



MATERIAL SAFETY DATA SHEET

Section I – Product Information

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|----------------------------------|------------------------------|-----------------------------|-----------------------|
| Product Name or Identity: | Selenite Broth | | |
| Manufacturer's Name: | Acumedia Manufacturers, Inc. | Emergency Phone No.: | 517/372-9200 |
| | 740 East Shiawassee | Fax No.: | 517/372-2006 |
| | Lansing, Michigan 48912 | e-mail: | foodsafety@neogen.com |
| Date Prepared or Revised: | 10/10/04 | | |

Section II – Hazardous Ingredients / Identity Information

| Hazardous Components: (Specific Chemical Identity: Common Names) | OSHA PEL (Permissible Exposure Limits) | ACGIH TLV (Threshold Limit Value) | Toxicity Data LD₅₀ |
|--|---|--|--------------------------------------|
| Sodium Selenite, Selenious acid disodium salt | 0.2 mg/m ³ (Selenium Compounds) | 0.2 mg/m ³ (Selenium Compounds) | ORL-RAT, 7 mg/kg |
| Sodium Phosphate, dibasic | N/A | N/A | ORL-RAT, 17000 mg/kg |

Section III – Physical Characteristics

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| Boiling Point: N/A | Specific Gravity (H ₂ O = 1): 2.04 g/cm ³ (Sodium Phosphate) |
| Vapor Pressure (mm Hg.): N/A | Melting Point: 240°C (Sodium Phosphate) 710°C (Sodium Selenite) |
| Vapor Density (AIR = 1): 3.1g/cm (Sodium Selenite) | Evaporation Rate (Butyl Acetate = 1): N/A |
| Solubility in Water: Appreciable (Sodium Selenite), Partly soluble (Sodium Phosphate) | |
| Appearance and Odor: White powder, odorless (Sodium Phosphate, Sodium Selenite) | |

Section IV – Fire and Explosion Hazard Data

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| Flash Point (<i>Method Used</i>): Not applicable | Flammable Limits: LEL (Lower Explosive Limit) - N/A UEL (Upper Explosive Limit) - N/A |
| Extinguishing Media: Suitable extinguishing agents. CO ₂ , extinguishing powder, or water spray. | |
| Special Fire Fighting Procedures: Fight larger fires with water or alcohol resistant foam. Firefighters should wear protective equipment and self-contained breathing apparatus. Remove contaminated clothing immediately. | |
| Unusual Fire and Explosion Hazards: During heating or in case of fire, poisonous gases are produced. | |

Section V – Reactivity Data

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| Stability: | Unstable | | Conditions to Avoid: Moisture and air sensitive. |
| | Stable | X | |
| Incompatibility: (<i>Materials to Avoid</i>): Strong and mineral acids, oxidizers, most common metals and reducers. | | | |
| Hazardous Decomposition or Byproducts: Carbon dioxide (CO ₂), Phosphorus oxides (POx) and Selenium / Seliium oxides. Toxic oxides of selenium form when heated to decomposition. | | | |
| Hazardous Polymerization: | May Occur | | Conditions to Avoid: Incompatible materials. |
| | Will Not Occur | X | |

| Section VI – Health Hazard Data | | | |
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| Route(s) of Entry: | Inhalation? Yes | Skin? Yes | Ingestion? Yes |
| Health Hazards: (Acute and Chronic) | Toxic. Toxic if swallowed, inhaled, or absorbed through the skin. May cause severe irritation to respiratory system, skin, and eyes. Sodium selenite may cause reproductive defects. | | |
| Carcinogenicity: | NTP? No (National Toxicology Program) | IARC Monographs? No (International Agency for Research in Cancer) | OSHA Regulated? No |
| Signs and Symptoms of Exposure: Inhalation of dust may cause irritation to upper respiratory tract, with soreness, coughing, labored breathing. May be fatal if swallowed. Contact with skin or eyes may cause redness, itching and pain. | | | |
| Medical Conditions Generally Aggravated by Exposure: Danger of cumulative effects. Chronic effects of overexposure may cause liver damage. Chronic selenium intoxication may cause depression, nervousness, dermatitis, gastrointestinal disturbances, fatigue, allergic eye reactions, and severe skin lesions. People with a history of asthma, allergies, known sensitization to selenium, chronic respiratory disease, gastrointestinal disturbances, or recurrent dermatitis would be expected to be at increased risk from exposure. Special consideration should be given to women of childbearing age since the possibility that selenium may be teratogenic might place these women in a high risk group. | | | |
| Emergency / First Aid Procedures: | General Information: Immediately remove contaminated clothing. Remove breathing apparatus only after contaminated clothing have been completely removed. | | |
| | Ingestion: If swallowed, seek medical attention immediately. Show physician product label. The following symptoms may occur: respiratory arrest, nausea, selenosis. Danger of pulmonary edema. | | |
| | Inhalation: Supply fresh air or oxygen, seek medical attention. In case of unconsciousness place patient on side position for transportation. | | |
| | Eye Contact: Rinse opened eye for at least 15 minutes under running water. Seek medical attention. | | |
| | Skin Contact: Wash with plenty of soap and water for at least 15 minutes. Seek medical attention. | | |

| Section VII – Precautions for Safe Handling and Use |
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| Accidental Release Measures: Ventilate area of leak or spill. Wear suitable protective clothing. Keep unnecessary and unprotected people away from area of spill. Avoid raising dust. Avoid inhalation, contact with eyes, skin and clothing. |
| Waste Disposal Method: Dispose in accordance with all applicable federal, state, and local environmental regulations. |
| Handling and Storing: Keep container tightly closed. Protect from moisture and physical damage. Isolate from incompatible substances. Do not store together with oxidizing and acidic materials. Containers of this material may be hazardous when empty since they retain product residues. |
| Other Precautions: Prevent formation of dust. Ensure good ventilation / exhaustion at the workplace. Keep respiratory protective device available. Do not breathe dust. Prevent prolonged or repeated exposure. |

| Section VIII – Control Measures | | |
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| Respiratory Protection (Specify Type): None required where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask. (NIOSH Approved) | | |
| Ventilation: | Local Exhaust: 50 – 100 CFM | Special: N/A |
| | Mechanical (General): N/A | Other: N/A |
| Protective Gloves: Proper disposable gloves | Eye Protection: Chemical resistant safety goggles | |
| Other Protective Clothing or Equipment: Long-sleeved laboratory coat, safety shower, and eye wash recommended. | | |
| Work / Hygienic Practices: Follow the usual precautionary measures for handling chemicals / powder. Keep away from food and beverages. Immediately remove all soiled and contaminated clothing. Avoid contact with eyes, skin, and clothing. | | |

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