

Safety Data Sheet

Section 1. Product and Company Identification

Product Identification: 100 µg/mL Silicon in Water
MSDS Number: 100 50-4
Company Identification: High-Purity Standards
P.O. Box 41727
Charleston, SC 29423
Telephone: (843) 767-7900
FAX: (843) 767-7906

Section 2. Hazard Identification

Classification:

None

Labeling:

Symbol: None

Signal Word: None

Hazard Statement: None

Precautionary Statement: None

Section 3. Chemical Composition

Component	CAS/EINECS Registry #	Percent Concentration
Sodium Silicate (Na ₂ SiO ₃)	1344-09-8/239-981-7	0.01 (as Si)
Water, deionized	7732-18-5/231-791-2	Balance

Section 4. First Aid Measures

Emergency Overview: May cause irritation. Wash areas of contact with water.

Skin/eye Contact: May cause slight irritation. Remove contaminated shoes and clothing. Flush contaminated area with plenty of water for at least 15 minutes. Call a physician if irritation develops.

Inhalation: Not likely to be hazardous by inhalation.

Ingestion: May cause irritation to stomach if ingested in large quantities. Rinse mouth with water. Dilute with water or milk.

Section 5. Fire Fighting Measures

Fire & Explosion hazards: Not considered to be a fire or explosion hazard.

Extinguishing Media: Use any extinguishing media that is suitable for the surrounding area.

Specific Methods: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Do not allow to enter drainage systems or water ways. Always dispose of in accordance with local regulations.

Section 7. Handling and Storage

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Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Keep container tightly sealed. Refer to Section 8 for personal handling instructions.

Section 8. Exposure Controls and Personal Protection

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron.

Exposure Limits:

Component	ACGIH TLV	OSHA PEL
Sodium Silicate	Not Available	Not Available

Section 9. Physical and Chemical Properties

Physical State: Liquid

Color: Clear, colorless

Odor: Odorless to a faint pungent odor

Odor threshold: None

pH: 4-5

Melting point: N/A

Freezing Point: N/A

Boiling Point: Approximately 100°C

Flash point: N/A

Evaporation rate: N/A

Flammability: N/A

Explosion limits: N/A

Vapor Pressure (mm): N/A

Vapor Density (air+1): N/A

Relative density: (H₂O = 1): Approximately 1.0

Solubility in H₂O: Complete

Auto ignition temperature: N/A

Decomposition temperature: N/A

Molecular Weight: 28.086 (Si)

Section 10. Stability and Reactivity

Stability Indicator: YES

Conditions to Avoid: Incompatibles

Incompatibles: Strong acids, metals such as aluminum, lead, tin and zinc.

Hazardous Decomposition Products: None expected.

Hazardous Polymerization: Will not occur.

Section 11. Toxicological Information

Toxicity Data:

Na₂SiO₃-RTECS# 1002947SS

LD₅₀ Oral, Rat: (Sulfuric Acid) 2140 mg/kg; LC₅₀ Inhalation, Rat: (Sulfuric Acid) 510 mg/m³/2H.

LD_{LO} Ingestion, Dog (Na₂SiO₃): 250 mg/kg.

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Section 12. Ecological Information

Ecotoxicological information: Biodegradability LC₅₀ 96 hrs fish 3185mg/l; EC₅₀ 96 hrs Daphnia 247 mg/l.

Section 13. Disposal Considerations

General: Follow Federal, state and local regulations for waste.

Section 14. Transport Information

D.O.T. Classification: Not hazardous by DOT.

Section 15. Regulations (Not meant to be all inclusive-selected regulation listed)

TSCA Status: The components of this solution are listed on the TSCA Inventory.

RCRA Status: No.

SARA: No.

Safety Phrases: S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

WHMIS Information (Canada): Uncontrolled Product

Section 16. Other Information

HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel only. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The MSDS was prepared carefully and represents the best data currently available to us; however, HPS does not certify the data on the MSDS. Certified values for this material are given only on the Certificate of Analysis.

Theodore C. Rains, Ph.D.