

Material Safety Data Sheet

Identity: Zinc sulfide

Formula: ZnS

SECTION I - GENERAL INFORMATION

Manufacturer: [Stanford Advanced Materials](#) (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 97.44

CAS #	OSHA PEL	ACGIH TLV	%
1314-98-3	N/A	N/A	0-100

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A

Vapor Pressure (vs. air or mmHg): N/A

Melting Point: 1700.00 °C

Density: N/A

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water: Insoluble

Specific gravity: 3.98

Appearance and odor: Colorless to light yellow crystalline powder and pieces, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: N/A

Explosive Limits: LEL: N/A

UEL: N/A

Extinguishing Media:

Use suitable extinguishing agent for surrounding material and type of fire

Special Fire Fighting Procedures:

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazards:

Zinc sulfide decomposes at temperatures greater than 400 °C in air and/or in oxidizing atmospheres, it produces zinc and sulfur fumes at temperatures greater than 900 °C in inert atmospheres and contact with strong acids may liberate hydrogen sulfide which may form explosive mixtures with air

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (stability): None

Incompatibility: Strong acids and bases

Hazardous Decomposition or Byproducts: Zinc oxide, sulfur, oxides of sulfur, zinc hydride and hydrogen sulfide

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Signs and Symptoms of Overexposure:

Inhalation: May cause a sweet taste, throat dryness, coughing, weakness, generalized aches, chills, fever, and nausea.

Ingestion: May cause coughing, shortness of breath and sweating

Skin: May cause redness and itching

Eye: May cause redness, itching and watering

Health Hazards (Acute and Chronic):

Zinc compounds have a variable toxicity, but generally are of low toxicity. Zinc is not inherently a toxic element. However, when heated, it evolves a fume of zinc oxide which, when inhaled fresh, can cause a disease known as "brass founders" or "brass chills". Zinc oxide which is not freshly formed is virtually innocuous. There is no cumulative effect from the inhalation of zinc fumes (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Inhalation:

Acute: May cause brass chills

Chronic: May cause respiratory tract irritation with nasopharyngitis and laryngitis

Ingestion:

Acute: May cause coughing, dyspnea and sweating

Chronic: None recorded

Skin: May cause irritation

Eye: May cause irritation

Carcinogenicity: NTP? No

IARC Monographs? No

OSHA Regulated? No

Medical Conditions Aggravated by Exposure: Pre-existing respiratory disorders

Emergency and First Aid Procedures:

- Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention
- Ingestion:* Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person
- Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist
- Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious rubber gloves, safety glasses, clothes to prevent contact.

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Recommended.

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established