

SAFETY DATA SHEET

M35887 NA_EN

OxyChem®



SODIUM SILICATE LIQUID SILICEOUS

MSDS No.: M35887

Rev. Date: 06-Aug-2012

Rev. Num. 05

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Identification: Occidental Chemical Corporation
5005 LBJ Freeway
P.O. Box 809050
Dallas, TX 75380-9050

24 Hour Emergency Telephone Number: 1-800-733-3665 or 1-972-404-3228 (U.S.); CHEMTREC (U.S.): 1-800-424-9300; CHEMTREC (outside U.S.): +1 703-527-3887

To Request an SDS: MSDS@oxy.com or 1-972-404-3245

Customer Service: 1-800-752-5151 or 1-972-404-3700

Trade Name: Sodium Silicate Liquid Siliceous, Grades 20 Clear, 20 Special Clear, 3.4, 40, 40 Clear, 40 Light, 40 Special, 40 Special Clear, 42, 42 Heavy, 42 Special, 42 Special Clear

Synonyms: Liquid sodium silicate, Water glass, Sodium silicate liquid siliceous

Product Use: adhesives and binders, pulp and paper, deinking, Detergents / Soaps, gels, Catalysts, soil stabilization, Textiles, Drilling fluids, zeolites, mineral processing, refractory cements, Water treatment chemicals, silica products

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Color: Colorless
Physical State: Liquid
Appearance: Clear to opaque
Odor: Odorless to slight odor

Signal Word: **WARNING**

MAJOR HEALTH HAZARDS: MAY BE HARMFUL IF SWALLOWED. CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION.

PRECAUTIONARY STATEMENTS: Wash thoroughly after handling. Wear protective gloves, protective clothing, eye, and face protection.

Print date: 06-08-2012

1 of 7

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POTENTIAL HEALTH EFFECTS:

Inhalation: May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. In some cases, pulmonary edema and/or pneumonia may develop, either immediately or more often within 72 hours. The symptoms may include tightness in the chest, dyspnea, frothy sputum, cyanosis, and dizziness. Physical findings may include moist rales, low blood pressure and high pulse pressure. Moist rales are a sound heard over fluid in the bronchial tubes.

Skin contact: Direct contact may cause severe irritation, pain, and possibly burns.

Eye contact: Direct contact may cause severe irritation, pain and burns, possibly severe, and permanent damage including blindness. The full extent of the injury may not be immediately apparent.

Ingestion: May cause immediate pain and severe burns of the esophagus and gastrointestinal tract with vomiting, nausea, and diarrhea. May cause swelling and tissue destruction to mucous membranes of the mouth, throat, esophagus, and stomach.

Chronic Effects: None known.

Interaction with Other Chemicals Which Enhance Toxicity: None known.

Medical Conditions Aggravated by Exposure: Respiratory disorders. Skin disorders.

See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	%	CAS Number
Sodium silicate	20.00 - 49.00	1344-09-8
Water	51.00 - 80.00	7732-18-5

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. 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.

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. GET MEDICAL ATTENTION IMMEDIATELY.

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. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION: Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.

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Product #: 983934 Name: SODIUM SILICATE N-40 Desc: MFG PQ/OXY

From: BRENNTAG PACIFIC INC. To: Wednesday, April 22, 2015

SODIUM SILICATE LIQUID SILICEOUS

M35887 NA_EN

MSDS No.: M35887

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Notes to Physician: The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage.

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.

6. ACCIDENTAL RELEASE MEASURES

Occupational Release: Flush spill area with water, if appropriate. Dries to form glass film which can easily cut skin. Wear appropriate personal protective equipment recommended in Section 8 of the SDS. Liquid material may be removed with a vacuum truck. Wet material is slippery under foot. Shovel dried residue into suitable container. Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate agencies. This material is alkaline and may raise the pH of surface waters with low buffering capacity.

7. HANDLING AND STORAGE

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

Handling Procedures: Do not get in eyes, on skin, or on clothing. Avoid breathing aerosol mist. Wash thoroughly after handling. Use care when handling hot material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Regulatory Exposure Limit(s): No occupational exposure limits have been established at this time

ENGINEERING CONTROLS: Provide local exhaust ventilation where dust or mist may be generated.

