

Material Safety Data Sheet (MSDS)

Product Name: Zinc Oxide BP/USP Grade

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

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1. Identification of the Substance/Preparation and of the Company

Product Name: Zinc Oxide BP/USP Grade

Chemical Formula: ZnO

Synonyms: Zinc White, Permanent White, Chinese White

Intended Use: Pharmaceutical, cosmetic, nutraceutical, and industrial applications.

2. Hazards Identification

- **Classification (GHS):** Not classified as hazardous under normal handling.
- **Hazard Statements:**
 - May cause mild irritation to skin, eyes, and respiratory tract if exposed to dust.
- **Precautionary Statements:**
 - Avoid inhalation of dust.
 - Use protective equipment.
 - Ensure adequate ventilation.

3. Composition/Information on Ingredients

- **Chemical Name:** Zinc Oxide
- **CAS No.:** 1314-13-2
- **EC No.:** 215-222-5
- **Purity:** $\geq 99\%$

4. First Aid Measures

- **Inhalation:** Move to fresh air. If breathing is difficult, seek medical attention.
- **Skin Contact:** Wash with soap and water.
- **Eye Contact:** Rinse cautiously with water for several minutes. Seek medical advice if irritation persists.
- **Ingestion:** Rinse mouth. Seek medical attention if discomfort occurs.

5. Fire Fighting Measures

- **Suitable Extinguishing Media:** Use CO₂, dry powder, water spray, or foam.
- **Special Hazards:** Not flammable, but may emit zinc fumes at very high temperatures.
- **Protective Equipment:** Firefighters should wear self-contained breathing apparatus.

6. Accidental Release Measures

- Avoid generating dust.
- Sweep or vacuum without creating dust cloud.
- Collect in suitable container for disposal.
- Ensure good ventilation.

7. Handling and Storage

- **Handling:** Avoid contact with eyes and skin. Avoid breathing dust. Use in well-ventilated area.

- **Storage:** Store in tightly sealed container in cool, dry, well-ventilated area away from acids.

8. Exposure Controls / Personal Protection

- **Occupational Exposure Limits:**
 - OSHA PEL: 5 mg/m³ (respirable fraction)
 - ACGIH TLV: 2 mg/m³ (respirable fraction)
- **Personal Protection:**
 - Respiratory: Dust mask or respirator.
 - Hands: Protective gloves.
 - Eyes: Safety goggles.
 - Skin: Protective clothing.

9. Physical and Chemical Properties

- **Appearance:** White, odorless powder
- **Molecular Weight:** 81.38 g/mol
- **Melting Point:** 1975 °C
- **Boiling Point:** Sublimes at 2360 °C
- **Solubility:** Insoluble in water, soluble in acids and alkalis
- **Density:** 5.6 g/cm³

10. Stability and Reactivity

- **Stability:** Stable under recommended conditions.
- **Reactivity:** Reacts with acids to release hydrogen gas.
- **Hazardous Decomposition:** Zinc fumes at high temperatures.

11. Toxicological Information

- **Acute Toxicity:** Low toxicity.
- **Inhalation:** Dust may cause metal fume fever if inhaled in large amounts.
- **Skin/Eye Contact:** Mild irritation possible.
- **Chronic Effects:** No known chronic health effects at low exposure.

12. Ecological Information

- **Ecotoxicity:** Harmful to aquatic organisms at high concentrations.
- **Persistence/Degradability:** Inorganic, not biodegradable.
- **Bioaccumulative Potential:** Low.
- **Mobility in Soil:** Low mobility due to insolubility in water.

13. Disposal Considerations

- Dispose of in accordance with local, regional, national, and international regulations.
- Avoid release into environment.

14. Transport Information (Detailed)

- **UN Number:** Not classified as hazardous under transport regulations.
- **UN Proper Shipping Name:** Not regulated.
- **Transport Hazard Class(es):** Not applicable.
- **Packing Group:** Not applicable.
- **Environmental Hazards:** Not considered hazardous for the environment during transportation.
- **Special Precautions for User:**
 - Avoid generating dust during handling and transport.
 - Ensure containers are tightly closed and secured to prevent leakage.
 - Store and transport in cool, dry, and well-ventilated conditions.
- **Transport in Bulk (Annex II of MARPOL 73/78 and the IBC Code):** Not applicable.

Mode-Specific Guidelines:

- **Road/Rail (ADR/RID):** Not regulated.
- **Sea (IMDG):** Not classified as dangerous goods.
- **Air (IATA):** Not classified as dangerous goods.

Note: Zinc Oxide BP/USP Grade is generally safe for transport but should be shipped in sealed containers to prevent dust release and moisture contamination.

15. Regulatory Information

- Not classified as hazardous under GHS, OSHA, or EU CLP regulations.
- Listed in major chemical inventories (EINECS, TSCA).

16. Other Information

- This MSDS is prepared in compliance with OSHA Hazard Communication Standard and EU CLP regulation.
- Information is based on current knowledge and is intended to describe the product in terms of health, safety, and environmental requirements.
- It should not be construed as guaranteeing specific properties.
- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.