

# SODIUM SELENITE

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## CAUTIONARY RESPONSE INFORMATION

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| <b>Common Synonyms</b><br>Disodium selenite<br>Selenious acid, disodium salt                                                                                                                                                                     | Solid<br>White to pink<br><br>Mixes with water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p>Keep people away. Avoid contact with solid and dust.<br/>Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves).<br/>Notify local health and pollution control agencies.<br/>Protect water intakes.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Fire</b>                                                                                                                                                                                                                                      | Not flammable.<br>POISONOUS GASES MAY BE PRODUCED IN FIRE.<br>Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves).                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Exposure</b>                                                                                                                                                                                                                                  | CALL FOR MEDICAL AID.<br>DUST OR SOLID.<br>POISONOUS IF INHALED OR SWALLOWED.<br>Irritating to skin and eyes.<br>Move to fresh air.<br>If breathing has stopped, give artificial respiration.<br>If breathing is difficult, give oxygen.<br>Remove contaminated clothing and shoes.<br>Flush affected areas with plenty of water.<br>IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting.<br>IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm. |
| <b>Water Pollution</b>                                                                                                                                                                                                                           | HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS.<br>May be dangerous if it enters water intakes.<br>Notify local health and wildlife officials.<br>Notify operators of nearby water intakes.                                                                                                                                                                                                                                                                                                                                                  |

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| <b>1. CORRECTIVE RESPONSE ACTIONS</b><br>Dilute and disperse<br>Stop discharge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>2. CHEMICAL DESIGNATIONS</b><br>2.1 <b>CG Compatibility Group:</b> Not listed.<br>2.2 <b>Formula:</b> Na <sub>2</sub> SeO <sub>3</sub><br>2.3 <b>IMO/UN Designation:</b> Not listed<br>2.4 <b>DOT ID No.:</b> 2630<br>2.5 <b>CAS Registry No.:</b> 10102-18-8<br>2.6 <b>NAERG Guide No.:</b> 151<br>2.7 <b>Standard Industrial Trade Classification:</b> 52499 |
| <b>3. HEALTH HAZARDS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                   |
| <p>3.1 <b>Personal Protective Equipment:</b> Wear a respirator or dust mask, safety glasses or chemical goggles, and protective clothing (including gloves) to avoid skin contamination.</p> <p>3.2 <b>Symptoms Following Exposure:</b> INHALATION OR INGESTION: Nervousness and fear followed by vomiting, then quietness and somnolence. Respiration becomes difficult, dyspnea develops, followed by opisthotonos, tetanic spasm, colonic spasm, falling blood pressure, and respiratory failure. EYES: Can cause severe damage. SKIN: Severe irritation may occur.</p> <p>3.3 <b>Treatment of Exposure:</b> Call a physician. INHALATION: Follow "general procedures" for poisons. EYES: Wash with water. SKIN: Wash with copious amounts of water. INGESTION: Induce vomiting until vomit is clear, follow with gastric lavage and saline cathartics.</p> <p>3.4 <b>TLV-TWA:</b> Not listed.<br/>3.5 <b>TLV-STEL:</b> Not listed.<br/>3.6 <b>TLV-Ceiling:</b> Not listed.<br/>3.7 <b>Toxicity by Ingestion:</b> Grade 4; LD<sub>50</sub> below 50 mg/kg.<br/>3.8 <b>Toxicity by Inhalation:</b> Currently not available.<br/>3.9 <b>Chronic Toxicity:</b> A suspected carcinogen. Chronic exposure can cause gastrointestinal disorders, nervousness, pallor, coated tongue, and a garlicky odor of the breath. Liver and spleen damage, emaciation, apathy, and progressive anemia.<br/>3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Currently not available<br/>3.11 <b>Liquid or Solid Characteristics:</b> Fairly severe skin irritant. May cause pain and second-degree burns after a few minutes contact.<br/>3.12 <b>Odor Threshold:</b> Currently not available<br/>3.13 <b>IDLH Value:</b> Not listed.<br/>3.14 <b>OSHA PEL-TWA:</b> Not listed.<br/>3.15 <b>OSHA PEL-STEL:</b> Not listed.<br/>3.16 <b>OSHA PEL-Ceiling:</b> Not listed.<br/>3.17 <b>EPA AEGL:</b> Not listed</p> |                                                                                                                                                                                                                                                                                                                                                                   |

## 4. FIRE HAZARDS

- 4.1 **Flash Point:**  
Not flammable
- 4.2 **Flammable Limits in Air:** Not flammable
- 4.3 **Fire Extinguishing Agents:** Not pertinent
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Emits toxic NaO and Se dusts when heated to decomposition.
- 4.6 **Behavior in Fire:** Decomposes at elevated temperatures (>320°C).
- 4.7 **Auto Ignition Temperature:** Not pertinent
- 4.8 **Electrical Hazards:** Currently not available
- 4.9 **Burning Rate:** Not flammable
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** Not pertinent.
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** Not pertinent.
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

