



Material Safety Data Sheet

LA0567
Sodium Silicate N

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: LA0567

Product Name: Sodium Silicate N

Synonyms: None

Chemical Family: None Known

Application: Adhesive, binder, pulp & paper, water treatment, catalysts & gels.

Distributed By:

Univar Canada Ltd.
9800 Van Horne Way
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Prepared By: The Safety, Health and Environment Department of Univar Canada Ltd.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Water 7732-18-5	62.5	Oral LD50 (Rat) >90 mL/kg
Sodium silicate 1344-09-8	37.5	Oral LD50 (Rat) : 1960 mg/kg Dermal LD50 (Rabbit) : >4640 mg/kg

Note: No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: Causes eye irritation.

Skin Contact: Causes moderate skin irritation.

Inhalation: Mists may cause irritation of upper respiratory tract.

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

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Immediately remove contaminated clothing and shoes.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

Ingestion: Do not induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

Notes to Physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flash Point: None.

Flash Point Method: Not applicable.

Autoignition Temperature: Not available.

Flammable Limits in Air (%): Not Available.

Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Special Exposure Hazards: None expected.

Hazardous Decomposition/Combustion Materials (under fire conditions): Hydrogen.

Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA RATINGS FOR THIS PRODUCT ARE: Not Available.

HMIS RATINGS FOR THIS PRODUCT ARE: Not Available.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed. Consult local authorities.

Procedure for Clean Up: Absorb with an inert dry material and place in an appropriate waste disposal container. Isolate hazard area and restrict access. Stop leak only if safe to do so. Prevent spilled material from entering sewers, confined spaces, drains, or waterways. Neutralize contamination area and flush with large quantities of water. Spilled material may cause floors and contact surfaces to become slippery.

7. HANDLING AND STORAGE

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

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

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

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

Gloves:

Impervious gloves.

Skin Protection: Apron, coveralls and/or other resistant protective clothing.

Eyes: Monogoggles.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Water	Not available.	Not available.	Not Available.
Sodium silicate	Not available.	Not available.	Not Available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Thick. Liquid.
Colour: Clear Hazy White
Odour: Odourless - Musty
pH 11.3
Specific Gravity: 1.394
Boiling Point: Not Available.
Freezing/Melting Point: Not Available.
Vapour Pressure: Not Available.
Vapour Density: Not Available.
% Volatile by Volume: Not Available.
Evaporation Rate: Not Available.
Solubility: Miscible in water.
VOCs: Not Available.
Viscosity: Not Available.
Molecular Weight: Not Available.
Other: Not Available.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: None known.
Materials to Avoid: Flammable hydrogen gas may be produced on contact with aluminum, tin, lead, and zinc. May react with ammonium salt solutions resulting in evolution of ammonia gas. Gels and generates heat when mixed with acid.
Hazardous Decomposition Products: Hydrogen.
Additional Information:
Dries to form glass film which can easily cut skin.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: May cause irritation to mouth, esophagus and stomach. Causes digestive tract irritation.
Skin Contact: Causes moderate skin irritation.
Inhalation: Mists may cause irritation of upper respiratory tract.
Eye Contact: Causes eye irritation.

Additional Information: 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.

Acute Test of Product:

Acute Oral LD50: Not Available.
Acute Dermal LD50: Not Available.
Acute Inhalation LC50: Not Available.

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Water	Not listed.	Not listed.
Sodium silicate	Not listed.	Not listed.

Carcinogenicity Comment: No additional information available.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: Not Available.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Water	Not Available.	Not Available.	Not Available.
Sodium silicate	LC50 96 h (Lepomis macrochirus) 301-478 mg/L LC50 96 h (Brachydanio rerio) 3185 mg/L semi-static	Not Available.	Not Available.

Other Information:

The following data is reported for sodium silicates on a 100% solids basis: A 96 hour median tolerance for fish (*Gambusia affinis*) of 2320 ppm; a 96 hour median tolerance for water fleas (*Daphnia magna*) of 247 ppm; a 96 hour median tolerance for snail eggs (*Lymnea*) of 632 ppm; and a 96 hour median tolerance for Amphipoda of 160 ppm. This material is not persistent in aquatic systems, but its high pH when undiluted or unneutralized is acutely harmful to aquatic life. Diluted material rapidly depolymerizes to yield dissolved silica in a form that is indistinguishable from natural dissolved silica. It does not contribute to BOD. This material does not bioaccumulate except in species that use silica as a structural material such as diatoms and siliceous sponges. Where abnormally low natural silica concentrations exist (less than 0.1 ppm), dissolved silica may be a limiting nutrient for diatoms and a few other aquatic algal species. However, the addition of excess dissolved silica over the limiting concentration will not stimulate the growth of diatom populations; their growth rate is independent of silica concentration once the limiting concentration is exceeded. Neither silica nor sodium will appreciably bioconcentrate up the food chain. Sinks and dissolves in water. Only water will evaporate from this material.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: Not Regulated.

DOT Hazardous Class: Not Applicable.

DOT UN Number: Not Applicable.

DOT Packing Group: Not Applicable.

DOT Reportable Quantity (lbs): Not Available.

Note: No additional remark.

Marine Pollutant: No.

TDG (Canada):

TDG Shipping Name: Not Regulated.

Hazard Class: Not Applicable.

UN Number: Not Applicable.

Packing Group: Not Applicable.

Note: No additional remark.

Marine Pollutant: No.

15. REGULATORY INFORMATION

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

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

Note: Not available.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Water	Not Listed.	Not Listed.	Not Listed.
Sodium silicate	Not Listed.	Not Listed.	Not Listed.

California Proposition 65: Not Listed.

MA Right to Know List: Not Listed.

New Jersey Right-to-Know List: Not Listed.

Pennsylvania Right to Know List: Not Listed.

WHMIS Hazardous Class:

D2B TOXIC MATERIALS



16. OTHER INFORMATION

Additional Information:

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Disclaimer:

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*****END OF MSDS*****