



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Selenium Oxide

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1. Product and Company Identification

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Trade Name: Selenium Oxide  
Chemical Formula: SeO<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: H301+H331: Toxic if swallowed or if inhaled  
H373: May cause damage to organs through prolonged or repeated exposure  
H410: Very toxic to aquatic life with long lasting effects

Precautionary Statements: P260: Do not breathe dust/fume/gas/mist/vapours/spray  
P261: Avoid breathing dust/fume/vapor  
P264: Wash skin thoroughly after handling  
P271: Use only outdoors or in a well-ventilated area  
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  
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: 1

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### 3. Composition

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Chemical Family:	Ceramic
Additional Names:	Selenium dioxide, Selenium (IV) oxide.
Selenium Oxide (SeO <sub>2</sub> ):	
Percentage:	0-100 wt%
CAS #:	7446-08-4
EC #:	231-194-7

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### 4. First Aid Procedures

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General Treatment:	Remove any clothing contaminated by the product. Remove breathing apparatus only after contaminated clothing has been removed. Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion:	Give one to two glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

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### 5. Firefighting Measures

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Flammability:	Product is not 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.

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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.
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
Threshold Limit Value:	0.2 mg/m <sup>3</sup> as Se, long-term value
Special Equipment:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Nitrile rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color	White
Form:	Powder, Pieces, Granules, Sputtering targets, etc.
Odor:	Odorless
Water Solubility:	N/A
Boiling Point:	N/A
Melting Point:	340-350 °C (subl)
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	3.950 g/cc
Molecular weight:	110.96 g/mol

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	No information is known
Incompatible Conditions:	Oxidizing agents, organic materials, strong acids, ammonia.
Hazardous Decomposition Products:	Selenium/Selenium Oxides

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	Toxic if inhaled
Inhalation:	Toxic if swallowed
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	68.1 mg/kg for rat by mouth
Carcinogen:	N/A

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## 12. Ecological Information

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Aquatic Toxicity:	Very toxic. Toxic to fish: LC50 - Pimephales promelas (fathead minnow) - 2.9 mg/l - 96.0 h Toxicity to algae: Growth inhibition EC50-Scenedesmus acutus-0.1 mg/l -3d Growth inhibition LOEC-Pseudokirchneriella subcapitata-24.63 mg/l-6d
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A

Notes: Do not allow product to reach ground water, water course or sewage system.  
Do not allow material to be released into the environment without proper governmental permits.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
May cause long lasting harmful effects to aquatic life.  
Avoid transfer into the environment.  
Very toxic for aquatic organisms

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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 for transportation.



Hazard Class: 6.1 Toxic Substances  
Packing Group: PG II  
UN Number: UN3283  
Proper Shipping Name: Selenium compound, solid, n.o.s. (Selenium (IV) oxide)

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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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