

## COPPER METAL

## Material Safety Data Sheet

Mallinckrodt Chemical Inc.

P.O. Box 800

Paris, Kentucky 40362

Emergency Telephone Number  
314-539-1600

Effective Date: 04-06-89 Supersedes 08-28-85

## PRODUCT IDENTIFICATION:

Synonyms: Bronze powder

Formula CAS No.: 7440-50-8

Molecular Weight: 63.54

Hazardous Ingredients: Copper

Chemical Formula: Cu

## PRECAUTIONARY MEASURES

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES EYE IRRITATION. CHRONIC EXPOSURE MAY CAUSE TISSUE DAMAGE.

Avoid breathing dust.  
Keep container closed.  
Use with adequate ventilation.  
Wash thoroughly after handling.  
Avoid contact with eyes.

## 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 case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. In all cases call a physician.  
SEE SECTION 5.

## Physical Data

## SECTION 1

Appearance: Reddish, metallic solid.

Odor: Odorless.

Solubility: Insoluble in water.

Boiling Point: 2324 C (4215 F).

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

Melting Point: 1083 C (1981 F).

Vapor Pressure (mm Hg): 1 @ 1628 C (2962 F).

Density: 8.92

Evaporation Rate: No information found.

## Fire and Explosion

## SECTION 2

## Information

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

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.

# Reactivity Data

## SECTION 3

### Stability:

Stable under ordinary conditions of use and storage.

### Hazardous Decomposition Products:

Non-hazardous decomposition.

### Hazardous Polymerization:

This substance does not polymerize.

### Incompatibilities:

Acetylene, ammonium nitrate, bromates, chlorates, chlorine, chlorine plus oxygen difluoride, chlorine trifluoride, ethylene oxide, fluorine, hydrazine, mononitrate, hydrozoic acid, hydrogen peroxide, hydrogen sulfide, iodates, lead azide, phosphorus, nitric acid, potassium peroxide, sodium azide, sodium peroxide, sulfur plus chlorates, and 1-bromo-2-propyne.

# Leak/Spill Disposal Information

## SECTION 4

Sweep or scoop up and place in a suitable container for reclamation or disposal. Package unreclaimable material for disposal in an approved waste disposal facility. Do not flush to sewer. Toxic to fish.

Ensure compliance with local, state and federal regulations.

# Health Hazard Information

## SECTION 5

### A. Exposure/Health Effects

#### Inhalation:

Dusts may cause irritation to the upper respiratory tract, metallic taste in mouth, metal fume fever, and discoloration of the skin and hair. Inhalation of high concentrations of dust may cause sneezing, nausea, weakness and fever. Nasal ulcerations and bleed may occur from inhaling fine dust.

#### Ingestion:

Large oral doses may cause nausea, vomiting, abdominal pain, metallic taste, and diarrhea. If vomiting does not occur immediately, systemic copper poisoning may occur. Symptoms may include capillary damage, headache, cold sweat, weak pulse, kidney and liver damage, central nervous excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure.

#### Skin Contact:

May cause rough, scaly skin on the hands and feet.

#### Eye Contact:

Small copper particles in the eyes may cause irritation, discoloration, and damage.

#### Chronic Exposure:

Prolonged or repeated exposure to copper dusts may cause runny nose, atrophic changes and irritation of the mucous membranes, and renal damage.

#### Aggravation of

#### Pre-existing Conditions:

Persons with pre-existing skin disorders or impaired liver, kidney, or pulmonary function or

pre-existing Wilson's disease may be more susceptible to the effects of this material.

## B. FIRST AID

- Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
- 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. Call physician immediately.
- Skin Exposure:** Remove any contaminated clothing. Wipe off excess from skin. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.
- Eye Exposure:** Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## C. TOXICITY (RTECS, 1986)

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

### Occupational Control Measures SECTION 6

**Airborne Exposure Limits:** -OSHA Permissible Exposure Limit (PEL): 1 mg/m<sup>3</sup> (TWA) dusts and mists as Cu -ACGIH Threshold Limit Value (TLV): 1 mg/m<sup>3</sup> (TWA) dusts and mists as Cu

**Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

**Personal Respirators (NIOSH Approved)** If the TLV is exceeded, a dust/mist respirator with chemical goggles may be worn, in general, up to ten times the TLV. Consult respirator supplier for limitations. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

**Skin Protection:** Wear protective gloves and clean body-covering clothing.

**Eye Protection:** Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

### Storage and Special Information SECTION 7

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances.

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