## 5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
- 5.2 **Reactivity with Common Materials:** Currently not available
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Currently not available
- 5.5 **Polymerization:** Not pertinent
- 5.6 **Inhibitor of Polymerization:** Not pertinent

## 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**  
10 ppm/98-144 hours/Goldfish/toxic/hard water  
10 to 100 ppm/96-hour/Fathead minnow/LC<sub>50</sub>  
0.9 to 1 ppm/96-hour/Daphne magna/LC<sub>50</sub>
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):** Currently not available
- 6.4 **Food Chain Concentration Potential:** Positive. Concentration factors for Se-marine and freshwater plants 800, invertebrates and fish 400.
- 6.5 **GESAMP Hazard Profile:**  
Bioaccumulation: 0  
Damage to living resources: 3  
Human Oral hazard: 4  
Human Contact hazard: II  
Reduction of amenities: XXX

## 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Se-44% to 46.5% Total metallic impurities-0.02% to 0.1%
- 7.2 **Storage Temperature:** Cool
- 7.3 **Inert Atmosphere:** Currently not available
- 7.4 **Venting:** Currently not available
- 7.5 **IMO Pollution Category:** Currently not available
- 7.6 **Ship Type:** Currently not available
- 7.7 **Barge Hull Type:** Currently not available

## 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Poison
- 8.2 **49 CFR Class:** 6.1
- 8.3 **49 CFR Package Group:** II
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:** Not listed
- 8.6 **EPA Reportable Quantity:** 100 pounds
- 8.7 **EPA Pollution Category:** B
- 8.8 **RCRA Waste Number:** Not listed
- 8.9 **EPA FWPCA List:** Yes

## 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
- 9.2 **Molecular Weight:** 172.95 (anhydrous salt) 263.01 (pentahydrate)
- 9.3 **Boiling Point at 1 atm:** Decomposes
- 9.4 **Freezing Point:** Decomposes
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** Currently not available
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** (calculated) Anhydrous salt - 5.96 Pentahydrate - 9.07
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
- 9.12 **Latent Heat of Vaporization:** Currently not available
- 9.13 **Heat of Combustion:** Not pertinent
- 9.14 **Heat of Decomposition:** Currently not available
- 9.15 **Heat of Solution:** Currently not available
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** Currently not available
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** Currently not available

## NOTES

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| 9.20<br>SATURATED LIQUID DENSITY |                                                              | 9.21<br>LIQUID HEAT CAPACITY |                                                              | 9.22<br>LIQUID THERMAL CONDUCTIVITY |                                                              | 9.23<br>LIQUID VISCOSITY   |                                                              |
|----------------------------------|--------------------------------------------------------------|------------------------------|--------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|----------------------------|--------------------------------------------------------------|
| Temperature<br>(degrees F)       | Pounds per cubic foot                                        | Temperature<br>(degrees F)   | British thermal unit per<br>pound-F                          | Temperature<br>(degrees F)          | British thermal unit inch<br>per hour-square foot-F          | Temperature<br>(degrees F) | Centipoise                                                   |
|                                  | N<br>O<br>T<br><br>P<br>E<br>R<br>T<br>I<br>N<br>E<br>N<br>T |                              | N<br>O<br>T<br><br>P<br>E<br>R<br>T<br>I<br>N<br>E<br>N<br>T |                                     | N<br>O<br>T<br><br>P<br>E<br>R<br>T<br>I<br>N<br>E<br>N<br>T |                            | N<br>O<br>T<br><br>P<br>E<br>R<br>T<br>I<br>N<br>E<br>N<br>T |

| 9.24<br>SOLUBILITY IN WATER |                                   | 9.25<br>SATURATED VAPOR PRESSURE |                                                                                                               | 9.26<br>SATURATED VAPOR DENSITY |                                                                                                               | 9.27<br>IDEAL GAS HEAT CAPACITY |                                                                                                               |
|-----------------------------|-----------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------|
| Temperature<br>(degrees F)  | Pounds per 100 pounds<br>of water | Temperature<br>(degrees F)       | Pounds per square inch                                                                                        | Temperature<br>(degrees F)      | Pounds per cubic foot                                                                                         | Temperature<br>(degrees F)      | British thermal unit per<br>pound-F                                                                           |
| 62                          | 53.700                            |                                  | C<br>U<br>R<br>R<br>E<br>N<br>T<br>L<br>Y<br><br>N<br>O<br>T<br><br>A<br>V<br>A<br>I<br>L<br>A<br>B<br>L<br>E |                                 | C<br>U<br>R<br>R<br>E<br>N<br>T<br>L<br>Y<br><br>N<br>O<br>T<br><br>A<br>V<br>A<br>I<br>L<br>A<br>B<br>L<br>E |                                 | C<br>U<br>R<br>R<br>E<br>N<br>T<br>L<br>Y<br><br>N<br>O<br>T<br><br>A<br>V<br>A<br>I<br>L<br>A<br>B<br>L<br>E |