



Ophir Optronics Ltd.  
Science Based Industries Park Har-Hotzvim  
P.O.Box 45021 Jerusalem 91450, ISRAEL  
Tel: 972-2-5484444 Fax: 972-2-5822338  
www.ophiropt.com  
mktg@ophiropt.com

## MATERIAL SAFETY DATA SHEET

### I PRODUCT IDENTIFICATION

<b>Trade Name:</b>	Copper	<b>Synonym:</b>	Copper Metal
<b>Chemical Nature:</b>	Metallic Element	<b>Formula:</b>	Cu
<b>CAS #:</b>	7440-50-8	<b>Formula Weight:</b>	63.55

### II HAZARDOUS INGREDIENTS

**TLV (Units):** Copper 1 mg/m<sup>3</sup> **PEL:** Copper 1 mg/m<sup>3</sup> (dust); 0.1 mg/m<sup>3</sup> (fume)  
**Weight Percent:** 90-100%

**SARA Title III Hazard Categories**

**Acute:** Yes, **Chronic:** Yes, **Flammability:** No, **Pressure:** No, **Reactivity:** No

**Extremely hazardous Substance:** No

**SARA 313 Toxic Chemicals:** Yes (contains copper)

**TSCA Inventory:** Yes

**CERCLA Hazardous Substance:** Yes (contains Cu RQ=5000 lbs)

**Generic Class:** Generic Class removed from CFR: 7-1-91

### III PHYSICAL DATA

<b>Boiling Point 760 mm Hg:</b>	2595 °C	<b>Melting Point:</b>	1083 °C
<b>Specific Gravity:</b>	8.92	<b>Vapor Density:</b>	N/A
<b>% Volatiles by Weight:</b>	N/A	<b>Solubility in H<sub>2</sub>O:</b>	None
<b>Appearance and Odor:</b>	Reddish color and odorless		

### IV FIRE AND EXPLOSION HAZARDS DATA

**Flash Point (Method used):** N/A **Autoignition Temperature:** N/A  
**Flammable Limits:** Upper: N/A Lower: N/A

**Extinguishing Media:** Dry sand or inert extinguishing material.

**Special Fire Fighting Procedures:** Gently cover the burning mass with Sand or inert material and allow to cool.

**Unusual Fire & Explosion Hazard:** Dust may form explosive mixture with air.

### V HEALTH HAZARD INFORMATION

**Threshold Limit Value:** 1 mg/m<sup>3</sup> **STEL:** Not Established

**Effects of Over Exposure:** If inhaled, can cause sneezing, nausea, weakness, and fever. Skin contact can cause irritation and dermatitis. Eye contact can cause irritation. Ingestion can cause nausea, vomiting, and diarrhea.

**Carcinogenicity:** NTP: No, IARC: No, Z List: No, Reg: No

**Reproductive Effects:** None identified

**Target Organs:** Respiratory system, lungs, skin, liver, kidneys.

**Medical Conditions Generally Aggravated by Exposure:** Wilson's disease

**Primary Routes of Entry:** Inhalation, ingestion, skin contact, eye contact



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## **EMERGENCY AND FIRST AID PROCEDURES:**

**EYES:** Flush eyes with plenty of water for at least 15 minutes.  
**SKIN:** Wash affected skin with soap and water for 15 minutes.  
**INHALATION:** Remove from exposure to fresh air.  
**INGESTION:** Give a conscious person large amounts of water. Consult a physician immediately.

## **VI REACTIVITY DATA**

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**Stability:** Stable

**Incompatibility (Material to Avoid):** Strong acids, bromates, strong bases, acetylene, acetaldehyde, magnesium, chlorates and iodates.

**Conditions to Avoid:** Heat, dusting

**Hazardous Decomposition Products:** Nitrogen oxide if reacted with nitric acid. Copper fumes.

**Hazardous Polymerization:** Will not occur.

## **VII SPILL OR LEAK PROCEDURES**

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**Steps to Be Taken in Case Material Is Released or Spilled:** Wear protective clothing, goggles and a NIOSH approved respirator.

Sprinkle moderately with damp sand and collect for disposal avoiding dust clouds as much as possible.

**Waste Disposal Method:** In accordance with Local, State and Federal waste disposal regulations.

## **VIII SPECIAL PROTECTION INFORMATION**

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**Respiratory Protection (Specify Type):** Use supplied air respiratory protection in confined or enclosed spaces if needed.

**Ventilation:** Local exhaust; minimum face velocity of 60 fpm

**Protective Gloves:** Chemical resistant gloves.

**Eye Protection:** Safety Glasses

**Other Equipment:** Apron

## **IX SPECIAL PRECAUTIONS**

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**Other Handling and Storage Conditions:** Store in a cool, dry place avoiding contact with heat and acids. Avoid creating dust clouds.

Issued By: S. Dierks  
Dated: February 1991