

MetroCHEM

ZINC DUST

Material Safety Data Sheet

1. Chemical Product and Company Identification

Supplier:

MetroCHEM
G-1/79-80, Riico I.A.,
Deoli(Tonk-Rajasthan)

- **Chemical Name:** Zinc
- **Synonym:** Zinc Powder, Blue Powder
- **Molecular Weight** 65.37

2. Composition/Information on Ingredients

Ingredient	Percent
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Zinc	99 - 99.6%
Zinc Oxide	0.1 - 1%

3. Hazards Identification:

- **Accute Health Effects:** Irritating to the skin and eyes on contact. Irritation to the eyes will cause watering and redness. Reddening, scaling, and itching are characteristics of skin inflammation. Follow safe industrial hygiene practices and always wear protective equipment when handling this compound. Inhalation may irritate the respiratory tract. Symptoms may include coughing, shortness of breath, sore throat and runny nose. If sufficient amounts are inhaled and absorbed, symptoms known as metal fume fever or "zinc shakes"; an acute, self-limiting condition without recognized complications. Symptoms of metal fume fever include chills, fever, muscular pain, nausea, and vomiting.
- **Chronic Health Effects:** This product has no known chronic effects. Repeated or prolong exposure to this compound is not known to aggravate medical conditions.

4. First Aid Measures

- **First Aid For Eye:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
- **First Aid For Skin:** In case of contact, flush skin with water. Wash clothing before reuse. Call a physician if irritation occurs.
- **First Aid For Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
- **First Aid For Ingestion:** If swallowed, call a physician immediately

5. Fire Fighting Measures

- **Fire:** Auto ignition temperature: 460C (860F)
The listed auto ignition temperature is for Zinc powder (layer); dust cloud is 680C (1255F). Zinc powder is not pyrophoric but will burn in air at elevated temperatures. Bulk powder in damp state may heat spontaneously and ignite on exposure to air. Releases flammable hydrogen gas upon contact with acids or alkali hydroxides. Contact with strong oxidizers may cause fire.
- **Explosion:** Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
- **Fire Extinguishing Media:** Smother with a suitable dry powder (sodium chloride, magnesium oxide, Met-L-X) or sand. Do not use water.
- **Special Information:** In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Remove all sources of ignition and provide mild ventilation in area of spill. Substance may be pyrophoric and self-ignite. Clean-up personnel require protective clothing, goggles and dust/mist respirators. Sweep or vacuum up the spill in a manner that does not disperse zinc powder in the air and place the zinc in a closed container for recovery or disposal.

7. Handling and Storage

- **Storage Temperatures:** Store at ambient temperature
- **Shelf Life:** Unlimited in tightly closed container.
- **Special Sensitivity:** None
- **Handling/Storage Precautions:** Avoid breathing dust. Avoid getting in eyes or on skin. Wash thoroughly after handling. Store in a dry place away from direct sunlight, heat and incompatible materials. Reseal containers immediately after use. Store away from food and beverages.

8. Exposure Controls/Personal Protection

- **Eye Protection:** Safety glasses or goggles.
- **Skin Protection:** PVC gloves with impervious boots, apron or coveralls. Employees should wash their hands and face before eating, drinking or using tobacco products.
- **Respirator:** Work ambient concentrations should be monitored and if the recommended exposure limit is exceeded, a dust respirator must be worn.
- **Ventilation:** Use local ventilation if dusting is a problem, to maintain air levels below the recommended exposure limit.
- **Additional Protective Measures:** Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of hazardous chemicals.

9. Physical and Chemical Properties

- **Physical Form:** Fine Powder
- **Color:** Blue-Grey
- **Odor:** Odorless
- **Molecular Weight:** 65.38
- **Boiling Point:** 1665°F
- **Melting/Freezing Point:** 788°F
- **Solubility In Water:** Reacts with Water (Insoluble)
- **Specific Gravity:** 7.11

10. Stability and Reactivity

- **Stability:** Stable under ordinary conditions of use and storage. Moist zinc powder can react exothermically and ignite spontaneously in air.
- **Hazardous Decomposition Products:** Hydrogen in moist air, zinc oxide with oxygen at high temperature. Zinc metal, when melted, produces zinc vapor which oxidizes and condenses in air to form zinc fume.
- **Hazardous Polymerization:** Will not occur.
- **Incompatibilities:** Zinc powder can react violently with water, sulfur and halogens. Dangerous or potentially dangerous with strong oxidizing agents, lower molecular weight chlorinated hydrocarbons, strong acids and alkalis.
- **Conditions to Avoid:** Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

- **Routes of Exposure:** Eye contact. Ingestion. Inhalation. Skin contact.
- **Chronic Toxic Effects:** This product has no known chronic effects. Repeated or prolonged exposure to this compound is not known to aggravate medical conditions.
- **Acute Toxic Effects:** Irritating to the skin and eyes on contact. Irritation to the eyes will cause watering and redness. Reddening, scaling, and itching are characteristics of skin inflammation. Follow safe industrial hygiene practices and always wear protective equipment when handling this compound. Inhalation may irritate the respiratory tract. Symptoms may include coughing, shortness of breath, sore throat and runny nose. If sufficient amounts are inhaled and absorbed, symptoms known as metal fume fever or "zinc shakes"; an acute, self-limiting condition without recognized complications. Symptoms of metal fume fever include chills, fever, muscular pain, nausea, and vomiting.

12. Ecological Information

- **Ecotoxicity:** Zinc is Ecotoxic. Toxic to Aquatic Organisms

13. Disposal Considerations

- **Waste Disposal Method:** Waste disposal should be in accordance with existing state and local environmental regulations

14. Transport Information

- **Transportation over Land, Sea or By Air:** There is no such regulations. The material should not be in contact with water or Humidity.

15. Regulatory Information

- **UN Classification: 4.3 Dangerous when Wet**
- **Risk Phrase 10, 15**
R-10- Flammable
R-15- Contacts with water liberates extremely flammable gas
- **Safety Phrase 7/8, 43.6**
S - 7/8 – Keep container tightly closed & Dry
S-43.6-In case of fire, use Sand. Never use Water

16. Other Information

- The information contained herein is based on the present state of our knowledge. It is believed to be reliable but no representation, guarantee of any kind are made.