



LTS Research Laboratories, Inc.
Safety Data Sheet
Zinc Selenide

1. Product and Company Identification

Trade Name: Zinc selenide
Chemical Formula: ZnSe
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+H331: Toxic if swallowed or if inhaled
H373: May cause damage to organs through central nervous system, the liver, and the digestive system through prolonged or repeated exposure. Route of exposure: Oral, inhalative.
H410 Very toxic to aquatic life with long lasting effects

Precautionary Statements: P260 Do not breathe dust/fume/gas/mist/vapours/spray
P264 Wash skin thoroughly after handling
P273: Avoid release to the environment
P270: Do not eat, drink, or smoke when using this product.
P309: IF exposed or you feel unwell:
P310: Immediately call a POISON CENTER or doctor/physician
P302+P352: IF ON SKIN: Wash with soap and water
P391: Collect spillage
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: 3
Flammability: 0
Physical: 0

3. Composition

Chemical Family:	Ceramic
Additional Names:	None
Zinc selenide (ZnSe):	
Percentage:	100 wt%
CAS #:	1315-09-9
EC #:	215-259-7

4. First Aid Procedures

General Treatment:	Immediately remove any clothing soiled by the product. Remove breathing apparatus only after contaminated clothing has been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration. Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Remove breathing apparatus only after contaminated clothing has been completely removed. Seek immediate medical attention.
Ingestion:	Do not induce vomit. Seek immediate medical attention.
Skin:	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. 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.
Storage Conditions:	Keep container tightly sealed. Store in a cool dry place in a tightly sealed container. Ensure good ventilation at the workplace. Open and handle container with care. 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:	0.2 mg/m ³ as Se, long-term value
Threshold Limit Value:	0.2 mg/m ³ as 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	Red
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	>1100 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	5.42 g/cc
Molecular weight:	144.33 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Bases, Oxidizing agents
Incompatible Conditions:	None
Hazardous Decomposition Products:	Hydrogen selenide, Selenium dioxide, Metal oxide fume

11. Toxicological Information

Potential Health Effects:	
Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	Toxic
Inhalation:	Toxic
Chronic:	Selenium may cause amyotrophic lateral sclerosis, bronchial irritation, gastrointestinal distress, vasopharyngeal irritation, garlic odor on breath and sweat, metallic taste, pallor, irritability, excessive fatigue, loss of fingernails and hair, pulmonary edema, anemia and weight loss. Zinc containing fumes may cause metal fume fever. Effects include dry throat, metallic taste, chest pain, dyspnea, rales, and dry cough. Several hours later, chills may occur with lassitude, malaise, fatigue, headache,

back pain, Muscle cramps, blurred vision, nausea, fever, perspiration, vomiting and leukocytosis.

Signs & Symptoms: N/A
Aggravated Medical Conditions: N/A
Median Lethal Dose: N/A
Carcinogen: N/A

12. Ecological Information

Aquatic Toxicity: High
Persistent Bioaccumulation Toxicity: No further relevant information available.
Very Persistent, Very Bioaccumulative: No further relevant information available.
Notes: Very Toxic to aquatic life.
May cause long lasting harmful effect on aquatic life.
Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach any water sources.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
Avoid transfer into the 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 Toxic substances
Packing Group: III
UN Number: UN3283
Proper Shipping Name: Selenium compound, solid, n.o.s. (Zinc 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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