



610, rue Adanac, Quebec (Quebec) G1C 7B7

## SAFETY DATA SHEET

Poison control center (Quebec)  
(800) 463-5060

Tel. (Qc): (418) 660-8666  
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### 1. IDENTIFICATION

#### Product identifier

**Product Name** SODIUM SILICATE (SOLUTION)

#### Other means of identification

**Product Code** SS-0104

**Synonyms** None

#### Recommended use of the chemical and restrictions on use

**Recommended Use** Adhesive, binder, pulp & paper, water treatment, catalysts & gels.

**Restricted Uses** No information available

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#### Emergency telephone number

24 Hour emergency phone number (CANUTEC): 1-888-226-8832 (1-888-CAN-UTEC)

### 2. HAZARD IDENTIFICATION

#### Hazardous Classification of the substance or mixture

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

#### Label elements



**Signal Word: Warning**

**Hazard statements**

Causes serious eye irritation  
Causes skin irritation

**Prevention**

Do not get in eyes, on skin, or on clothing  
Wear protective gloves/eye protection/face protection

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

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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

Not applicable.

**Mixture**

Chemical Name	CAS No	Weight-% (W/W)	Synonyms
Water	7732-18-5	60 - 70%	Water
Sodium silicate	1344-09-8	30 - 40%	Sodium silicate

### 4. FIRST AID MEASURES

**Description of first aid measures**

**Inhalation**

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

**Eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact**

Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

**Ingestion**

Do NOT induce vomiting. Rinse mouth thoroughly with water. Get immediate medical advice/attention.

**Most important symptoms and effects, both acute and delayed:**

Causes digestive tract irritation. Mists may cause irritation of upper respiratory tract. May cause irritation to mouth, esophagus and stomach. Causes eye irritation Causes moderate skin irritation.

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

**Note to physicians**

Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing media appropriate for surrounding fire.

**Specific hazards arising from the substance or mixture**

None expected.

**Hazardous combustion products**

Hydrogen.

**Special protective equipment and precautions for fire-fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

**Environmental precautions**

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Consult local authorities.

**Methods and materials for containment and cleaning up**

Prevent further leakage or spillage if safe to do so. Spilled material may cause floors and contact surfaces to become slippery. Isolate hazard area and restrict access. Absorb with an inert dry material and place in an appropriate waste disposal container. Avoid direct contact with material.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

Avoid breathing vapor. Promptly clean residue from closures with cloth dampened with water. Avoid contact with eyes, skin and clothing.

**Conditions for safe storage, including any incompatibilities**

Keep containers tightly closed. Separate from acids, reactive metals and ammonium salts. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers. Store between 0°C and 95 °C. Bulk loading temperature 45 - 95 °C. Store in clean stainless steel or plastic containers.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Control parameters

### Exposure Limits

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

Chemical Name	Alberta OEL	British Columbia OEL	Ontario	Quebec OEL	Exposure Limit - ACGIH	Immediately Dangerous to Life or Health - IDLH
Water 7732-18-5	Not available	Not available	Not available	Not available	Not available	Not available
Sodium silicate 1344-09-8	Not available	Not available	Not available	Not available	Not available	Not available

Consult local authorities for recommended exposure limits

## Appropriate engineering controls

### Engineering controls

Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit.

## Individual protection measures, such as personal protective equipment

### Eye/face protection

Monogoggles.

### Hand protection

Impervious gloves. Plastic. Rubber gloves.

### Skin and body protection

Apron, coveralls and/or other resistant protective clothing.

### Respiratory protection

For dusty or misty conditions, wear NIOSH-approved dust or mist respirator.

### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

#### Appearance

Physical state	Liquid
Color	Colorless
Odor	Odorless
Odor threshold	No information available

#### PROPERTIES

##### pH

11-12

##### Melting point / freezing point

No data available

##### Initial boiling point/boiling range

100 °C / 212 °F

##### Flash point

No data available

##### Evaporation rate

No data available

##### Flammability (solid, gas)

No data available

##### Flammability Limit in Air

###### Upper flammability limit:

No data available

###### Lower flammability limit:

No data available

#### Remarks • Method

None known

None known

None known

None known

None known

<b>Vapor pressure</b>	No data available	None known
<b>Relative vapor density</b>	No data available	None known
<b>Specific Gravity</b>	1.41	
<b>Water solubility</b>	Soluble in water	
<b>Solubility in other solvents</b>	No data available	
<b>Partition coefficient</b>	No data available	
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	No information available.	
<b>Oxidizing properties</b>	No information available.	
<b>Molecular weight</b>	No information available	
<b>VOC Percentage Volatility</b>	No information available	
<b>Liquid Density</b>	No information available	
<b>Bulk density</b>	No information available	

## 10. STABILITY AND REACTIVITY

### Reactivity/Chemical Stability

Stable

### Possibility of hazardous reactions

Dries to form glass film which can easily cut skin.

