



Zinc Sulfide (Pieces, Sputter Targets)

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1. Product Identification

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Trade Name:	Zinc sulfide (Pieces, Sputter Targets)
Chemical Formula:	ZnS
Recommended Use:	Scientific research and development

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2. Hazards Identification

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Signal Word:	None
Hazard Statements:	None
Precautionary Statements:	None
HMIS Ratings (0-4):	
Health:	1
Flammability:	0
Physical:	1

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3. Composition

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Chemical Family:	Ceramic
Additional Names:	Zinblend, Wurtzite, Zinc sulphide
Zinc sulfide (ZnS):	
Percentage:	100 wt%
CAS #:	1314-98-3
EC #:	215-251-3

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4. First Aid Procedures

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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.
Ingestion:	Seek medical attention.
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. Fire and Explosion Hazards Data

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Flammability:	Non-flammable
Flash Point:	N/A
Autoignition Temperature:	N/A
Extinguishing Media:	No special restrictions – use suitable extinguishing agent or 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.

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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:	None
Threshold Limit Value:	None
Special Equipment:	None
Respiratory Protection:	Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber gloves, NBR
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, Granules, Pellets, Sputtering target, Custom parts

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Odor:	Odorless
Water Solubility:	0.0069 g/l
Boiling Point:	N/A
Melting Point:	1700 °C
Density:	4.09 g/cc (20°C)
Molecular weight:	97.474 g/mol

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### 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Acids, Oxidizing agents.
Incompatible Conditions:	Acids, Oxidizing agents.
Hazardous Decomposition Products:	Metal oxide fume, Sulfur Oxides (SO <sub>x</sub> ), Zinc Oxide

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### 11. Toxicological Information

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#### Potential Health Effects:

Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	Contact with acids liberates toxic gas
Inhalation:	May cause irritation
Chronic:	Zinc-containing fumes may cause metal fume fever. Sulfides may cause irritation to skin, corrosive by ingestion. Hydrogen sulfide, if generated, is toxic, a severe irritant and flammable. Effects include conjunctivitis, headache, nausea, dizziness, coughing, Pulmonary edema and leading to death.

Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A

Median Lethal Dose: >2000 mg/kg for rat by mouth or skin

Carcinogen: EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available. EPA-I: Data are inadequate for an assessment of human carcinogenic potential.  
EPA-II: Inadequate information to assess carcinogenic potential.

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### 12. Ecological Information

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Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bio-accumulative:	N/A
Notes:	N/A

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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: The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

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Hazard Class: Not classified. No transport warning sign required.  
Packing Group: Not applicable  
UN Number: Not applicable  
Proper Shipping Name: Not applicable

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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: None of the ingredients are listed or exempt

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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. **No warranty, guarantee or representation is made to its accuracy, reliability or completeness.** These materials should only be handled by, or under the direct supervision of a “technically qualified individual”, as defined in TSCA regulations 40 CFR 710.3(e). 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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