

## Material Safety Data Sheet

**ZINC OXIDE****1. PRODUCT DESCRIPTION**

Product Name: Zinc Oxide  
 Product Code (s): Various  
 Size: Various  
 Chemical Name: Zinc Oxide  
 CAS Number: 1314-13-2  
 Formula: See section 2  
 Synonyms: Zinc white  
 Distributor: Carolina Biological Supply Company  
 2700 York Road  
 Burlington, NC 27215  
 Chemical Emergency Information:  
 800-227-1150 (8am–5pm [ET] M–F)  
 Chemtrec (Transportation Spill Response 24 hours):  
 800-424-9300

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Principal Hazardous Components: Zinc Oxide  
 TLV and PEL units:  
 ACGIH-TLV: 2 mg/m<sup>3</sup> TWA  
 10 mg/m<sup>3</sup> STEL  
 OSHA-PEL: 5 mg/m<sup>3</sup> TWA (fume)  
 15 mg/m<sup>3</sup> TWA (total dust)  
 5 mg/m<sup>3</sup> TWA (respirable fraction)

**3. HAZARDOUS IDENTIFICATION**

Emergency Overview: May irritate respiratory tract  
 Potential Health Effects:  
 Eyes: May cause irritation  
 Skin: May cause irritation  
 Ingestion: May cause gastrointestinal discomfort  
 Inhalation: May cause irritation to respiratory tract

**4. FIRST AID MEASURES**

Emergency and First Aid Procedures:  
 Eyes - Rinse thoroughly with running water. Get medical attention if irritation develops.  
 Skin - Wash thoroughly with soap and water and rinse with water. Get medical attention if irritation develops.  
 Ingestion - If large amounts are swallowed, and if conscious, give plenty of water. Get medical attention.  
 Inhalation - Remove to fresh air. Get medical attention if breathing is difficult.

**5. FIREFIGHTING PROCEDURES**

Flash Point (Method Used): None  
 NFPA Rating: Health: 1  
 Fire: 0  
 Reactivity: 0  
 Extinguisher Media: Use dry chemical, CO<sub>2</sub> or appropriate foam  
 Flammable Limits in Air % by Volume: N/A  
 Autoignition Temperature: N/A  
 Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
 Unusual Fire and Explosion Hazards: None in normal conditions; material is non-combustible. Has reacted explosively with chlorinated rubber at elevated temperatures. Has reacted violently with magnesium on heating and with linseed oil varnish.

**6. SPILL OR LEAK PROCEDURES**

Steps to be Taken in Case Material is Released or Spilled:  
 Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

**7. SPECIAL PRECAUTIONS**

Precautions to be Taken in Handling or Storing: Avoid prolonged skin contact. Avoid breathing dust  
 Other Precautions: Isolate in a closed container in a cool, dry area suitable for chemical storage.

**8. SPECIAL PROTECTION INFORMATION**

A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded  
 Ventilation: Local Exhaust: Acceptable  
 Mechanical (General): Required  
 Special: No  
 Other: No  
 Protective Gloves: Rubber, neoprene, PVC, or equivalent  
 Eye Protection: Splash proof chemical safety goggles should be worn at all times  
 Other Protective Clothing or Equipment: Lab coat, eye wash, and safety shower

## Material Safety Data Sheet

# ZINC OXIDE (CONT.)

### 9. PHYSICAL DATA

Molecular Weight: 81.37

Melting Point: 3587 °F

Boiling Point: Sublimes

Vapor Pressure: N/A

Vapor Density (Air-1): N/A

Specific Gravity (H<sub>2</sub>O=1): 5.65

Percent Volatile by Volume: 0

Evaporation Rate (H<sub>2</sub>O=1): N/A

Solubility in Water: Insoluble

Appearance and Odor: Odorless, white to yellowish-white powder

### 10. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Heat, incompatibles

Incompatibility (Materials to Avoid): Chlorinated rubber, magnesium, linseed oil

Hazardous Decomposition Products: Toxic fumes released when sublimed

Hazardous Polymerization: Will not occur

### 11. TOXICITY DATA

Toxicity Data: orl-mus LD50 : 7950 mg/kg

Effects of Overexposure:

Acute: See section 3

Chronic: This product has been investigated as a mutagen and reproductive effector. Zinc oxide is not listed as causing cancer by NTP, IARC, or OSHA.

Conditions Aggravated by Overexposure: Respiratory conditions

Target Organs: N/A

Primary Route(s) of Entry: Inhalation, ingestion

### 12. ECOLOGICAL DATA

EPA Waste Numbers: N/A

### 13. DISPOSAL INFORMATION

Waste Disposal Methods: Dispose in accordance with all applicable federal, state and local regulations

Always contact a permitted waste disposer (TSD) to assure compliance

### 14. TRANSPORT INFORMATION

Description: N/A

### 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute Chronic

#### SARA Sec. 313

Product or Components	SARA EHS	Chemicals	CERCLA RCRA		
	Sec. 302 TPQ	Name List	Chemical Category	Sec. 103 RQ lbs.	Sec. 261.33
Zinc oxide	No	No	Yes	No	No

### 16. ADDITIONAL INFORMATION

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

#### Glossary

ACGIH American Conference of Governmental Industrial Hygienists

CAS Number Chemical Abstracts Service Number

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

DOT U.S. Department of Transportation

IARC International Agency of Research on Cancer

mppcf million particles per cubic foot

N/A Not Available

NTP National Toxicology Program

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

ppm parts per million

RCRA Resource Conservation and Recovery Act

SARA Superfund Amendments and Reauthorization Act

TLV Threshold Limit Value

TSCA Toxic Substances Control Act