

## Offer Sheet

Product	Sodium Silicate
Quantity	12 totes x 27 gallons
Net weight	42,636 lbs.
Manufacture date	4/15/2020
Availability	One time
Location	Mt. Dora, FL 32757
Date	1/9/26
COA & SDS	Attached below



**Brian Svrusis**  
Solvent Systems International  
575 Bennett Road  
Elk Grove Village, IL 60007  
847-323-6718 call or text  
Click here for: [Surplus Inventory](#)  
[Solvent-Systems.com](#)

Sodium silicate (water glass) has broad commercial use across multiple industries due to its alkalinity, binding capability, corrosion resistance, and film-forming properties. Key commercial applications include:

#### **Construction and Building Materials**

- **Concrete and cement additive** to improve density, reduce permeability, and enhance chemical resistance
- **Soil stabilization and grouting** for ground strengthening and water cutoff
- **Fireproofing and refractory applications** as a binder for insulation boards and castables

#### **Detergents and Cleaning Products**

- **Builder in laundry and industrial detergents** to soften water, buffer pH, and prevent corrosion of equipment
- **Heavy-duty cleaners and degreasers**, particularly in metal and food-processing environments

#### **Pulp and Paper**

- **Adhesive and binder** for corrugated board and paperboard
- **De-inking agent** in recycled paper processing
- **Bleaching stabilizer** in paper pulp treatment

#### **Foundry and Metal Processing**

- **Binder for sand molds and cores** in metal casting
- **Welding rod coatings** to improve arc stability and slag formation
- **Corrosion inhibitor** in metal surface treatments

#### **Water and Wastewater Treatment**

- **Coagulant aid and corrosion control agent** in potable and industrial water systems
- **Scale and deposit control** in piping and boilers

#### **Chemical Manufacturing**

- **Intermediate for silica-based products**, including precipitated silica, colloidal silica, and zeolites
- **Source of alkalinity** in chemical formulations

#### **Adhesives, Sealants, and Coatings**

- **Inorganic adhesive** for paper, cardboard, and mineral substrates
- **Protective coatings** for fire resistance and chemical resistance
- **Dust-proofing agent** for concrete floors

#### **Textiles**

- **Dye fixing and setting agent** in textile printing and fabric finishing

#### **Agriculture**

- **Silicate source** to improve plant stress resistance and disease tolerance (region- and regulation-dependent)



Occidental Chemical Corporation  
A subsidiary of Occidental Petroleum Corporation

**Certificate of Analysis**  
**Liquid Sodium Silicate - Grade 52**  
**Bulk**

**Detailed Order Information**

Date	04/20/2020
Purchase order item/date	23484 / 04/02/2020
Delivery item/date	85853676 900004 / 04/22/2020
Order item/date	1633124 000020 / 04/02/2020
Customer Number	Container Number
112005	244

Batch No. **450K417031** / Quantity **BULK**  
Date of Manufacture: 04/15/2020

OxyChem Product Code: **52/BU**

Characteristic	Unit	Value	<u>Specifications</u>	
			Min.	Max.
Gravity @ 20 deg C	Baume	<b>51.52</b>	51.50	52.50
Weight Ratio (SiO2/Na2O)		<b>2.41</b>	2.35	2.45
Na2O	Wt. %	<b>13.71</b>	13.60	14.20
SiO2	Wt. %	<b>33.08</b>	32.85	33.85
Total Solids	Wt. %	<b>46.79</b>	46.45	48.05
Viscosity (cP) @ 20 deg C	cP	<b>1438</b>	1375	2200
Specific Gravity @ 20 deg C		<b>1.551</b>	1.551	1.568

ISSUED BY: Al Turner (or designee)

Seal Numbers: 133829, 133830, 133991

Occidental Chemical Corporation  
14555 Dallas Parkway Suite 400  
Dallas, TX 75254  
800-752-5151

Augusta Plant  
1620 Marvin Griffin Rd  
Augusta, GA 30906

# OXY LIQUID SODIUM SILICATE GRADE 52

## Label elements

### Hazard pictograms

#### Pictograms:



Danger

## Signal Word:

### Hazards

Causes serious eye irritation.

Causes mild skin irritation.

### Precautionary statements

#### Prevention

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear eye protection/ face protection.

Wear protective gloves/ protective clothing.

#### Response

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

Rinse mouth.