PERSONAL PROTECTIVE EQUIPMENT:

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

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Skin and Body Protection: Wear protective clothing to minimize skin contact. When skin contact is likely, wear Tychem® SL or a similar protective suit. Wear appropriate heat resistant clothing when potential exists for contact with materials above 120 F (49 C).

Hand Protection: Wear appropriate chemical resistant gloves. Use gloves that are cut resistant if handling dry glass material.

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

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Clear to opaque
Color:	Colorless
Odor:	Odorless to slight odor
Molecular Formula:	$x\text{SiO}_2/\text{Na}_2\text{O}$ ($x > 3.0$ by weight)
Boiling Point/Range:	214 - 216 F (101 - 102 C)
Freezing Point/Range:	30 F (-1 C)
Specific Gravity (water=1):	1.32 - 1.61
Density:	11.0 - 13.4 lbs/gal
Water Solubility:	100%
pH:	11.0 - 11.4
Volatility:	> 50%

10. STABILITY AND REACTIVITY

Reactivity/ Stability: Stable at normal temperatures and pressures. Prolonged contact with incompatible metals may produce flammable hydrogen gas.

Conditions to Avoid: Prolonged storage above 140 F (60 C). Contact with acids will cause gelling and evolution of heat.

Incompatibilities/ Materials to Avoid: Acids, Prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys

Hazardous Decomposition Products: None known

Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

IRRITATION DATA: As listed below

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Standard Draize (Eye):	Test results for solutions with the following pH/weight ratio of SiO ₂ /Na ₂ O are as follows: 11.6/2.54 = irritant; 11.6/2.4 = irritant; 12.2/2.0 = corrosive; 12.4/1.8 = corrosive
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TOXICITY DATA:

Component	LD50 Oral:	LC50 Inhalation:	LD50 Dermal:
Sodium silicate	1153 mg/kg (Rat)		4640 mg/kg (Rabbit)
Water	900 mg/kg (Rabbit)	1108 ppm (1hr-Rat)	

TOXICITY:

Solutions of sodium silicate are alkaline. Exposure to alkaline solutions may result in irritation to severe burns depending on the concentration and duration of the exposure. Sodium silicate is a type of amorphous silica and does not cause pulmonary silicosis.

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

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

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

FATE AND TRANSPORT:

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.

13. DISPOSAL CONSIDERATIONS

Reuse or recycle if possible. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

Status: Not regulated

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

Status: Not regulated

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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
- **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)

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 is not listed, but it may contain impurities/trace elements known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. For additional information, contact OxyChem Customer Service.

California Proposition 65 Cancer WARNING:	
California Proposition 65 CRT List - Male reproductive toxin:	Not Listed
California Proposition 65 CRT List - Female reproductive toxin:	Not Listed
Massachusetts Right to Know Hazardous Substance List	Not Listed
New Jersey Right to Know Hazardous Substance List	Not Listed
New Jersey Special Health Hazards Substance List	Not Listed
New Jersey - Environmental Hazardous Substance List	Not Listed
Pennsylvania Right to Know Hazardous Substance List	Not Listed

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Sodium silicate	
Pennsylvania Right to Know Special Hazardous Substances	Not Listed
Pennsylvania Right to Know Environmental Hazard List	Not Listed
Rhode Island Right to Know Hazardous Substance List	Not Listed

CANADIAN REGULATIONS

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

WHMIS - Classifications of Substances:

- D2B - Poisonous and Infectious Material; Materials causing other toxic effects - Toxic material

16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Product Stewardship

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

Health: 2 Flammability: 0 Reactivity: 0

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

Health: 2 Flammability: 0 Reactivity: 0

Reason for Revision:

- Updated 24 Hour Emergency Telephone Number: SEE SECTION 1
- Updated FDA Statement: SEE SECTION 15
- Revised California Proposition 65 Statement: SEE SECTION 15
- Revised Preparer Information: SEE SECTION 16
- Added "End of Safety Data Sheet" phrase

IMPORTANT:

The information presented herein, while not guaranteed, was prepared by technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, storage, disposal and other factors that may involve other or additional legal, environmental, safety or performance considerations, and OxyChem assumes no liability whatsoever for the use of or reliance upon this information. While our technical personnel will be happy to respond to questions, safe 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

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7 of 7

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