Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>See Section 15.</td>
</tr>
</tbody>
</table>

**Common Name/Trade Name**

Selenium sulfide

**Manufacturer**

SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

**Commercial Name(s)**

Selsun Blue

**Synonym**

Selenium Disulfide

**Chemical Name**

Not available.

**Chemical Family**

Not available.

**Chemical Formula**

SeS2

**Supplier**

SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

**Catalog Number(s).**

S1019

**CAS#**

7488-56-4

**RTECS**

VS8925000

**TSCA**

TSCA 8(b) inventory: Selenium sulfide

**CI#**

Not available.

**NFPA**

2: Health Hazard

1: Fire Hazard

0: Reactivity

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
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</thead>
<tbody>
<tr>
<td>Selenium sulfide</td>
<td>7488-56-4</td>
<td>0.2</td>
<td></td>
<td></td>
<td>100</td>
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</tbody>
</table>

**Toxicological Data on Ingredients**

**Selenium sulfide:**

ORAL (LD50): Acute: 138 mg/kg [Rat]. 370 mg/kg [Mouse].

Section 3. Hazards Identification

**Potential Acute Health Effects**

Hazardous in case of skin contact (permeator), of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Severe over-exposure can result in death.

**Potential Chronic Health Effects**

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to lungs. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Continued on Next Page
**Section 4. First Aid Measures**

| Eye Contact | Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs. |
| Skin Contact | Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. |
| Serious Skin Contact | Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Serious Inhalation | Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention. |
| Ingestion | If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. |
| Serious Ingestion | Not available. |

**Section 5. Fire and Explosion Data**

| Flammability of the Product | May be combustible at high temperature. |
| Auto-Ignition Temperature | Not available. |
| Flash Points | Not available. |
| Flammable Limits | Not available. |
| Products of Combustion | Not available. |
| Fire Hazards in Presence of Various Substances | Slightly flammable to flammable in presence of heat. |
| Explosion Hazards in Presence of Various Substances | Risks of explosion of the product in presence of mechanical impact: Not available. |
| | Risks of explosion of the product in presence of static discharge: Not available. |
| Fire Fighting Media and Instructions | SMALL FIRE: Use DRY chemical powder. |
| | LARGE FIRE: Use water spray, fog or foam. Do not use water jet. |
| Special Remarks on Fire Hazards | When heated to decomposition it emits very toxic fumes of sulfur oxides and selenium. |
| Special Remarks on Explosion Hazards | Not available. |

**Section 6. Accidental Release Measures**

| Small Spill | Use appropriate tools to put the spilled solid in a convenient waste disposal container. |
| Large Spill | Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities. |

*Continued on Next Page*
Selenium sulfide

Section 7. Handling and Storage

**Precautions**
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with skin. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.

**Storage**
Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

**Engineering Controls**
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection**
Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill**
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits**
TWA: 0.2

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

**Physical state and appearance**
Solid. (Powdered solid.)

**Molecular Weight**
143.08 g/mole

**pH (1% soln/water)**
Not applicable.

**Boiling Point**
Not available.

**Melting Point**
121.5°C (250.7°F)

**Critical Temperature**
Not available.

**Specific Gravity**
2.44 (Water = 1)

**Vapor Pressure**
Not applicable.

**Vapor Density**
Not available.

**Volatility**
Not available.

**Odor Threshold**
Not available.

**Water/Oil Dist. Coef.**
Not available.

**Ionicity (in Water)**
Not available.

**Dispersion Properties**
Not available.

**Solubility**
Insoluble in cold water.

Section 10. Stability and Reactivity Data

**Stability**
The product is stable.

**Instability Temperature**
Not available.

**Conditions of Instability**
Excess heat, incompatible materials

**Incompatibility with various substances**
Reactive with oxidizing agents, metals, acids.

**Corrosivity**
Non-corrosive in presence of glass.

**Special Remarks on Reactivity**
Incompatible with ammonia, chromium trioxide, potassium bromate, silver (I) oxide.

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Selenium sulfide

Section 11. Toxicological Information

Routes of Entry
Inhalation. Ingestion.

Toxicity to Animals
Acute oral toxicity (LD50): 138 mg/kg [Rat].

Chronic Effects on Humans
Causes damage to the following organs: lungs.

Other Toxic Effects on Humans
Hazardous in case of skin contact (permeator), of ingestion. Slightly hazardous in case of skin contact (irritant), of inhalation.

Special Remarks on Toxicity to Animals
Not available.

Special Remarks on Chronic Effects on Humans
Not available.

Special Remarks on other Toxic Effects on Humans
Acute Potential Health Effects:
Skin: May cause skin irritation. It can be absorbed through damaged skin and skin with open lesions and cause systemic toxicity with symptoms including tremors, weakness, lethargy, loss of appetite, vomiting, severe perspiration, garlicky breath, pain in the low abdomen.
Eyes: May cause eye irritation.
Inhalation: Dust may cause respiratory tract irritation.
Ingestion: Harmful if swallowed. It can cause nausea, vomiting, abdominal pain, hypermotility, diarrhea, loss of appetite, garlicky breath, metallic taste, pallor, weakness, and coated tongue. It may also affect behavior/central nervous system (lethargy, headache, tremors, nervousness, mood changes), respiration (dyspnea)

Chronic Potential Health Effects:
Ingestion: Prolonged or repeated ingestion may affect the liver and kidneys, behavior/central nervous system.

Special Remarks on Toxicity to Animals
Not available.

Special Remarks on Chronic Effects on Humans
Not available.

Special Remarks on other Toxic Effects on Humans
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

The products of degradation are less toxic than the product itself.

Section 12. Ecological Information

Ecotoxicity
Not available.

BOD5 and COD
Not available.

Products of Biodegradation
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation
The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation
Not available.

Section 13. Disposal Considerations

Waste Disposal
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification
CLASS 6.1: Poisonous material.

Identification
UNNA: 2657 : Selenium Disulfide PG: II

Special Provisions for Transport
Not available.

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Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Selenium sulfide

Canada: Listed on Canadian Domestic Substance List (DSL).
China: Listed on National Inventory.
Japan: Listed on National Inventory (ENCS).
Korea: Listed on National Inventory (KECI).
Philippines: Listed on National Inventory (PICCS).
Australia: Listed on AICS.

Other Regulations

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 231-303-8).

Other Classifications

WHMIS (Canada) CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC) R25: Toxic if swallowed.

HMIS (U.S.A.)

Health Hazard 2
Fire Hazard 1
Reactivity 0
Personal Protection E

National Fire Protection Association (U.S.A.)

Flammability

Reactivity

Specific hazard

WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

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### Protective Equipment

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloves.</td>
</tr>
<tr>
<td>Lab coat.</td>
</tr>
<tr>
<td>Dust respirator.</td>
</tr>
<tr>
<td>Be sure to use an approved/certified respirator or equivalent.</td>
</tr>
<tr>
<td>Wear appropriate respirator when ventilation is inadequate.</td>
</tr>
<tr>
<td>Safety glasses.</td>
</tr>
</tbody>
</table>

### Section 16. Other Information

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>S3182</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Special Considerations</td>
<td>Major uses: in medicines to treat seborrhea; in medicated shampoos; in the manufacturer of glass, photoelectric cells</td>
</tr>
</tbody>
</table>

Verified by Sonia Owen.  

**CALL (310) 516-8000**

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user’s responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.