IF ON SKIN: Wash with plenty of soap and water.

IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.

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

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

#### Disposal

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

### Other hazards

No data available

## DOT INFORMATION:

Proper shipping name Not Regulated

Class NA

Packing group NA

Marine pollutant NA

BATCH: 450K417031



## First aid measures:

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Contaminated leather items such as shoes should be disposed of properly. Safety shower should be located in immediate work area.

**Eye contact:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Eye wash fountain should be located in immediate work area.

**Ingestion:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

## Indication of any immediate medical attention and special treatment needed:

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

## Handling and storage:

**Precautions for safe handling:** Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION. Spills of these organic materials on hot fibrous insulations may lead to lowering of the Autoignition temperatures possibly resulting in spontaneous combustion.

**Conditions for safe storage:** No specific requirements. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact. The shelf life given is for unopened containers stored under moderate temperature conditions.

## OCCIDENTAL CHEMICAL CORPORATION

A subsidiary of Occidental Petroleum Corporation

14555 Dallas Parkway, Suite 400

Dallas, Texas 75254

**Customer Information Number:** 800-752-5151

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** CHEMTREC +1 800-424-9300

# SAFETY DATA SHEET

M35886 - ANSI - EN



**Occidental Chemical Corporation**

A subsidiary of Occidental Petroleum Corporation



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## LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

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### SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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<b>Company Identification:</b>	Occidental Chemical Corporation 14555 Dallas Parkway, Suite 400, Dallas, Texas 75254-4300
<b>24 Hour Emergency Telephone Number:</b>	1-800-733-3665 or 1-972-404-3228 (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
<b>To Request an SDS:</b>	MSDS@oxy.com or 1-972-404-3245
<b>Customer Service:</b>	1-800-752-5151 or 1-972-404-3700
<b>Product Identifier:</b>	<b>LIQUID SODIUM SILICATE - ALKALINE</b>
<b>Trade Name:</b>	Sodium Silicate Liquid Alkaline, Grades 2.2, 2.2 Special, 30 Clear, 47, 47 Light, 47 Special, 49FG, 49FG Special, 50, 50 Clear, 50 Light, 50 Special, 50 Special Clear, 52, 52 Special, JW-25, JW-27, JW Clear, Pilot Special, WD-43, WD-43 Heavy, WD-43 Special; Moroc 1
<b>Synonyms:</b>	Liquid sodium silicate; Water glass; Sodium silicate liquid alkaline
<b>Product Use:</b>	adhesives and binders; pulp and paper; deinking; detergents / soaps; catalysts; textiles; drilling fluids; mineral processing; refractory cements; zeolites
<b>Uses Advised Against:</b>	Neutralizing acidic wastewater.

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### SECTION 2. HAZARDS IDENTIFICATION

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# LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

**OSHA REGULATORY STATUS:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## EMERGENCY OVERVIEW:

**Color:** Colorless to slight tint  
**Physical State:** Liquid  
**Appearance:** Clear to opaque  
**Odor:** Odorless to slight odor  
**Signal Word:** DANGER

**MAJOR HEALTH HAZARDS:** CAUSES SERIOUS EYE DAMAGE. CAUSES MILD TO MODERATE SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED.

**PHYSICAL HAZARDS:** Upon drying forms thin glass that can cut skin. Spilled material may cause a slipping hazard.

**PRECAUTIONARY STATEMENTS:** Wear eye and face protection.

**ADDITIONAL HAZARD INFORMATION:** Significant exposures must be referred for medical attention immediately. There is no specific antidote.

## HAZARD CLASSIFICATION:

<b>GHS: CONTACT HAZARD - SKIN:</b>	Category 3 - Causes mild skin irritation
<b>GHS: CONTACT HAZARD - EYE:</b>	Category 1 - Causes serious eye damage
<b>HAZARDS NOT OTHERWISE CLASSIFIED (HNOC):</b>	- ACUTE TOXICITY - ORAL: Category 5 (May be harmful if swallowed)

**GHS SYMBOL:** Corrosive



**GHS SIGNAL WORD:** DANGER

## GHS HAZARD STATEMENTS:

### GHS - Health Hazard Statement(s)

- Causes serious eye damage
- Causes mild skin irritation

### Additional Hazards - GHS Hazards Not Otherwise Classified (HNOC):

# LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

- ACUTE TOXICITY - ORAL: Category 5 (May be harmful if swallowed)

