



Chemtrec: (800) 424-9300
Poison Center: (800) 562-8236
Revision Date: January 8th, 2019

SAFETY DATA SHEET

Identity: Copper oxide

Formula: CuO

SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 79.55

CAS #	OSHA PEL	ACGIH TLV	%
1317-38-0	1mg (Cu)/m ³	1mg (Cu)/m ³	0.0-100.0%

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 1026.0°C

Vapor Pressure (vs. air or mmHg): N/A

Melting Point: 1326°C

Specific Gravity (water=1): 6.3-6.49

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water: Insoluble

Appearance and odor: Black powder and pieces, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Non-flammable

Explosive Limits: LEL: N/A

UEL: N/A

Extinguishing Media: Use suitable media for surrounding materials and fires

Special Fire Fighting Procedures:

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazards:

- May ignite on contact with dichloromethylsilane, hydrogen sulfide and hydrogen trisulfide.
- May react violently with hydrazine, PN₂H, titanium, zirconium.
- May have a violent exothermic reaction with boron when heated.
- May explode when heated with powdered aluminum, anilinium perchlorate, hydrogen and phthalic anhydride.
- May explode at 350C with cesium acetylene carbide.



SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (stability): None

Incompatibility: Cesium acetylene carbide, dichloromethylsilane, hydrogen sulfide and hydrogen trisulfide, hydrazine, PN_2H , titanium, zirconium, boron when heated, aluminum, anilinium perchlorate, hydrogen and phthalic anhydride. May explode at 350°C with cesium acetylene carbide.

Hazardous Decomposition or Byproducts: None recorded

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other? No

Copper compounds: In animals, inhalation of copper dust has caused hemolysis of the red blood cells, deposition of hemofuscin in the liver and pancreas, and injury to the lung cells; injection of the dust has caused cirrhosis of the liver and pancreas, and a condition closely resembling hemochromatosis or bronzed diabetes. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause a red, dry throat, metallic taste in mouth, congestion of the nasal and pharyngeal, sneezing, headache, excitability, dizziness and difficulty breathing

Ingestion: May cause fever, hypotension, tachycardia, hemolytic anemia, oliguria, uremia, coma and cardiovascular collapse, yellow watery diarrhea, green stools, saliva, and jaundice.

Skin: May cause redness, itching and swelling

Eye: May cause redness, itching, burning, and watering

Health Hazards (Acute and Chronic):

Inhalation:

Acute: May cause metallic taste in mouth and irritation to the respiratory tract.

Chronic: May cause ulceration and perforation of the nasal septum and pharyngeal congestion

Ingestion:

Acute: Moderately toxic by ingestion. May cause acute copper toxicity

Chronic: May cause irritation to the gastrointestinal tract and chronic copper toxicity. May cause damage to the nervous system, kidneys and enlarge the liver.

Skin:

Acute: May cause irritation

Chronic: May cause dermatitis

Eye:

Acute: May cause irritation to the conjunctivae

Chronic: No chronic health effects recorded

Target Organs: May affect respiratory system, skin, liver, central nervous system and kidneys.

Carcinogenicity: NTP? No

IARC Monographs? No

OSHA Regulated? No



Super Conductor Materials, Inc.

391 Spook Rock Industrial Park, Suffern, NY 10901 · 845.368.0240 · Fax 845.368.0250 · www.scm-inc.com

Medical Conditions Aggravated by Exposure: Pre-existing respiratory, gastric disorders and an increased risk for individuals with Wilson's disease.

Emergency and First Aid Procedures:

- Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention
- Ingestion:* Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person
- Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist
- Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious rubber gloves, safety glasses, clothes to prevent contact.

Ventilation:

- Local Exhaust: To maintain concentration at low exposure levels.
- Mechanical (General): Recommended.

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established