

# MATERIAL SAFETY DATA SHEET

24 HR. EMERGENCY PHONE # CHEM-TREC 1-800-424-9300

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## SECTION 1 Product Identification

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**CHEMICAL NAME:** Zinc oxide  
**CAS #:** 1314-13-2  
**FORMULA:** ZnO  
**SYNONYM:** zinc monoxide

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## SECTION 2 Composition and Information on Ingredients

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INGREDIENT:	CAS #	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	1314-13-2	100	10mg/m <sup>3</sup> (as dust)	15mg/m <sup>3</sup> (as total dust)

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## SECTION 3 Hazards Identification

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**EMERGENCY OVERVIEW:** Irritating to skin, eyes and respiratory tract. Inhalation of high levels may produce symptoms known as metal fume fever or zinc shakes.

**PRIMARY ROUTES OF EXPOSURE:** Ingestion, Inhalation of dust.

**EYE CONTACT:** Causes slight to mild irritation of the eyes.

**SKIN CONTACT:** Causes slight to mild irritation of the skin.

**INHALATION:** Irritating to the nose, mucous membranes and respiratory tract. Inhalation may produce symptoms known as metal fume fever and zinc shakes.

**INGESTION:** Zinc salts have a harsh metallic taste.

**CHRONIC HEALTH EFFECTS:** Prolonged or repeated exposure may cause breathing difficulty and decreased pulmonary function.

**ACUTE HEALTH EFFECTS:** Irritating to eyes, skin and respiratory tract. Inhalation may cause chills, muscle aches, nausea, vomiting, fever, dry throat, cough, headache, blurred vision and decreased pulmonary function.

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## SECTION 4 First Aid Measures

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**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

**SKIN EXPOSURE:** Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.

**INGESTION:** Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

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## **SECTION 5                      Firefighting Measures**

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**FLASH POINT:** not applicable

**AUTO IGNITION TEMPERATURE:** none

**EXPLOSION LIMITS:** none

**EXTINGUISHING MEDIUM:** None. Material is non flammable

**SPECIAL FIREFIGHTING PROCEDURES:** If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** No hazardous combustion or decomposition products.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:** No unusual fire or explosion hazards.

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## **SECTION 6                      Accidental Release Measures**

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**SPILL AND LEAK PROCEDURES:** Small spills can be mixed with vermiculite or sodium carbonate and swept up.

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## **SECTION 7                      Handling and Storage**

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**HANDLING AND STORAGE:** Store material in a tightly sealed container.

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## **SECTION 8                      Exposure Controls and Personal Protection**

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**EYE PROTECTION:** Always wear approved safety glasses w/side shields, or safety goggles, face shield when handling a chemicals substance in the laboratory.

**SKIN PROTECTION:** Chemical-resistant.

**VENTILATION:** If possible, handle the material in an efficient fume hood.

**RESPIRATOR:** If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

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## **SECTION 9                      Physical and Chemical Properties**

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**COLOR AND FORM:** white powder

**MOLECULAR WEIGHT:** 81.37

**MELTING POINT (DEG. C.):** none

**BOILING POINT:** no data

**VAPOR PRESSURE:** not applicable

**SPECIFIC GRAVITY:** 5.606

**SOLUBILITY IN WATER:** insoluble

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## **SECTION 10                    Stability and Reactivity**

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**STABILITY:** air and moisture stable solid

**HAZARDOUS POLYMERIZATION:** no hazardous polymerization

**CONDITIONS TO AVOID:** none

**INCOMPATIBILITY:** strong mineral acids and bases

**DECOMPOSITION PRODUCTS:** none

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## **SECTION 11 Toxicological Information**

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**RTECS DATA:** Administration onto the skin (rabbit); Standard Draize test: 500 mg/24H. Oral (human) LDLo: 500 mg/kg. Inhalation (human); TLC: 600 mg/m<sup>3</sup>. Oral (rat); LD: >8437 mg/kg. Intraperitoneal (rat); LD50: 240 mg/kg. Oral (mouse); LD50: 7950 mg/kg. Inhalation (mouse); LC50: 2500 mg/m<sup>3</sup>. Oral (rat); TDLo: 17431 mg/kg/90D-C. Inhalation (guinea pig); TCLo: 5900 ug/m<sup>3</sup>/3H/3D-1. Inhalation (guinea pig); TCLo: 4600 ug/m<sup>3</sup>/3H/6D-1. Oral (chicken); TDLo: 32203 mg/kg/4W-C. Oral (mammal-domestic); TDLo: 3584 mg/kg/4W-1. Oral (rat); TDLo: 6846 mg/kg. Inhalation (rat); Cytogenetic analysis: 100 ug/m<sup>3</sup>. Hamster embryo; Morphological Transformation: 1 mg/L.

**MUTAGENIC EFFECTS:** no data

**TETRATOGENIC EFFECTS:** no data

**CARCINOGENIC EFFECTS:** no data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

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## **SECTION 12 Ecological Information**

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**ECOLOGICAL INFORMATION:** No information available

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## **SECTION 13 Disposal Considerations**

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**DISPOSAL:** Dispose of in according to local state and federal regulations.

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## **SECTION 14 Transportation Information**

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Non-hazardous

Non-hazardous

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## **SECTION 15 Regulatory Information**

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**TSCA:** Listed in the TSCA inventory

**SARA (TITLE 313):** Title compound : See category N982 for reporting.

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## **SECTION 16 Other Information**

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