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

- Wear eye protection/face protection

#### GHS - Precautionary Statement(s) - Response

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF IN EYES: Immediately call a POISON CENTER or physician

#### GHS - Precautionary Statement(s) - Storage

- There are no Precautionary-Storage phrases assigned

#### GHS - Precautionary Statement(s) - Disposal

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

#### Hazard Not Otherwise Classified (HNOC)-Health

- May be harmful if swallowed

See Section 11: TOXICOLOGICAL INFORMATION

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Percent [%]
Water	7732-18-5	45 - 70
Sodium silicate	1344-09-8	30 - 55

## SECTION 4. FIRST AID MEASURES

**INHALATION:** If inhalation of this material occurs and adverse effects result, move person to fresh air and keep comfortable for breathing. Call a Poison Center or seek medical attention if you feel unwell.

**SKIN CONTACT:** If on skin, wash with plenty of water. If skin irritation occurs, get medical advice/attention. **SPECIFIC TREATMENT:** Wash with lots of water. Take off contaminated clothing and wash before reuse.

**EYE CONTACT:** If in eyes, immediately rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

**INGESTION:** If swallowed, rinse mouth. Contact a Poison Center, or a doctor/physician, or get medical attention if you feel unwell.

#### **Most Important Symptoms/Effects (Acute and Delayed):**

Solutions of sodium silicate are alkaline. Exposure to alkaline solutions may result in irritation to any contacted tissue,

## LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

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.

**Acute Symptoms/Effects:**

**Inhalation (Breathing):** Respiratory System Effects: Inhalation exposure may cause irritation, redness of upper and lower airways, coughing, laryngeospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.

**Skin:** Skin exposures normally result in only mild to moderate skin irritation. Prolonged contact may result in dermal burns, that are typically partial thickness, but full thickness skin loss may occur. Exposure to skin may cause mild skin irritation: redness, dry skin.

**Eye:** Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye. The full extent of the injury may not be immediately apparent.

**Ingestion (Swallowing):** Swallowing this material may be harmful. Gastrointestinal System Effects: Exposure by ingestion may cause irritation, swelling, and perforation of upper and lower gastrointestinal tissues. Permanent scarring may occur.

**Delayed Symptoms/Effects:**

Repeated and prolonged skin contact may cause a dermatitis.

**Protection of First-Aiders:** Avoid contact with skin and eyes. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.

**Notes to Physician:** 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:** None known.

**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, skin infections. Pulmonary disorders that compromise the integrity of the lungs such as asthma.

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## SECTION 5. FIRE-FIGHTING MEASURES

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**Fire Hazard:** Negligible fire hazard.

**Explosive properties:** This product does not contribute to the spreading of flames, nor is it combustible or explosive.

**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.

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## LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

**Sensitivity to Mechanical Impact:** Not sensitive.

**Sensitivity to Static Discharge:** Not sensitive.

**Lower Flammability Level (air):** Not flammable

**Upper Flammability Level (air):** Not flammable

**Flash point:** Not flammable

**Auto-ignition Temperature:** Not applicable

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Do not get in eyes, on skin or on clothing. Avoid breathing mist, vapor, or spray. Dries to form glass film which can easily cut skin. Spilled material may cause a slipping hazard. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

**Personal Protective Equipment:** See section 8 for information on personal protective equipment.

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

**Methods and Materials for Containment, Confinement, and/or Abatement:** Reclaim for processing if possible.

**Recovery:** Completely contain spilled material with dikes, sandbags, etc. After containment, collect the spilled material and transfer to a chemical waste area. Liquid material may be removed with a properly rated vacuum truck. Spills must be surrounded by absorbent material in order to delimit its extension, then complete its absorption.

**Neutralization:** No additional information available.

**Final Disposal:** Control pH at the discharge to sewer or the receiving water and comply with all federal, state, and local regulations. Runoff may pollute waterways. Dispose in accordance with all applicable regulations.

**Additional Disaster Prevention Measures:** See section 7 for storage and handling information. See section 8 for information on personal protective equipment. See section 13 for disposal information.

## SECTION 7. HANDLING AND STORAGE

### Handling:

**Precautions for Safe Handling:** Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Avoid

## LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

breathing vapor, mist, or spray. Product shipped/handled hot can cause thermal burns. Use care when handling hot material. Do not eat, drink or smoke in areas where this material is used. Use appropriate personal protective equipment (PPE). See Section 8, Exposure Controls and Personal Protection, for additional information.

