

# Mallinckrodt

## Material Safety Data

Emergency Phone Number: 314-982-5000

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Mallinckrodt, Inc., Science Products Division, P. O. Box M, Paris, KY 40361.

### ZINC METAL POWDER

#### PRODUCT IDENTIFICATION:

Synonyms: Powdered zinc; blue powder

Formula CAS No.: 7440-66-6

Molecular Weight: 65.37

Chemical Formula: Zn

Hazardous Ingredients: Not applicable.

#### PRECAUTIONARY MEASURES

**WARNING: HARMFUL IF SWALLOWED OR INHALED.**

**COMBUSTIBLE. MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR.**

Avoid breathing dust.

Keep away from heat and flame.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

#### EMERGENCY/FIRST AID

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air.

If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In all cases call a physician.

SEE SECTION 5.

DOT Hazard Class: Flammable Solid

#### SECTION 1 Physical Data

Appearance: Gray or bluish-gray powder.

Odor: Odorless.

Solubility: Insoluble in water.

Boiling Point: 907°C (1665°F)

Melting Point: 419°C (787°F)

Specific Gravity: 7.14

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): 1 at 487°C (909°F)

Evaporation Rate: No information found.

#### SECTION 2 Fire and Explosion Information

**Fire:**

Zinc powder is not pyrophoric but will burn in air at elevated temperatures. Autoignition temperatures are approximately 680°C (dust cloud) or 460°C (layer). Bulk dust in damp state may heat spontaneously and ignite on exposure to air. Releases flammable hydrogen gas upon contact with acids or alkali hydroxides.

**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).

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

#### SECTION 3 Reactivity Data

**Stability:**

Stable under ordinary conditions of use and storage.

**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 Polymerizations:**

This substance does not polymerize.

**Incompatibilities:**

Zinc powder can react violently with sulfur and halogens. Dangerous or potentially dangerous with strong oxidizing agents, lower molecular weight chlorinated hydrocarbons, strong acids and alkalis.

#### SECTION 4 Leak/Spill Disposal Information

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. Dispose in a RCRA approved facility.

Ensure compliance with local, state and federal regulations.

Effective Date: 08-09-85

NIHA Ratings: Health: 0 Flammability: 1 Reactivity: 1

ZINC METAL POWDER

**SECTION 5 Health Hazard Information**

**A. EXPOSURE / HEALTH EFFECTS**

**Inhalation:**

No adverse effects expected but dust may cause mechanical irritation. The effects may be expected to resemble those of inhaling an inert dust; possible difficulty in breathing, sneezing, coughing. When heated, the fumes are highly toxic and may cause fume fever.

**Ingestion:**

Extremely large oral dosages may produce gastrointestinal disturbances, due both to mechanical effects and the possibility of reaction with gastric juice to produce zinc chloride. Pain, stomach cramps and nausea could occur in aggravated cases.

**Skin Contact:**

No adverse effects expected but dust may cause mechanical irritation.

**Eye Contact:**

No adverse effects expected but dust may cause mechanical irritation.

**Chronic Exposure:**

No adverse health effects expected.

**Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

**B. FIRST AID**

**Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion:**

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person.

**Skin Exposure:**

Wash exposed area with soap and water. Get medical advice if irritation develops.

**Eye Exposure:**

Wash eyes with plenty of water for at least 15 minutes. If irritation develops, get medical attention.

**C. TOXICITY DATA**

(RTECS, 1982)

No LD50/LC50 information found relating to normal routes of occupational exposure.

**SECTION 6 Occupational Control Measures**

**Airborne Exposure Limits:**

-ACGIH Threshold Limit Value (TLV):  
5mg/m<sup>3</sup> (TWA), 10mg/m<sup>3</sup> (STEL)  
for zinc oxide fume.

**Ventilation System:**

A local exhaust system which captures the contaminant at its source is recommended to prevent dispersion of the contaminant into the workroom air.

**Personal Respirators: (NIOSH Approved)**

For conditions of use where exposure to the dust is apparent, a dust/mist respirator may be worn. For emergencies, a self-contained breathing apparatus may be necessary.

**Skin Protection:**

Wear protective gloves and clean body-covering clothing.

**Eye Protection:**

Use chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

**SECTION 7 Storage and Special Information**

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities.

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