# MATERIAL SAFETY DATA SHEET

## CHEMET TECHNICAL GRADE CUPROUS OXIDE

| NPCA HMIS HAZARD RATING | |
|---|---|
| Health | 1 |
| Flammability | 1 |
| Reactivity | 1 |
| Maximum Personal Protection | E |

*Includes, but not limited to the following Trade Names: Red Copp 97N, Red Premium, Purple Copp 97, Purple Copp 97N, LoLo Tint 97, Chem Copp HP II, Chem Copp HPIII, Chem Copp Ultrafine and other technical grade Cuprous Oxides manufactured by American Chemet Corporation*

**SECTION I MANUFACTURER**

AMERICAN CHEMET CORPORATION
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East Helena, MT 59635

EMERGENCY TELEPHONE (406) 227-5302
ATTN: Dan Brimhall

| CHEMICAL NAME | | CAS NUMBER | APPROX. WT. % |
|---|---|---|---|
| CUPROUS OXIDE | ($Cu_2O$) | 1317-39-1 | 95% |
| CUPRIC OXIDE | (CuO) | 1317-38-0 | 3% |
| METALLIC COPPER | (Cu) | 7440-50-8 | 2% |

**SECTION II HAZARDOUS INGREDIENTS**

| | | TLV & PEL |
|---|---|---|
| COPPER | 86% Min | 1 mg/m$^3$ |

There is no ACGIH TLV or OSHA PEL for cuprous oxide or cupric oxide. Exposure is governed by the 8 hour TWA established for finely divided copper in dusts or mists. Cuprous oxide , cupric oxide and copper are not carcinogenic materials as listed by OSHA (29 CFR 1910) or ACGIH (Appendix A, Threshold Limit Values for Chemical Substances 1995-1996).
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**SECTION III PHYSICAL DATA**

| | |
|---|---|
| Boiling Point: | NA |
| Specific Gravity: $H_2O$=1 | 6.0 |
| Vapor Pressure: | NA |
| Percent Volatile by volume: | 0% |
| Vapor Density: | NA |
| Evaporation Rate: | NA |
| Solubility in Water: | Negligible |
| Melting Point: | 2255$^o$ F |
| Appearance and Odor: | Purple Fine Powder. No Odor. |

**SECTION IV FIRE & EXPLOSION HAZARD DATA**

Flash Point: NA

Flammable Limits LEL: NA UEL: NA

Extinguishing Media: $CO_2$, ABC extinguisher, or water.
Special Fire Fighting Procedures: Separate from mass. Eliminate oxygen.
Unusual Fire Fighting Procedures: Spontaneous combustion may occur oxidizing product to CuO if exposed to moist air at temperatures above 100$^o$ C.

**SECTION V HEALTH HAZARD DATA**

Threshold Limit Value: See Section II
Signs, Symptoms, and Effects of Overexposure: Nausea, chills, diarrhea. May cause respiratory irritation; skin irritation(oxide pox); fever, eye irritation with redness, pain and conjunctivitis; preexisting lung diseases may be aggravated by exposure. Could result in respiratory disease if over exposed on a chronic basis.
Primary Routes of Entry: Inhalation and/or ingestion.
Emergency and First Aid Procedure: Remove to fresh air. Lay patient down. Cover with blanket. If irritated, flush eyes and skin with large volumes of fresh water for 15 minutes. Refer to physician.

**SECTION VI REACTIVITY DATA**

Stable X Unstable
Conditions and Materials to Avoid: Temperatures about 100$^o$ C while in presence of moist air. Mass build up under reactive conditions. Under certain conditions cuprous oxide may react violently with strong reactants such as acids, bases, and metals, such as but not limited to, Al and Mg.

Hazardous Decomposition Products: Copper fumes will be released if cuprous oxide is heated above its melting point (2255$^o$ F).

Hazardous Polymerization: Will not occur.

**SECTION VII SPILL OR LEAK PROCEDURES**

Steps to be taken in case material is released or spilled. Clean up with vacuum or conventional tools. Avoid dusting.
Waste Disposal: Approved land fill if allowed by local, state and federal authorities.

**SECTION VIII SPECIAL PROTECTION INFORMATION**

Respiratory Protection: Cartridge type filter or dust mask approved by NOISH. Refer to Respiratory Protective Devices approved by NIOSH under 42 CFR 84.

Ventilation: To keep below listed TLV in Section II, use general dilution type ventilation.

Protective Gloves: Wear if skin contact is probable and skin is sensitive.
Eye Protection: Safety glasses or goggles.
Other Protective Equipment: Long sleeve shirts if contact is probable and skin is sensitive.

**SECTION IX SPECIAL PRECAUTIONS**

Precautions to be taken in handling and storing: Keep lids tightly sealed. Store in cool, dry place.
Other Precautions: Do not take internally. Avoid prolonged contact with skin. Wash with soap and water after contact.

**SECTION X SARA TITLE III**

This product contains copper compounds and is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
U.S. Reportable Quantity: 5,000 lbs (2,270 Kg)

Date: Revised 4/12/2006 (Rev 9)