

AMERICAN
chemet
CORPORATION

400 LAKE COOK ROAD
P.O. Box 437
DEERFIELD, ILLINOIS 60015 USA
Phone (708) 948-0800
Telex 72-4301 Chemet DFLD
FAX (708) 948-0811

CUSTOM COPPER OXIDES

SPECIFICATION RANGES

Total Copper
Cuprous Oxide - Cu_2O
Cupric Oxide - CuO
Metallic Copper - Cu

75 - 99.9%
0 - 99.9%
0 - 99.9%
0 - 99.9%

Trace Elements

By Agreement

Surface Area by BET
 HNO_3 Insol
Particle Size

0.5 - 4.0 m^2/g
.25 Maximum
Determined by the
surface area

July 1990

MATERIAL SAFETY DATA SHEET

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

SECTION I MANUFACTURER

AMERICAN CHEMET CORPORATION
P.O. Box 1160
East Helena, MT 59635

EMERGENCY TELEPHONE

(406) 227-5302 ATTN: W. H. Porter or Dan Brimhall

CHEMICAL NAME

COPPER AND OXIDIZED COPPER

TRADE NAME

CUSTOM COPPER OXIDES — CODE WERMI 067112

CHEMICAL FAMILY

Copper Copper (I) Oxide Copper (II) Oxide

FORMULA

Cu Cu₂O CuO

CAS NUMBER

7440-50-8 1317-39-1 1317-38-0

SECTION II

HAZARDOUS INGREDIENTS

COPPER

% TLV & PEL
83% (Min) 1 mg/m³

There is no ACGIH TLV or OSHA PEL for either 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 (29CFR1910) or ACGIH (Appendix A, Threshold Limit Values for Chemical Substances 1984-1985).

SECTION III

PHYSICAL DATA

Boiling Point (f):

Specific Gravity:

Vapor Pressure:

Percent Volatile by volume
(%):

NA

H₂O=1 6.0

NA

0%

Vapor Density:

Evaporation Rate:

Solubility in Water:

Melting Point:

Appearance and Odor:

NA

NA

Negligible

2255°F

Fine powder, red-brown in color. No odor.

SECTION IV

FIRE & EXPLOSION HAZARD DATA

Flash Point

Flammable Limits

LEL

UEL

NA

NA

NA

Extinguishing Media: CO₂, ABC extinguisher, or water.

Special Fire Fighting Procedures: Separate from mass. Eliminate oxygen.

Usual Fire Fighting Procedures: Spontaneous combustion may occur oxidizing product to CuO if exposed to moist air at temperatures above 100°C.

SECTION V

HEALTH HAZARD DATA

Threshold Limit Value: See Section II

Signs, Symptoms, and Effects of Overexposure: Nausea, chills, diarrhea. May cause upper 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 irritation; 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 MD.

SECTION VI

REACTIVITY DATA

Stable X Unstable

Conditions and Materials to Avoid: Temperatures above 100°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°).

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 Method: Approved land fill. Large masses of this product exposed to moist air over 100°C can result in spontaneous combustion.

SECTION VIII

SPECIAL PROTECTION INFORMATION

Respiratory Protection: Cartridge type filter or approved dust mask. Refer to Respiratory Protective devices approved by Bureau of Mines Circular IC 8436.

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.