



Material Safety Data Sheet

Copper, powder or dust

MSDS# 05430

Section 1 - Chemical Product and Company Identification

MSDS Name: Copper, powder or dust  
Catalog Numbers: C431-500, C434-500  
Synonyms: None.

Company Identification: Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

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CAS#: 7440-50-8  
Chemical Name: Copper  
%: 100  
EINECS#: 231-159-6  
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Hazard Symbols: None listed

Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Flammable solid. Causes respiratory tract irritation. May cause lung damage. May cause liver and kidney damage. Causes eye and skin irritation. Inhalation of fumes may cause metal-fume fever. Can be explosive when exposed to heat or flames. Target Organs: Kidneys, liver, lungs.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. May cause skin discoloration.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage.

Inhalation: Dust is irritating to the respiratory tract. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count.

Chronic: Prolonged or repeated skin contact may cause dermatitis. May cause liver and kidney damage. May cause lung damage.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion: Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Individuals with Wilson's disease are more susceptible to chronic copper poisoning.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dust can be an explosion hazard when exposed to heat or flame. Flammable solid. May burn rapidly with flare burning effect. May re-ignite after fire is extinguished. Finely divided dusts may exhibit pyrophoric tendencies.

**Extinguishing Media:** Use dry sand, Met-L-X powder, or G-1 graphite powder. Contact professional fire-fighters immediately. Use dry sand, graphite powder, dry sodium chloride-based extinguishers. Dousing metallic fires with water may generate hydrogen gas, an extremely dangerous explosion hazard, particularly if fire is in a confined environment.

**Autoignition Temperature:** Not applicable.

**Flash Point:** Not applicable.

**Explosion Limits: Lower:** Not available

**Explosion Limits: Upper:** Not available

**NFPA Rating:** health: 2; flammability: 2; instability: 0;

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Scoop up with a nonsparking tool, then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition.

### Section 7 - Handling and Storage

**Handling:** Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:** Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not expose to air.

### Section 8 - Exposure Controls, Personal Protection

| Chemical Name | ACGIH   | NIOSH  | OSHA - Final PELs  |
|---------------|---|--|--|
| Copper        | 0.2 mg/m <sup>3</sup><br>(fume); 1 mg/m <sup>3</sup><br>(dust and mist,<br>as Cu) | 1 mg/m <sup>3</sup> TWA (dust<br>and mist) 100<br>mg/m <sup>3</sup> IDLH<br>(dust, fume and<br>mist) | 0.1 mg/m <sup>3</sup> TWA<br>(fume); 1 mg/m <sup>3</sup><br>TWA (dust and<br>mist) |

OSHA Vacated PELs: Copper: 0.1 mg/m<sup>3</sup> TWA (dust, fume, mists, as Cu)

#### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

#### Exposure Limits

#### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### Section 9 - Physical and Chemical Properties

Physical State: Powder

Color: red to brown

Odor: none reported

pH: Not available

Vapor Pressure: 1 mm Hg @1628C

Vapor Density: Not available

Evaporation Rate: Not applicable.

Viscosity: Not applicable.

Boiling Point: 2595 deg C ( 4,703.00°F)

Freezing/Melting Point: 1083 deg C ( 1,981.40°F)

Decomposition Temperature: Not available

Solubility in water: Insoluble in water.

Specific Gravity/Density: 8.92

Molecular Formula: Cu

Molecular Weight: 63.54

#### Section 10 - Stability and Reactivity

|  |   |
|--|---|
| Chemical Stability:                    | Stable at room temperature in closed containers under normal storage and handling conditions. |
| Conditions to Avoid:                   | Ignition sources, dust generation, moisture, exposure to air, excess heat.                    |
| Incompatibilities with Other Materials | Strong oxidizing agents.  |
| Hazardous Decomposition Products       | Copper fumes.   |
| Hazardous Polymerization               | Has not been reported.  |

#### Section 11 - Toxicological Information

|                  |   |
|------------------|---|
| RTECS#:          | CAS# 7440-50-8: GL5325000 GL7440000 GL7590000                           |
| LD50/LC50:       | RTECS: Not available.   |
| Carcinogenicity: | Copper - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. |
| Other:           | See actual entry in RTECS for complete information.                     |

#### Section 12 - Ecological Information

Not available

#### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

#### Section 14 - Transport Information

US DOT

Shipping Name: METAL POWDERS, FLAMMABLE, N.O.S.

Hazard Class: 4.1

UN Number: UN3089

Packing Group: II

Canada TDG

Shipping Name: METAL POWDER, FLAMMABLE, N.O.S. (Copper)

Hazard Class: 4.1

UN Number: UN3089

Packing Group: II

USA RQ: CAS# 7440-50-8: 5000 lb final RQ (no reporting of releases of this hazardous substa

#### Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 7440-50-8: 0

Canada

CAS# 7440-50-8 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2B, B4

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7440-50-8 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 7440-50-8 is listed on the TSCA

Inventory.

#### Section 16 - Other Information

MSDS Creation Date: 12/12/1997

Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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