHS Chemical (40 CFR 355.30)
Not regulated.

SARA HAZARD CATEGORIES ALIGNED WITH GHS (2018):
Physical Hazard - Corrosive to Metal
Health Hazard - Acute Toxin (any route of exposure)
Health Hazard - Skin Corrosion or Irritation
Health Hazard - Serious eye damage or eye irritation
Health Hazard - Specific Target Organ Toxicity (STOT) Single Exposure (SE)

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

DEPARTMENT OF HOMELAND SECURITY (DHS)- Chemical Facility Anti-Terrorism Standards (6 CFR 27):
No components in this material are regulated under DHS

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

FDA: Sodium Silicates have Generally Recognized as Safe (GRAS) status under specific FDA regulations. Refer to 21 Code of Federal Regulations (CFR) 173, 175, 176, 177, 182, and 184, which is accessible on the FDA's website. This product is not produced under all current Good Manufacturing Practices (cGMP) requirements as defined by the Food and Drug Administration (FDA). While OxyChem's Liquid Sodium Silicate and Sodium Metasilicate products (all grades) meet all requirements specified by the FDA, OxyChem does not represent or warrant general compliance of these products for food uses. It is the responsibility of the user to carefully assess regulations for each prospective use of a product in direct or indirect food applications.

EPA'S CLEAN WATER AND CLEAN AIR ACTS:
Component(s) not listed on impacted regulatory lists.

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):

Component	TSCA Inventory	TSCA ACTIVE LIST	TSCA 12(b)	TSCA/Section 4	TSCA/Section 5	TSCA/Section 6	TSCA/Section 8
Sodium Metasilicate 6834-92-0 (56-59 %)	Listed	ACTIVE	Not Listed	Not listed	Not Listed	Not Listed	Not listed
Sodium Metasilicate Pentahydrate 10213-79-3 (100 %)	Not Listed	Excluded as a hydrate	Not Listed	Not listed	Not Listed	Not Listed	Not listed

TSCA 12(b):
• This component is not subject to export notification

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

Component	DSL	NDSL
Sodium Metasilicate 6834-92-0 (56-59)	Listed	Not Listed
Sodium Metasilicate Pentahydrate 10213-79-3 (100)	Excluded as a hydrate of sodium metasilicate	Not Listed

STATE REGULATIONS

California Proposition 65:
This product is not listed on the California Governor's current list of Carcinogens, Reproductive Toxicants, and/or Candidate Carcinogens (Proposition 65), but it may contain trace amounts of impurities that are listed. For additional information, contact Occidental Chemical Corporation Customer Service (1-800-752-5151 or 1-972-404-3700).

Component	U.S. - California - Proposition 65 - Carcinogens List	CA. Prop. 65 Teratogen	California Proposition 65 CRT List - Male reproductive toxin:	California Proposition 65 CRT List - Female reproductive toxin:	Massachusetts Right to Know Hazardous Substance List	Rhode Island Right to Know Hazardous Substance List
Sodium Metasilicate 6834-92-0 (56-59 %)	Not listed	Not listed	Not Listed	Not Listed	Not Listed	Not Listed
Sodium Metasilicate	Not listed	Not listed	Not Listed	Not Listed	Not Listed	Not Listed

Pentahydrate 10213-79-3 (100 %)						

Component	New Jersey Right to Know Hazardous Substance List	New Jersey Special Health Hazards Substance List	New Jersey - Environmental Hazardous Substance List	Pennsylvania Right to Know Hazardous Substance List	Pennsylvania Right to Know Special Hazardous Substances	Pennsylvania Right to Know Environmental Hazard List
Sodium Metasilicate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Sodium Metasilicate Pentahydrate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Workplace Hazardous Materials Information System (WHMIS 2015) which includes the amended Hazardous Products Act (HPA) and the Hazardous Product Regulations (HPR).

Component	Canada - CEPA - Schedule I - List of Toxic Substances	Canada - NPRI	Canada - CEPA - Greenhouse Gases (GHG) Subject to Mandatory Reporting	Canadian Chemical Inventory:	NDSL
Sodium Metasilicate 6834-92-0 (56-59)	Schedule 1, Part 3 Substance	Not Listed	Not Listed	Listed on inventory	Not Listed
Sodium Metasilicate Pentahydrate 10213-79-3 (100)	Not listed	Not Listed	Not Listed	Hydrates are not listed on inventory (see anhydrous form, plus water)	Not Listed

SECTION 16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Product Stewardship

Rev. Date: 08-Apr-2026

Reason for Revision:
• Scheduled review
• SDS format adopts revisions to the Hazardous Products Regulations (HPR) to include revisions to “Section 9: Physical and chemical properties” and ensures classification with at a minimum the seventh revised edition of GHS and certain elements from the eighth revised edition (Revision 8)
• SDS format adopts revisions to the OSHA's 2024 Hazard Communication Rule 29CFR 1910.1200 and ensures classification with at a minimum the seventh revised edition of GHS and certain elements from the eighth revised edition (Revision 8)

IMPORTANT:
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handling and use of the product remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patents or to violate any Federal, State, local or foreign laws.

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

End of Safety Data Sheet