### **Storage:**

**Safe 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 below or Section 10 of the Safety Data Sheet).

**Incompatible Substances:** 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.

### **Additional Information:**

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### **REGULATORY EXPOSURE LIMIT(S):**

This product does not contain any components that have regulatory occupational exposure limits (OELs) established.

### **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.

Component	OXY REL 8 hr TWA	OXY REL STEL	OXY REL Ceiling
Sodium silicate 1344-09-8 ( 30 - 55 )	NA	NA	Alkaline Product Grades: 4 mg/m <sup>3</sup> Siliceous Product Grades: 6 mg/m <sup>3</sup>

**Additional Advice:** ACGIH and/or 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:** Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

### **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 face shield to protect against eye and skin contact when appropriate. 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 skin contact is likely, wear

## LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

Tychem® SL or a similar protective suit. Wear appropriate heat resistant clothing when potential exists for contact with hot materials.

**Hand Protection:** Wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove. 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.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid
<b>Appearance:</b>	Clear to opaque
<b>Color:</b>	Colorless to slight tint
<b>Odor:</b>	Odorless to slight odor
<b>Molecular Formula:</b>	$x\text{SiO}_2/\text{Na}_2\text{O}$ ( $x = 1.63$ to $3.00$ by weight)
<b>pH:</b>	$\geq 11.5 - 12.9$
<b>Melting Point/Range:</b>	Not applicable to liquids
<b>Freezing Point/Range:</b>	$30^{\circ}\text{F} (-1^{\circ}\text{C})$
<b>Boiling point / boiling range</b>	$214\text{--}216^{\circ}\text{F} (101\text{--}102^{\circ}\text{C})$
<b>Flash point:</b>	Not flammable
<b>Vapor Pressure:</b>	No data available
<b>Vapor Density (air=1):</b>	No data available
<b>Relative Density/Specific Gravity (water=1):</b>	1.17 - 1.57
<b>Density:</b>	9.8 - 13.1 lbs/gal
<b>Water Solubility:</b>	100%
<b>Partition Coefficient (n-octanol/water):</b>	No data available
<b>Auto-ignition Temperature:</b>	Not applicable
<b>Decomposition Temperature:</b>	No data available
<b>Odor Threshold [ppm]:</b>	No data available
<b>Evaporation Rate (ether=1):</b>	No data available
<b>Volatility:</b>	>46%
<b>Flammability (solid, gas):</b>	Not applicable
<b>Lower Flammability Level (air):</b>	Not flammable
<b>Upper Flammability Level (air):</b>	Not flammable
<b>Viscosity:</b>	25 - 2500 cP

## SECTION 10. STABILITY AND REACTIVITY

## LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

**Chemical Stability:** Stable at normal temperatures and pressures.

**Reactivity:** Not reactive under normal temperatures and pressures.

**Possibility of Hazardous Reactions:** Contact with acids will cause gelling and evolution of heat. Prolonged contact with incompatible metals may produce flammable hydrogen gas.

**Conditions to Avoid (e.g., static discharge, shock, or vibration):** Prolonged storage above 140 °F (60 °C).

**Incompatible Substances:** 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

**Hazardous Decomposition Products:** None known.

**Hazardous Polymerization:** Will not occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 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 skin irritation. Contact with skin may result in redness, itching, irritation, burning sensation, swelling.

**Inhalation:** Inhalation of mist, vapor, or spray may cause irritation of the respiratory tract, possibly with coughing, choking, and pain either immediately or within 72 hours.

**Ingestion:** May be 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 silicate 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):** Respiratory System Effects: Inhalation exposure may cause irritation, redness of upper and lower airways, coughing, laryngeospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.

**Skin:** Skin exposures normally result in only mild to moderate skin irritation. Prolonged contact may result in dermal burns, that are typically partial thickness, but full thickness skin loss may occur. Exposure to skin may cause mild skin irritation: redness, dry skin.

**Eye:** Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of

# LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

the eye. The full extent of the injury may not be immediately apparent.

**Ingestion (Swallowing):** Swallowing this material may be harmful. Gastrointestinal System Effects: Exposure by ingestion may cause irritation, swelling, and perforation of upper and lower gastrointestinal tissues. Permanent scarring may occur.

