



MATERIAL SAFETY DATA SHEET
COMPLIES WITH 29 CFR 1910.1200.
OSHA HAZARD COMMUNICATION RULE

DATE OF LAST REVISION: 04-30-99

CHEMICAL IDENTITY

LABEL IDENTITY	ZINC SULFIDE		
FORMULA	ZnS		
CHEMICAL FAMILY	METAL SULFIDE		
CAS REGISTRY NUMBER	1314-98-3		
HAZARDOUS INGREDIENTS	NA		
ZnS	%: 100	TLV:	Not set OSHA/PEL: Not set
ZnO			5mg/m3
SO2			2 ppm
H2S			10 ppm 20 ppm

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR	Colorless granules, odorless
BOILING POINT	ND
DENSITY (gm/cc)	at 20 °C 4.087 g/cm³
VAPOR PRESSURE @ 20°	ND
% VOLATILE BY VOLUME (%)	NA
REACTION WITH WATER	None
EVAPORATION RATE (H2O=1)	NA
SOLUBILITY IN WATER	Insoluble
MELTING POINT	1700 °C

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	NA
AUTOIGNITION TEMPERATURE (°C)	ND
FLAMMABILITY	*Non-flammable*
EXTINGUISHING MEDIA	Use fire fighting measures that suit the surrounding fire
SPECIAL FIRE FIGHTING PROCEDURES	Wear a self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.
UNUSUAL FIRE & EXPLOSION HAZARDS	Sulfides are moderate fire hazards when exposed to flame or by spontaneous chemical reaction. Many sulfides ignite easily in air at room temperature. Others react violently and explosively on contact w/powerful oxidizers. Upon contact with moisture or acids. Hydrogen sulfide evolved can form explosive mixtures in air. *see attached sheet*



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HEALTH HAZARD INFORMATION

TOXICITY DATA NO DATA ON THIS COMPOUND, **SEE ATTACHED SHEET**

HMIS RATING:

HEALTH: **3** FLAMMABILITY: **0** REACTIVITY: **1** PERSONAL PROTECTION: **F**

ROUTES OF ENTRY

INHALATION: **Yes**
SKIN: **Yes**
INGESTION: **Yes**

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **Respiratory Disorders**

EFFECTS OF OVEREXPOSURE (acute and chronic):

INHALATION:

ZnO: **a pulmonary irritant. Freshly formed fumes may cause metal fume fever with chills, fever, tightness in chest, cough and leukocytes.**

SO₂: **it chiefly affects the upper respiratory tract and the bronchi. It may cause edema of the lungs or glottis, and can produce respiratory paralysis.**

H₂S: **hydrogen sulfide is both an irritant and asphyxiant.**

DERMAL/EYE:

ZnO: **a skin and eye irritant. May cause watering, redness of the eye.**

SO₂: **it is dangerous to the eyes, as it causes irritation @ 20 ppm and inflammation of the conjunctiva. 10,000 ppm is an irritant to moist areas of the skin within a few minutes of exposure.**

H₂S: **repeated exposures to low concentration may cause conjunctivitis, photophobia, corneal bullae, tearing, pain and blurred vision.**

In its actual state, Zinc Sulfide may be mechanically irritating to the skin and eyes. It may cause redness and watering of the eyes. Sulfides of the metals are generally insoluble and hence have little toxic action through its decomposition products.

CARCINOGENICITY: **none** NTP: **no** IARC MONOGRAPHS: **no** OSHA REGULATE: **no**

EMERGENCY FIRST AID PROCEDURES:

INGESTION: **Seek medical treatment.**

INHALATION: **Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek medical advice.**

SKIN CONTACT: **Immediately wash with water and soap and rinse thoroughly.**

EYE CONTACT: **Rinse opened eye for several minutes under running water. Then consult a doctor.**



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REACTIVITY DATA

STABILITY	Stable
CONDITIONS CONTRIBUTING TO UNSTABILITY	None
INCOMPATIBILITY (MATERIALS TO AVOID)	Acids and oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS	Sulfur oxide and hydrogen sulfide
HAZARDOUS POLYMERIZATION	Will Not Occur
CONDITIONS TO AVOID	Heat, flame, oxidizers and incompatible materials

SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **Wear a self-contained breathing apparatus and full protective clothing. Isolate area where the spill occurred and insure proper ventilation is available. Vacuum up the spill using a high efficiency unit and place in a container for proper disposal. Take care not to raise dust.**

WASTE DISPOSAL METHOD:

Consult federal, state and local regulations for proper disposal procedures.

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION	NIOSH approved dust-mist-fume cartridge respirator
LOCAL EXHAUST	Maintain below TLV level for ZnO, SO₂ & H₂S
MECHANICAL (general)	Recommended
SPECIAL	Handle in controlled atmosphere
OTHER	NA
PROTECTIVE GLOVES	Neoprene
EYE PROTECTION	Safety glasses
OTHER PROTECTIVE EQUIPMENT	Wear protective clothing to prevent contamination of skin and clothes

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

Store in tightly closed containers in a cool, dry place. No special precautions are necessary if used correctly.



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TRANSPORTATION REQUIREMENTS

DOT CLASS: **None**
UN NUMBER: **NC**
IMCO CLASS: **NC**
OTHER:

Not a hazardous material for transportation.

PRECAUTIONARY LABELING

NONE

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NA= NOT APPLICABLE

ND= NO DATA FOUND

NR=NOT RECORDED