

## MATERIAL SAFETY DATA SHEET

### ZINC OXIDE

# MSDS

#### 1. PRODUCT NAME AND COMPANY IDENTIFICATION

**Product Name:** ZINC OXIDE  
**Product Use:** Personal Care Formulations  
**Company Name:** XI'AN AOGU BIOTECH CO.,LTD  
**Company Address:** Room 606,Block B3,Jinye Times,No.32,East Section of Jinye  
 Road,Yanta District,Xi'an Shaanxi 710065 China  
**Emergency Telephone Number:** 0086-1809184336

#### 2. COMPOSITION/INGREDIENT INFORMATION

<b>Chemical Family:</b>	<b>Metal Oxide</b>	
<b>Formula:</b>	<b>ZnO</b>	
<b>CAS No:</b>	<b>1314-13-2</b>	
<b>HMIS:</b>	<b>Health</b>	<b>0</b>
	<b>Flammability</b>	<b>0</b>
	<b>Reactivity</b>	<b>0</b>
<b>Hazardous Ingredients:</b>		
<b>CAS No:</b>	<b>CAS No:</b>	<b>% by Weight</b>
Zinc Oxide	1314-13-2	99.9
Lead	7439-92-1	0.001
Cadmium	7440-43-9	0.005

Lead and cadmium are inherent in the manufacture of Zinc and are not physically added in the manufacture of Zinc Oxide.

#### 3. HAZARDS IDENTIFICATION

**Routes of Entry** Primary: Inhalation  
 Secondary: Ingestion

**Eye Contact:** Mechanical irritation may occur

**Skin Contact:** Mechanical irritation may occur

**Inhalation:** Inhalation of high levels of zinc oxide may result in tightness of chest, metallic taste, cough, dizziness, fever, shills, headache, nausea, and dry throat. Over-exposure may produce symptoms known as metal fume fever or "zinc snakes": an acute self-limiting condition without recognized complications, Symptoms of metal fume fever include chills, fever, muscular pain, nausea and vomiting.

**Effects of Long Term Exposure:** Chronic exposure to zinc oxide may cause respiratory tract irritation with nasopharyngitis and laryngitis.

**Medical Conditions Aggravated by Exposure:** Inhalation of any dust particulate may aggravate respiratory medical conditions.

#### 4. FIRST AID MEASURES

**Eyes:** Remove contacts. Flush with plenty of water for 15 minutes. Get medical attention if irritation persists.

**Skin:** Remove contaminated clothing and shoes. Wash with soap and water. Seek medical attention if symptoms persist.

**Ingestion:** If this material is swallowed call a physician immediately. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms persist, seek medical attention.

#### 5. FIRE FIGHTING MEASURES

**Flammability of Product:** Non-flammable

**Extinguishing Media:** Water spray

**Special Firefighting Procedures:** Wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**Unusual Fire & Explosion Hazards:** Toxic fumes are produced in fire.

#### 6. ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

**Methods for Cleaning Up:** Wear suitable protective equipment. Sweep up spilled material into appropriately labeled containers for proper disposal. Avoid raising dust. Finish cleaning by washing area with water. Comply with the reporting requirements of all federal, state and local regulations.

#### 7. HANDLING AND STORAGE

**Safe Handling:** Avoid generating dust. Avoid breathing dust. Use only with adequate ventilation. Avoid prolonged, contact with skin. Avoid contact with eyes. Keep container closed. Wash thoroughly after handling.

**Storage** Keep container dry. Keep containers sealed until ready to use.

**Other Precautions:** Reacts violently with magnesium when heated, resulting in explosion. Mixture of zinc oxide and chlorinated rubber explode when heated above 215°C.

#### 8. EXPOSURE CONTROL/PERSONAL PROTECTION

**Threshold Limit Values:** **ACGIH:** 5 mg/m<sup>3</sup>  
TWA: 10 hour period  
**OSHA:** 5 mg/m<sup>3</sup>  
TWA: 8 hour period  
**NIOSH:** 5 mg/m<sup>3</sup>  
TWA: 10 hour period  
**NOTE: THE ABOVE EXPOSURE LIMITS ARE FOR AIR LEVELS ONLY. IF SKIN CONTACT OCCURS, YOU MAY BE OVER-EXPOSED.**

**Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, use ventilation to keep exposure to airborne contaminants below the exposure limit. Where the exposure limit is or may be exceeded, use NIOSH approved respiratory protection. Select the appropriate dust respirator based on actual or potential concentration of airborne dust from this product. Comply with all appropriate OSHA, EPA, State and Local regulations.

**Eye:**

Safety glasses

**Skin/Body:**

Rubber or Plastic Gloves & Lab Coats.

**Respiratory:**

High efficiency particle respirator.

**Other:**

Evaluate need based on application.

**Personal Protection in Case of Large Spills:**

Splash goggles, synthetic apron, Gloves, MSHA/NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Fine Powder
<b>Color:</b>	White
<b>Odor:</b>	Odorless
<b>Melting Point °F:</b>	3587°F
<b>Specific Gravity:</b>	5.61
<b>Percent Volatile by Weight:</b>	0
<b>Evaporation Rate:</b>	0
<b>Solubility in Water:</b>	0.00016 g/cc

**10. STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable Reacts violently with magnesium when heated, resulting in explosion. Mixture of zinc oxide and chlorinated rubber explode when heated above 215°C.
<b>Incompatibility:</b>	
<b>Hazardous Decomposition or Byproducts:</b>	None
<b>Hazardous Polymerization:</b>	Will Not Occur

**11. TOXICOLOGICAL INFORMATION**

<b>Routes of Entry:</b>	Primary: Inhalation Secondary: Ingestion Inhalation of high levels of zinc oxide may result in tightness of chest, metallic taste, cough, dizziness, fever, shills, headache, nausea, and dry throat. Over-exposure may produce symptoms known as metal fume fever or "zinc snakes": an acute self-limiting condition without recognized complications, Symptoms of metal fume fever include chills, fever, muscular pain, nausea and vomiting.
<b>Effects of Short Term Exposure:</b>	Zinc Oxide may cause mechanical irritation to eyes and skin.

**Effects of Long Term Exposure:** Chronic exposure to zinc oxide may cause respiratory tract irritation with nasopharyngitis and laryngitis.

**Toxicology:** LD50 Intraperitoneal Mouse: 7950 mg/kg  
LD50 Intraperitoneal Rat: 240 mg/kg  
LC50 Intraperitoneal Mouse: 2500 mg/kg  
LD50 Human: 500 mg/kg

**Carcinogenic Effects:** Not listed with NTP, IARC or OSHA as a known or suspected carcinogen.

## 12. ENVIRONMENTAL INFORMATION

**RCRA Code:** None  
**TSCA Registered:** Yes

## 13. DISPOSAL CONSIDERATIONS

**Treatment:** Dispose of according to all federal, state and local regulations. This material may be regulated under CERCLA, TSCA, SARA, and/or RCRA Regulations.

## 14. TRANSPORT INFORMATION

**Proper Shipping Name:** Not regulated  
**Hazard Classification:** None  
**UN Number:** None  
**Packing Group:** None  
**Labels Required:** None  
**Harmonized Tariff Code:** 2817.00.00

## 15. REGULATORY INFORMATION

**SARA Section 313:** This product is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act and CFR 372. Zinc Oxide is present in quantities above the applicable de minimis concentrations and is considered to be listed in 40 CFR 372.65 as a zinc compound.

## 16. ADDITIONAL INFORMATION

The complete range of conditions or methods of use are beyond our control therefore we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate however, all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers.