



Material Data Safety Sheet

Quick Identifier: Copper

I. PRODUCT IDENTIFICATION

Trade Name:	Copper	Formula:	Cu
Synonyms:	Copper Metal	Molecular Weight:	63.55
CAS #:	7440-50-8		

II. HAZARDOUS INGREDIENTS

<u>Hazardous Components:</u>	<u>OSHA PEL:</u>	<u>ACGIH TLV:</u>	<u>Other Limits:</u>
Copper	1 mg/m3	1 mg/m3	
Sec. 302 (EHS):	No	Sec. 304 RQ: No	Sec. 313: No
HMIS Ratings (0-4): Health:	N/A	Flammability: N/A	Reactivity: N/A
HMIS Protective Equipment:	N/A		

III. PHYSICAL DATA

Boiling Point:	2595 C	Melting Point:	1800 C
Specific Gravity (H₂O=1):	8.92	Vapor Density (Air=1):	N/A
Vapor Pressure (mm Hg):	N/A	Evaporation Rate:	N/A
% Volatiles by Volume:	N/A	Solubility in H₂O:	None

Appearance and Odor: Copper Metallic, Odorless

IV. FIRE AND EXPLOSION HAZARDS DATA

Flash Point/Method:	None
Explosive Limits:	LEL: N/A UEL: N/A

Extinguishing Media: Dry sand or inert extinguishing material.
Special Fire Fighting Procedures: Products in the solid state present no fire or explosion hazard.
Unusual Fire and Explosion Hazards: Dust hazard exists under favoring conditions of small practice size. Dispersion in air and strong ignition source may result in an explosion.

V. HEALTH HAZARD INFORMATION

Routes of Entry:	Inhalation, Skin and Eyes.				
Target Organs:	Respiratory system, lungs, skin, liver, kidneys.				
Carcinogenicity: NTP:	No	IARC Monographs:	No	OSHA Regulated:	No
LD50/LC50:	No toxicity data recorded.				

Health Hazards (Acute and Chronic):

Inhalation:

Acute: If inhaled, can cause sneezing, nausea, weakness, and fever.

Chronic: N/A

Ingestion:

Acute: Can cause nausea, vomiting, and diarrhea

Chronic: N/A

Skin:

Acute: May cause irritation of skin.

Chronic: N/A

Eye:

Acute: May cause irritation of eyes.

Chronic: N/A

Signs and Symptoms of Exposures:

Inhalation: Irritation of the respiratory system.

Ingestion:

Skin: Irritation of skin.

Eye: Irritation of eyes.

Medical Conditions Generally N/A

Aggravated by Exposure:

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove from dusty area to fresh air.

INGESTION: N/A

SKIN: No hazard associated with skin contact.

EYE: Flush with water to insure no particles remain in the eye.

VI. REACTIVITY DATA

Stability: Stable

Incompatibility (Material to avoid): Mercury, Ammonia, Acetylene, Acids

Hazardous Decomposition Products: Toxic gases, aerosols and vapors may be released in a fire involving copper alloys if fumes of other compounds or other contacting materials are involved.

Hazardous Polymerization: Will not occur

Conditions to Avoid: Exposure during storage to strong acids, bases or oxidizing agents.

VII. SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material N/A

Is Released or Spilled:

Waste Disposal Method: According to local, state and federal regulations.

Hazard Label Information: N/A

Precautions to Be Taken in Handling and Storing: No special precautions are required.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH/MSHA- Approved dust and fume, respirator should be used to avoid excessive inhalation of particulates when exposure exceeds TLV's

Ventilation: Local Exhaust: Use when welding, burning, sawing, brazing, grinding, or machining.

Mechanical (General): N/A

Protective Gloves: Use when appropriate

Eye Protection: Safety glasses or goggles

Other Protective Clothing or Equipment: Protective equipment should be utilized as required by welding.

Work/Hygienic/Maintenance Practices: Normal hygienic practices.

IX. ADDITIONAL COMMENTS

Some of the chemicals listed herein are research or experimental substances which may be toxic, as defined by various governmental regulations. In accordance with Environmental Protection Agency regulations and the Toxic Substance Control Act (TSCA), these materials should only be handled by, or under the direct supervision of a "technically qualified individual", as defined in 40 CFR 710.2(aa).

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