MSDS – Sodium Hydrogen Selenite

MATERIAL SAFETY DATA SHEET (MSDS) / SAFETY DATA SHEET (SDS)

1. Identification

Product Name: Sodium Hydrogen Selenite
Chemical Name: Sodium hydrogen selenite
Synonyms: Sodium biselenite
Chemical Formula: $NaHSeO_3$
Recommended Use: Laboratory reagent; industrial research use only
Restrictions on Use: Not for food, drug, or cosmetic use

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2. Hazard Identification

GHS Classification:
Acute Toxicity (Oral) – Category 3
Acute Toxicity (Inhalation) – Category 3
Acute Toxicity (Dermal) – Category 4
Specific Target Organ Toxicity (Repeated Exposure) – Category 2
Hazardous to the Aquatic Environment – Acute Category 1
Signal Word: Danger
Hazard Statements:
Toxic if swallowed or inhaled
Harmful in contact with skin
Causes damage to organs through prolonged or repeated exposure
Very toxic to aquatic life
Precautionary Statements:
Avoid breathing dust or fumes
Use only in a fume hood
Wear protective gloves, clothing, and eye protection
Avoid release to the environment

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3. Composition / Information on Ingredients

Component	CAS Number	Concentration
Sodium hydrogen selenite	10102-18-8	≥ 98%

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4. First-Aid Measures

Inhalation: Move person to fresh air immediately. Seek medical attention if symptoms occur.
Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing.
Eye Contact: Rinse cautiously with water for at least 15 minutes. Seek medical attention.
Ingestion: Do NOT induce vomiting. Rinse mouth and seek immediate medical attention.
Most Important Symptoms: Nausea, vomiting, garlic-like odour on breath, respiratory irritation, neurological symptoms.

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5. Fire-Fighting Measures

Suitable Extinguishing Media: Water spray, dry chemical, CO_2, foam
Specific Hazards: Toxic selenium oxides may form during combustion
Protective Equipment: Self-contained breathing apparatus (SCBA)

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6. Accidental Release Measures

Evacuate area and ventilate
Avoid dust formation

Wear appropriate PPE
Collect material using non-sparking tools
Prevent entry into waterways

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7. Handling and Storage
Handling: Handle in fume hood. Avoid inhalation and contact with skin or eyes.
Storage: Store in tightly closed container in a cool, dry, well-ventilated area. Keep away from acids and reducing agents.

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8. Exposure Controls / Personal Protection
Exposure Limits: No established OSHA PEL; treat as highly toxic selenium compound
Engineering Controls: Local exhaust ventilation
Personal Protective Equipment (PPE):
Gloves (nitrile or neoprene)
Safety goggles or face shield
Lab coat or protective clothing
Respirator if dust exposure possible

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9. Physical and Chemical Properties
Appearance: White to off-white crystalline powder
Odour: Odourless to slight
pH: Acidic (aqueous solution)
Solubility: Soluble in water
Melting Point: Decomposes upon heating

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10. Stability and Reactivity
Stability: Stable under recommended storage conditions
Incompatible Materials: Strong acids, strong reducing agents
Hazardous Decomposition Products: Selenium oxides

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11. Toxicological Information
Toxic by ingestion and inhalation
May cause selenium poisoning (selenosis)
Chronic exposure may affect liver, kidneys, and nervous system

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12. Ecological Information
Very toxic to aquatic organisms
Bio accumulative potential for selenium compounds
Avoid environmental release

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13. Disposal Considerations
Dispose of contents and container in accordance with local, regional, and national regulations.
Treat as hazardous waste.

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14. Transport Information
UN Number: UN 2630 (Selenium compounds, inorganic, solid, toxic)
Hazard Class: 6.1
Packing Group: II

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15. Regulatory Information

Selenium compounds may be subject to occupational exposure, environmental, and hazardous waste regulations.

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16. Other Information

Revision Date: 29 November 2025

Disclaimer: This MSDS is provided for informational purposes only and is based on current knowledge. Users must ensure compliance with applicable laws and regulations.