**Interaction with Other Chemicals Which Enhance Toxicity:** None known.

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## GHS HEALTH HAZARDS:

**GHS: CONTACT HAZARD - SKIN:** Category 3 - Causes mild skin irritation

**GHS: CONTACT HAZARD - EYE:** Category 1 - Causes serious eye damage

**GHS: ACUTE TOXICITY - ORAL:** Category 5 - May be harmful if swallowed

## TOXICITY DATA:

### PRODUCT TOXICITY DATA:

The test material for the toxicological studies was sodium silicate (Grade 50).

<u>LD50 Oral:</u> 5500 mg/kg (Rat)	<u>LD50 Dermal:</u> No data is available on the product itself	<u>LC50 Inhalation:</u> No data is available on the product itself
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### COMPONENT TOXICITY DATA:

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 silicate	1960 mg/kg (Rat)	>4640 mg/kg (Rabbit)	

**Standard Draize (Eye):** Test results for solutions with the following pH/weight ratio of SiO<sub>2</sub>/Na<sub>2</sub>O are as follows: 11.2/3.22 = irritant; 11.6/2.58 = irritant; 11.8/2.4 = irritant; 12.3/2.0 = corrosive; 12.4/1.8 = corrosive

**Eye Irritation/Corrosion:** Causes serious eye damage.

**Standard Draize (Skin):** Score (Intact Skin) - Er.1Ed.0 @ 24 hrs.; Er.0Ed.0 @ 48 hrs.; Er.0Ed.0 @ 72 hrs

**Skin Irritation/Corrosion:** The product is classified as cutaneous irritant (Category 3, H316), according to GHS classification criteria.

**Skin Absorbent / Dermal Route:** NO.

**RESPIRATORY OR SKIN SENSITIZATION:** Sodium metasilicate was not sensitizing in the local lymph node assay. In a human case study contact urticaria induced by sodium silicate was observed. However, evidence is not strong enough to classify the product as a skin sensitizer for GHS purposes.

**CARCINOGENICITY:** No reliable data available; however, sodium silicate 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):** No data other than Acute Toxicity data and the acute toxicity data indicates there is no evidence to classify the products for specific target organ toxicity with a single exposure (STOT-SE).

## LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

**SPECIFIC TARGET ORGAN TOXICITY (Repeated or Prolonged Exposure):** Sodium silicate has been tested in repeated oral dose toxicity studies ranging from 28 days to 180 days exposure in rats and dogs with no adverse effects observed. Rat No Observable Affect Exposure Level (NOAEL) is greater than 159 mg/kg/bw/d (highest tested dose).

**INHALATION HAZARD:** The product is not classified as an inhalation hazard, according to criteria of the GHS.

**IN-VITRO / IN-VIVO GENOTOXICITY:** The available in vitro genotoxicity tests with bacteria were all negative. In a modern guideline study that was performed in accordance with OECD TG 473, sodium silicate solution (36 % active ingredient) induced no chromosomal aberrations in V79 cells, both in the absence and in the presence of metabolic activation. Sodium silicate solutions are not classified as mutagenic according to GHS criteria.

**REPRODUCTIVE TOXICITY:** Not classified as a reproductive toxin per GHS criteria.

**DEVELOPMENTAL TOXICITY:** Not classified as a developmental or reproductive toxin per GHS criteria.

**ASPIRATION HAZARD:** Not classified as an aspiration hazard per GHS criteria.

**TOXICOKINETICS:** It can be assumed that dermal bioavailability is limited due to its relative high water solubility, low lipophilicity and molecule size. However, damage to skin surface due to corrosivity may enhance dermal penetration. The urinary excretion half-life for ingested sodium silicate was calculated to be 24 hours. The excretion rate was independent of the doses applied. Inhalation is not considered to be a significant route of exposure due to low vapor pressure for sodium silicates.

