



LTS Research Laboratories, Inc.
Safety Data Sheet
Silver(I) Selenide

1. Product and Company Identification

Trade Name: Silver (I) Selenide
Chemical Formula: Ag₂Se
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H301 Toxic if swallowed.
H332 Harmful if inhaled.

Precautionary Statements: P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Health Ratings (0-4):
Health: 3
Flammability: 0
Physical: 0

3. Composition

Chemical Family: Inorganic
Additional Names: Naumannite, Argentous selenide

Silver Selenide (Ag₂Se):
Percentage: 100 wt%
CAS #: 1302-09-6
EC #: 215-099-8

4. First Aid Procedures

| | |
|---------------------|---|
| General Treatment: | Seek medical attention if symptoms persist. |
| Special Treatment: | None |
| Important Symptoms: | None |
| Inhalation: | Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek medical attention. |
| Ingestion: | Give one to two glasses of water. Never induce vomiting or give anything by mouth to an unconscious person. Seek medical attention. |
| Skin: | Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention. |
| Eyes: | Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention. |

5. Firefighting Measures

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| Flammability: | Non-flammable, except as powder |
| Extinguishing Media: | No special restrictions – use suitable extinguishing agent for surrounding material and type of fire. Do not use water for metal fires – use CO ₂ , sand, extinguishing powder. |
| Spec. Fire Fighting Procedure: | Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products. |

6. Accidental Release Measures

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|----------------------------------|--|
| If Material Is Released/Spilled: | Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust. |
| Environmental Precautions: | Isolate runoff to prevent environmental pollution. |

7. Handling and Storage

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| Handling Conditions: | Wash thoroughly after handling. |
| Storage Conditions: | Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10. |
| Work/Hygienic Maintenance: | Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air. |
| Ventilation: | Provide sufficient ventilation to maintain concentration at or below threshold limit. |

8. Exposure Controls and Personal Protection

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|------------------------------|---|
| Permissible Exposure Limits: | 0.2 mg/m ³ as Ag ₂ Se, long-term value |
| Threshold Limit Value: | 0.2 mg/m ³ as Ag ₂ Se, long-term value |
| Special Equipment: | None |
| Respiratory Protection: | Dust Respirator |
| Protective Gloves: | Rubber gloves |
| Eye Protection: | Safety glasses or goggles |
| Body Protection: | Protective work clothing. Wear close-toed shoes and long sleeves/pants. |

9. Physical and Chemical Characteristics

| | |
|---------------------------|--|
| Color | N/A |
| Form: | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor: | Odorless |
| Water Solubility: | Insoluble |
| Boiling Point: | N/A |
| Melting Point: | 880 °C |
| Flash Point: | N/A |
| Autoignition Temperature: | N/A |
| Density: | 8.22 g/cc |
| Molecular weight: | 294.7 g/mol |

10. Reactivity

| | |
|-----------------------------------|--|
| Stability: | Stable under recommended storage conditions |
| Reacts With: | Oxidizing agents |
| Incompatible Conditions: | Avoid moisture |
| Hazardous Decomposition Products: | Metal oxide fume, Silver/silver oxides, Selenium/selenium oxides |

11. Toxicological Information

Potential Health Effects:

| | |
|-------------|----------------------|
| Eyes: | May cause irritation |
| Skin: | May cause irritation |
| Ingestion: | May cause irritation |
| Inhalation: | May cause irritation |
| Chronic: | N/A |

Signs & Symptoms:

Aggravated Medical Conditions:

N/A
N/A

Median Lethal Dose:

N/A

Carcinogen:

N/A

12. Ecological Information

| | |
|--|-----|
| Aquatic Toxicity: | N/A |
| Persistent Bioaccumulation Toxicity: | N/A |
| Very Persistent, Very Bioaccumulative: | N/A |
| Notes: | N/A |

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous for transportation



Hazard Class: 6.1 Poisonous Material
Packing Group: II
UN Number: UN3283
Proper Shipping Name: Selenium compound, solid, n.o.s. (Silver(I) selenide)

15. Regulatory Information

Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: N/A
Sec 313 Toxic Chemicals: Yes

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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