



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Platinum Selenide

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1. Product and Company Identification

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Trade Name: Platinum Selenide  
Chemical Formula: PtSe<sub>2</sub>  
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)

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2. Hazards Identification

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Signal Word: Danger



Hazard Statements: H228: Flammable solid  
H301+H331: Toxic if swallowed or if inhaled  
H373: May cause damage to organs through prolonged or repeated exposure

Precautionary Statements: P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking  
P240: Ground/bond container and receiving equipment  
P241: Use explosion-proof electrical/ventilating/light/equipment  
P260: Do not breathe dust/fume/gas/mist/vapors/spray  
P264: Wash face, hands, and 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  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P403: Store in a well-ventilated place  
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: 3  
Physical: 1

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### 3. Composition

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Chemical Family: Inorganic  
Additional Names: Platinum diselenide, Platinum (IV) selenide

Platinum Selenide (PtSe<sub>2</sub>):  
Percentage: 0-100 wt%  
CAS #: 12038-26-5  
EC #: N/A

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### 4. First Aid Procedures

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General Treatment: Seek medical attention if symptoms persist.  
Special 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.  
Important Symptoms: None  
Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.  
Ingestion: DO NOT induce vomiting. 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.

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### 5. Firefighting Measures

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Flammability: Flammable  
Extinguishing Media: In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction  
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.

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### 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. Remove all ignition sources. Evacuate personnel away from dangerous areas.  
Environmental Precautions: Isolate runoff to prevent environmental pollution.

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### 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.

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### 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits: 0.2 mg/m<sup>3</sup> as Se, long-term value  
0.002 mg/m<sup>3</sup> as Pt, long-term value

Threshold Limit Value:	0.2 mg/m <sup>3</sup> as Se, long-term value 0.002 mg/m <sup>3</sup> as Pt, 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	Opaque metallic yellowish white
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	353.00 g/mol

## 10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents
Incompatible Conditions:	Excess heat. Avoid dust formation.
Hazardous Decomposition Products:	Platinum oxide Selenium dioxide (SeO <sub>2</sub> )

## 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:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	IARC-3: Not classifiable as to carcinogenicity to huans. EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.

## 12. Ecological Information

Aquatic Toxicity:	High
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bio accumulative:	No
Notes:	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.

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### 13. Disposal Considerations

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

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### 14. Transportation Data

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Hazardous:

Hazardous as powder only



Hazard Class:  
Packing Group:  
UN Number:  
Proper Shipping Name:

4.1  
III  
UN3089  
Metal powder, flammable, n.o.s (Platinum selenide)

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### 15. Regulatory Information

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

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### 16. Other Information

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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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