**METABOLISM:** There is no indication that toxic metabolites are formed in-vivo.

**BIOLOGICAL DISTRIBUTION:** See Toxicokinetics above.

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

**ENDOCRINE DISRUPTOR:** Not available.

**NEUROTOXICITY:** Not Available.

**IMMUNOTOXICITY:** Not available.

**Hazard Not Otherwise Classified (HNOC)-Health**

- May be harmful if swallowed

## SECTION 12. ECOLOGICAL INFORMATION

**ECOTOXICITY (EC, IC, and LC):**

Component:	Freshwater Fish:	Invertebrate Toxicity:	Algae Toxicity:	Other Toxicity:
Sodium silicate	3185 mg/L LC50 Brachydanio rerio 96h semi-static mg/L LC50 Lepomis macrochirus 96h	216 mg/L EC50	No data available	No data available

## LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

### Aquatic Toxicity:

This material has exhibited moderate toxicity to aquatic organisms.

### **FATE AND TRANSPORT:**

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

**BIODEGRADATION:** This material is inorganic and not subject to biodegradation.

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

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

## SECTION 13. DISPOSAL CONSIDERATIONS

### **Waste from material:**

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

### **Container Management:**

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

## SECTION 14. TRANSPORT INFORMATION

### **LAND TRANSPORT**

#### **U.S. DOT 49 CFR 172.101:**

Status: Not Regulated

#### **CANADIAN TRANSPORTATION OF DANGEROUS GOODS:**

Status: Not Regulated

### **MARITIME TRANSPORT (IMO / IMDG)**

Status - IMO / IMDG: Not Regulated

### **AIR TRANSPORT (ICAO / IATA)**

## SECTION 15. REGULATORY INFORMATION

# LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

## 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.

### SARA EHS Chemical (40 CFR 355.30)

Not regulated.

### EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):

Acute Health Hazard

### SARA HAZARD CATEGORIES ALIGNED WITH GHS (2018):

Health Hazard - Skin Corrosion or Irritation

Health Hazard - Serious eye damage or eye irritation

Health Hazard - HNOC

### 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):

Component	TSCA Inventory	TSCA ACTIVE LIST	TSCA 12(b)	TSCA - Section 4	TSCA - Section 5	TSCA - Section 6	TSCA - Section 8
Sodium silicate 1344-09-8	Listed	ACTIVE	Not Listed	Not listed	Not Listed	Not listed	Not listed

**CANADIAN CHEMICAL INVENTORY:** All components of this product are listed on either the DSL or the NDSL.

Component	DSL	NDSL
Sodium silicate 1344-09-8 ( 15 - 55 )	Listed	Not Listed

## STATE REGULATIONS

### **California Proposition 65:**

This product and its ingredients are 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 OxyChem Customer Relations.

# LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

## 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.

Component	Canada - CEPA - Schedule I - List of Toxic Substances	Canada - NPRI	Canada - CEPA - 2010 Greenhouse Gases (GHG) Subject to Mandatory Reporting	CANADIAN CHEMICAL INVENTORY:	NDSL:
Sodium silicate 1344-09-8 ( 15 - 55 )	Not listed	Not Listed	Not Listed	Listed	Not Listed

## SECTION 16. OTHER INFORMATION

**Prepared by:** OxyChem Corporate HESS - Product Stewardship

**Rev. Date:** 03-Mar-2020

### Reason for Revision:

- Scheduled review
- Change of company physical address: SEE SECTION 1
- Trade Name has been added: SEE SECTION 1
- Revised Major Health Hazards: SEE SECTION 2
- Added or revised Precautionary Statements: SEE SECTION 2
- Revised GHS Information: SEE SECTION 2
- GHS symbol removed: SEE SECTION 2
- The formulation has been revised: SEE SECTION 3
- Updated First Aid Measures: SEE SECTION 4
- Modified Fire Fighting Measure Recommendations: SEE SECTION 5
- Revised Accidental Release Measures: SEE SECTION 6
- Exposure Level has changed. SEE SECTION 8
- Physical State information has been revised: SEE SECTIONS 2 and 9
- Toxicological Information has been revised: SEE SECTION 11
- Ecological Information has been modified: SEE SECTION 12
- Modified SARA Hazard Categories Aligned with GHS (2018): SEE SECTION 15
- Updated TSCA Status Table: SEE SECTION 15
- WHMIS Classifications were removed from format: SEE SECTION 15
- Revised California Proposition 65 Statement: SEE SECTION 15

### 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, EXPRESSED 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

## LIQUID SODIUM SILICATE - ALKALINE

SDS No.: M35886

Rev. Date: 03-Mar-2020

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that may involve other or additional legal, environmental, safety or performance considerations, and Occidental Chemical Corporation 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.

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**End of Safety Data Sheet**