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Material Safety Data Sheet (MSDS)

Product Name: Zinc Oxide IP Grade
MSDS Generate Date: 20-05-2017
Revision Date: 30-12-2024

Supplier:

Rawpharma Biz Pvt Ltd
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Science City Road,
Sola Ahmedabad Gujarat,
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1. Identification of the Substance/Preparation and of the Company

- **Product Name:** Zinc Oxide
- **Grade:** IP Grade
- **Synonyms:** Zinc white, Flowers of Zinc
- **Use of Substance:** Pharmaceutical, cosmetic formulations, industrial applications, pigments, rubber industry, ceramics.

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2. Hazards Identification

- **Classification:** Not classified as hazardous according to GHS criteria.
- **Potential Health Effects:**
    - *Inhalation:* May cause respiratory irritation if dust is inhaled.
    - *Skin Contact:* Generally non-irritating.
    - *Eye Contact:* Dust may cause mechanical irritation.

    - *Ingestion:* Low toxicity; large doses may cause gastrointestinal discomfort.
- **Environment:** Not considered dangerous, but excessive release may affect aquatic life.

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3. Composition/Information on Ingredients

- **Chemical Name:** Zinc Oxide
- **CAS No.:** 1314-13-2
- **EC No.:** 215-222-5
- **Purity:** ≥ 99% (IP Grade)

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4. First Aid Measures

- **Inhalation:** Move person to fresh air; seek medical attention if symptoms persist.
- **Skin Contact:** Wash with soap and water.
- **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present. Seek medical attention if irritation continues.
- **Ingestion:** Rinse mouth with water. If large amounts are ingested, seek medical advice.

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5. Firefighting Measures

- **Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire (water spray, foam, CO_2, dry powder).
- **Specific Hazards:** Non-flammable; may emit zinc fumes when heated strongly.
- **Protective Equipment:** Firefighters should wear self-contained breathing apparatus.

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6. Accidental Release Measures

- Avoid dust formation.
- Sweep or vacuum without creating dust.
- Place in suitable, labeled containers for disposal.
- Prevent entry into drains and water sources.

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7. Handling and Storage

- **Handling:** Avoid dust generation. Ensure adequate ventilation.
- **Storage:** Store in tightly closed containers, in a cool, dry, and well-ventilated area. Protect from moisture and incompatible substances (strong acids).

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8. Exposure Controls/Personal Protection

- **Occupational Exposure Limit (OEL):**
    - OSHA PEL: 5 mg/m³ (respirable fraction)
    - ACGIH TLV: 2 mg/m³ (respirable fraction)
- **Engineering Controls:** Use local exhaust ventilation where dust may be generated.
- **Personal Protection:**
    - Respiratory: N95 or equivalent dust mask.
    - Eye: Safety goggles.
    - Skin: Protective gloves and clothing.

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9. Physical and Chemical Properties

- Appearance: White powder
- Odor: Odorless
- Melting Point: 1975°C
- Boiling Point: >2360°C (sublimes)
- Solubility: Insoluble in water, soluble in acids and alkalis
- Density: ~5.6 g/cm³
- pH: Neutral (in suspension)
- Stability: Stable under normal conditions

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10. Stability and Reactivity

- **Chemical Stability:** Stable under normal temperature and pressure.
- **Conditions to Avoid:** Excessive heat, dust formation.

- **Incompatible Materials:** Strong acids, strong bases, ammonium salts.
- **Hazardous Decomposition Products:** Zinc fumes under fire conditions.

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11. Toxicological Information

- **Acute Toxicity:**
    - Oral LD_{50} (rat): >5000 mg/kg (low toxicity).
- **Inhalation:** Dust may cause irritation and "metal fume fever" on exposure to zinc oxide fumes.
- **Skin/Eye Contact:** May cause mild irritation.
- **Chronic Effects:** No known significant chronic health effects at low exposure.

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12. Ecological Information

- **Ecotoxicity:** Harmful in large concentrations to aquatic organisms.
- **Persistence & Degradability:** Inorganic compound, not biodegradable.
- **Bioaccumulation Potential:** Low.
- **Mobility in Soil:** Immobile; insoluble in water.

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13. Disposal Considerations

- Dispose of in accordance with local, regional, and national regulations.
- Avoid release into drains or environment.
- Can be disposed of in landfills for non-hazardous waste.

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14. Transport Information (Detailed)

- **UN Number:** Not regulated as dangerous goods.
- **UN Proper Shipping Name:** Zinc Oxide
- **Transport Hazard Class:** Not classified as hazardous for transport (ADR/RID, IMDG, ICAO/IATA).
- **Packing Group:** Not applicable.

- **Environmental Hazards:**
    - Not classified as marine pollutant under IMDG Code.
    - However, large spills to water should be avoided as zinc compounds may affect aquatic life.
- **Special Precautions for User:**
    - Ensure containers are well-sealed and protected from physical damage.
    - Prevent dust dispersion during transport.
- **Transport in Bulk (Annex II of MARPOL 73/78 and IBC Code):** Not applicable.
- **Additional Information:**
    - Safe for transport by road (ADR), rail (RID), sea (IMDG), and air (IATA/ICAO).
    - Recommended to transport in fiber drums, HDPE bags, or equivalent sealed packaging to minimize dust.
    - Always label packaging with product name and hazard warnings (dust irritation precaution).

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15. Regulatory Information

- **India:** Complies with IP standards.
- **GHS Classification:** Not classified as hazardous.
- **Other Regulations:** Not listed as a hazardous chemical under international transport regulations.

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16. Other Information

- This MSDS is prepared in accordance with international guidelines.
- The information provided is believed to be accurate but does not constitute a warranty.
- Users are responsible for safe handling according to applicable laws and regulations.
- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.