

Material Safety Data Sheet

Copper – Cathode or Rod

SUPPLIER DETAILS

Supplier Name:	Palabora Copper (Pty) Ltd	Emergency Telephone Number:	+27 (0)15 780 2666
Address:	PO Box 65 1 Copper Road Phalaborwa, 1390 South Africa	E-Mail Address:	palabora.msds@palabora.co.za
MSDS Custodian:	Manager: Environment & SHEQ MS	Telephone Number:	+27 (0)15 780 2281
		URL / WebPages:	http://www.palabora.com/

1. PRODUCT IDENTIFICATION

Chemical Names and Synonyms: Copper cathode, Copper rod, Copper metal	UN Number: NA
CAS Number: 7440-50-8	NIOSH Number: NA

2. COMPOSITION

Composition - Copper Percent by wt. - 99.9% minimum

3. HAZARDOUS IDENTIFICATION

Emergency Overview - Metallic product which poses little or no immediate hazard in solid form.

Inhalation – Copper fumes can cause irritation to the nose, throat, lungs, and mucous membranes. Inhalation of particulate may cause metal fume fever (high temperature, metallic taste, nausea, coughing, general weakness, muscle aches, and exhaustion), bronchitis, chills, decreased pulmonary function, and asthma-like symptoms. Inhalation of particulate containing metallic copper can cause ulceration and perforation of the nasal septum.

Ingestion – Copper dust ingestion causes nausea, vomiting, abdominal pain, metallic taste, and diarrhea.

Skin & Eyes – Copper particulates may cause a greenish-black skin discoloration

Long-term health effects - Prolonged or repeated exposure to copper can discolor skin and hair and irritate the skin; may cause mild dermatitis, runny nose, and irritation of the mucous membranes. Repeated ingestion may damage the liver and kidneys.

4. FIRST AID MEASURES

Inhalation:	Breathing difficulty caused by inhalation of particulate requires immediate removal to fresh air. If breathing has stopped, perform artificial respiration and obtain medical help.
Ingestion:	Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person
Skin contact:	Thoroughly wash skin cuts or wounds to remove all particulate, debris from the wound Seek medical attention for wounds that cannot be thoroughly cleansed. Treat skin cuts and wounds with standard first aid practices such as cleansing, disinfecting and covering to prevent wound infection and contamination before continuing work. Obtain medical help for persistent irritation. Material accidentally implanted or lodged under the skin must be removed.
Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower & upper eyelids occasionally. Get medical attention immediately

5. FIRE FIGHTING MEASURES

Flash Point (Method Used): Not Applicable
 Extinguishing Media: Dry Sand or Metal Extinguishing Powders
 Special Fire Fighting Procedures: Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing if involved in fire.
 Unusual Fire and Explosion Hazards: Solid form can burn at minimum rate without flame (smolder). Do not use water on molten or smoldering metal. Grinding or other machining operations can produce fine particulate dust that may explode in the presence of a strong ignition source.

6. ACCIDENTAL RELEASE MEASURES

Pick up spilled rod or cathode. If soiled or dirty, store in closed container for delivery to a metals recycling center. Do not dispose in trash or domestic waste - recycle.

7. HANDLING AND STORAGE

Handling: Particulate may enter the body through cuts, abrasions or other wounds on the surface of the skin. Wear gloves when handling parts with loose surface particulate or sharp edges.
Storage: - Store in a dry area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne copper below the TLV. If ventilation alone cannot so control exposures, use approved respirators selected according to local regulations. Avoid repeated skin contact. Wear suitable gloves. Wash skin thoroughly after handling. Launder clothing and gloves as needed.
 TLV-TWA (Dusts & Mists) - 1mg/m³
 TLV-TWA (Fumes) - 0.2 mg/m³

9. PHYSICAL AND CHEMICAL PROPERTIES

Color: Reddish
 Melting point: 1083 Degrees
 Specific Gravity (H₂O=1): 8.89-8.94
 Solubility in Water: Negligible

10. STABILITY AND REACTIVITY

Stability : Stable
 Incompatibility (Material to avoid) : Do not mix with powdered alkali and alkaline earth metals or strong oxidizing agents.
 Conditions to Avoid : None Known
 Hazardous Polymerization : Will not occur.
 Products of Decomposition : None

11. TOXICOLOGICAL INFORMATION

Inhalation : Inhalation of dust an fumes can irritate the respiratory tract.
 Ingestion : Can cause allergic reaction in some individuals.
 Skin : Can cause allergic reaction in some individuals.
 Eye : Contact with fumes can irritate the eyes.
 Cancer Information : No ingredients listed as human carcinogens by NTP or IARC.

12. ECOLOGICAL INFORMATION

Environmental Impact Information: In its solid form it has no known toxicity to ecological systems. Some copper derivatives (salts) are microelements but may be toxic in high concentrations to aquatic life.

13. DISPOSAL CONSIDERATIONS

Copper-containing waste is normally collected to recover copper values. Should waste disposal be deemed necessary, follow local regulations.

14. TRANSPORT INFORMATION

Not regulated for either air or ground shipments.

15. REGULATORY INFORMATION

This product contains metallic Copper which may be subject to local and international regulations.

16. OTHER INFORMATION

None.

DISCLAIMER

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors or omissions or the consequences thereof. It is the user's obligation to determine the conditions of safe use of the material, all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product.