### Hazardous polymerization

Will not occur.

### Conditions to avoid

None known based on information supplied.

### Incompatible materials

Gels and generates heat when mixed with acid. May react with ammonium salt solutions resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead, and zinc.

### Hazardous decomposition products

Hydrogen.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Inhalation

Mists may cause irritation of upper respiratory tract.

#### Eye contact

Causes serious eye irritation.

#### Skin contact

Causes skin irritation.

#### Ingestion

Causes digestive tract irritation. May cause irritation to mouth, esophagus and stomach.

### Information on toxicological effects

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## Symptoms

Frequent ingestion over extended periods of time of gram quantities of silicates is associated with the formation kidney stones and other siliceous urinary calculi in humans. When tested for primary eye irritation potential according to OECD Guidelines, Section 405, this material produced corneal, iridal and conjunctival irritation. Some eye irritation was still present 14 days after treatment, although the average primary irritation score had declined from 19.7 after 1 day to 4.0 after 14 days.

When tested for primary skin irritation potential, this material produced irritation with a primary irritation index of 3 to abraded skin and 0 to intact skin. Human experience confirms that irritation occurs when this material gets on clothes at the collar, cuffs or other areas where abrasion may occur.

The acute oral toxicity of this product has not been tested. When sodium silicates were tested on a 100% solids basis, their single dose acute oral LD50 in rats ranged from 1500 mg/kg to 3200 mg/kg. The acute oral lethality resulted from nonspecific causes. This product contains approximately 37.5% sodium silicate.

Subchronic Data: In a study of rats fed sodium silicate in drinking water for three months, at 200, 600 and 1800 ppm, changes were reported in the blood chemistry of some animals, but no specific changes to the organs of the animals due to sodium silicate administration were observed in any of the dosage groups. Another study reported adverse effects to the kidneys of dogs fed sodium silicate in their diet at 2.4g/kg/day for 4 weeks, whereas rats fed the same dosage did not develop any treatment-related effects. Decreased numbers of births and survival to weaning was reported for rats fed sodium silicate in their drinking water at 600 and 1200 ppm.

## Numerical measures of toxicity

### Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

**ATEmix (oral)** 5,227.00 mg/kg

**Unknown acute toxicity** No information available

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg ( Rat )	Not available	Not available
Sodium silicate 1344-09-8	= 1960 mg/kg ( Rat )	> 4640 mg/kg ( Rabbit )	Not available

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

### Skin corrosion/irritation

Causes skin irritation.

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitization

No information available.

### Germ cell mutagenicity

No information available.

### Carcinogenicity

No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Water 7732-18-5	Not available	Not available	Not available	Not available
Sodium silicate 1344-09-8	Not available	Not available	Not available	Not available

### Reproductive toxicity

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No information available.

**Specific target organ systemic toxicity - single exposure**

No information available.

**Specific target organ systemic toxicity - repeated exposure**

No information available.

**Aspiration hazard**

No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Fish Species Data	Toxicity to microorganisms	Crustacea
Water 7732-18-5	Not available	Not available	Not available	Not available
Sodium silicate 1344-09-8	Not available	301 - 478 mg/L LC50 (Lepomis macrochirus) 96 h 3185 mg/L LC50 (Brachydanio rerio) 96 h semi-static	Not available	EC50: =216mg/L (96h, Daphnia magna)

**Persistence and degradability** No information available.

**Bioaccumulation** No information available.

Chemical Name	Partition coefficient
Water 7732-18-5	Not available
Sodium silicate 1344-09-8	Not available

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Do not reuse empty containers.

## 14. TRANSPORT INFORMATION

### TDG (Canada):

<b>UN Number</b>	Not applicable
<b>Shipping name</b>	Not regulated
<b>Class</b>	Not applicable
<b>Packing Group</b>	Not applicable
<b>Marine pollutant</b>	Not available.

**DOT (U.S.)**

<b>UN Number</b>	Not applicable
<b>Shipping name</b>	Not regulated
<b>Class</b>	Not applicable
<b>Packing Group</b>	Not applicable
<b>Marine pollutant</b>	Not available

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture**

NSF International



Certified to NSF/ANSI 60
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**Additional information**

Maximum use for potable water 265 mg/L. Only products bearing the NSF Mark on the product, product packaging, and/or documentation shipped with the product are Certified.

**U.S. Regulatory Rules**

Chemical Name	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Water - 7732-18-5	Not Listed	Not Listed	Not Listed
Sodium silicate - 1344-09-8	Not Listed	Not Listed	Not Listed

**International Inventories****TSCA**

All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

**DSL/NDSL**

All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**16. OTHER INFORMATION**

<b>NFPA:</b>	<b>Health hazards</b> 0	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Physical and chemical properties</b> -
<b>HMIS:</b>	<b>Health hazards</b> 0	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> X

**Legend** Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation



**Disclaimer:****NOTICE TO READER:**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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**End of Safety Data Sheet**