



LTS Research Laboratories, Inc.
Safety Data Sheet
Mercury selenide

1. Product and Company Identification

Trade Name: Mercury selenide
Chemical Formula: HgSe
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
H330: Fatal if inhaled
H360: May damage fertility or the unborn child
H373: May cause damage to organs through prolonged or repeated exposure

Precautionary Statements: P260: Do not breathe dust/fume/gas/mist/vapors/spray
P264: Wash face, hands and any exposed 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
P281: Use personal protective equipment as required
P284: Wear respiratory protection
P301+P310+P330: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth
P304+P340+P310: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician
P308+P313: IF exposed or concerned: Get medical advice/attention
P403+P233: Store in a well-ventilated place. Keep container tightly closed
P405: Store locked up
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

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

3. Composition

Material Family: Selenide
Additional Names: Mercury (II) selenide

Mercury selenide (HgSe):
Percentage: 100 wt%
CAS #: 20601-83-6
EC #: 243-910-5

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. Keep patient warm. Seek immediate medical attention.
Ingestion: Seek immediate medical attention.
Skin: Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention

5. Firefighting Measures

Flammability: Non-flammable
Extinguishing Media: No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.
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

If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. Evacuate personnel to safe areas. 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

Handling Conditions: Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe vapors/dust. Do not ingest.
Storage Conditions: Store in a cool dry place in a tightly sealed container. Store away from water/moisture, strong oxidizing agents. 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

Permissible Exposure Limits:	0.1 mg/m ³ as Hg, long-term value
Threshold Limit Value:	0.025 mg/m ³ as Hg, long-term value
Special Equipment:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
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	Grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	600°C - 650 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	8.27 g/cc
Molecular weight:	279.55 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Strong oxidizing agents
Incompatible Conditions:	N/A
Hazardous Decomposition Products:	Metal oxide fume, mercury oxides, selenium oxides

11. Toxicological Information

Potential Health Effects:	
Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	Toxic if swallowed
Inhalation:	Fatal if inhaled
Chronic:	May cause damage to organs through prolonged or repeated exposure
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	May damage fertility or the unborn child
Median Lethal Dose:	N/A
Carcinogen:	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

12. Ecological Information

Aquatic Toxicity: N/A
Persistent Bioaccumulation Toxicity: May persist due to material being insoluble in water
Very Persistent, Very Bioaccumulative: N/A
Notes: Very toxic to aquatic organisms.
May cause long-term adverse effects in the aquatic environment.

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: UN2025
Proper Shipping Name: Mercury compound, solid, n.o.s (Mercury selenide)

15. Regulatory Information

Sec 302 Extremely Hazardous: N/A
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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