

# MSDS Document

## Product CUPRIC OXIDE

### 1. Chemical Product and Company Identification

Trade Name of this Product **CUPRIC OXIDE**

Synonyms: BLACK COPPER OXIDE, COPPER(II) OXIDE

MSDS ID 2475

Phibro-Tech Inc.  
65 Challenger Road  
Ridgefield Park, NJ 07660

**Phone Number**

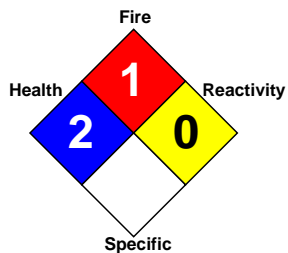
(201) 329-7300

**Emergency Phone**

CHEMTREC (800) 424-9300

CHEMTREC International (703) 527-3887

**Revision Date** 1/28/2001



### 2. Composition and Information on Ingredients

Ingredient	CAS Number	Weight %	ACGIH TLV	PEL	STEL
CUPRIC OXIDE	1317-38-0	95% - 100%			

### 3. Hazard Identification

**EFFECTS OF OVEREXPOSURE:**

**SYMPTOMS OF INGESTION:** MAY CAUSE NAUSEA, VOMITING, ABDOMINAL PAIN, METALLIC TASTE, AND DIARRHEA. THE INSOLUBLE COPPER COMPOUNDS SUCH AS COPPER OXIDE ARE LESS TOXIC THAN THE SOLUBLE SALTS.

**SYMPTOMS OF INHALATION:** CAUSES IRRITATION OF THE UPPER RESPIRATORY TRACT; SYMPTOMS MAY INCLUDE COUGHING, SORE THROAT, AND SHORTNESS OF BREATH. MAY RESULT IN ULCERATION OR PERFORA-

TION OF RESPIRATORY TRACT. WHEN HEATED TO DECOMPOSITION MAY GIVE OFF COPPER FUME, WHICH CAN CAUSE SYMPTOMS SIMILAR TO THE COMMON COLD, INCLUDING CHILLS AND STUFFINESS OF THE HEAD.

SYMPTOMS OF SKIN CONTACT: CAUSES IRRITATION; SYMPTOMS MAY INCLUDE ITCHING, REDNESS, AND PAIN.

SYMPTOMS OF EYE CONTACT: CONTACT IS IRRITATING AND MAY CAUSE CONJUNCTIVITIS, ULCERATION, OR CORNEAL CLOUDINESS.

CHRONIC EXPOSURE: PROLONGED OR REPEATED SKIN EXPOSURE MAY CAUSE DERMATITIS. PROLONGED OR REPEATED EXPOSURE TO DUSTS OF COPPER SALTS MAY CAUSE DISCOLORATION OF THE SKIN OR HAIR, ULCERATION AND PERFORATION OF THE NASAL SEPTUM, RUNNY NOSE, METALLIC TASTE, AND ATROPHIC CHANGES AND IRRITATION OF THE MUCOUS MEMBRANES.

#### **4. First Aid Information**

EYE CONTACT: IMMEDIATELY, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS APART. WASHING WITHIN ONE MINUTE IS ESSENTIAL TO ACHIEVE MAXIMUM EFFECTIVENESS. GET IMMEDIATE MEDICAL ATTENTION AFTER FLUSHING.

SKIN CONTACT: WASH AFFECTED AREA THOROUGHLY WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND LAUNDRY BEFORE REUSE. IF IRRITATION SHOULD DEVELOP, GET MEDICAL ATTENTION.

INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CONSULT A PHYSICIAN.

INGESTION: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. GET IMMEDIATE MEDICAL ATTENTION.

NOTES TO PHYSICIAN: TAKE APPROPRIATE ACTION TO COUNTERACT SYMPTOMS.

#### **5. Fire Fighting Measures**

CUPRIC OXIDE IS NOT CONSIDERED TO BE A FIRE HAZARD.

FLASH POINT (DEG C): NA

TEST METHOD: NA

FLAMMABLE LIMITS (% BY VOL): NA

AUTOIGNITION TEMP. (DEG C): NA

EXTINGUISHING MEDIA: ANY SUITABLE MEANS TO EXTINGUISH SURROUNDING FIRE.

SPECIAL FIRE FIGHTING PROCEDURES: USE SPECIAL BREATHING EQUIPMENT AND PROTECTIVE CLOTHING APPROPRIATE TO THE SURROUNDING FIRE.

UNUSUAL FIRE OR EXPLOSION HAZARDS: NOT CONSIDERED TO BE AN EXPLOSION HAZARD. REACTIONS WITH INCOMPATIBLE MATERIALS MAY POSE AN EXPLOSION HAZARD.

## 6. Accidental Release Measures

SPILL/LEAK CLEAN-UP PROCEDURES: SWEEP, SCOOP, OR PICK UP SPILLED MATERIAL. AVOID DUSTING. PACKAGE FOR RECLAMATION OR RECOVERY.

## 7. Handling and Storage

PRECAUTIONARY MEASURES: AVOID CONTACT WITH SKIN, EYES, AND CLOTHING. WEAR PROTECTIVE CLOTHING, GLOVES, AND SPLASH GOGGLES OR SHIELD. WASH THOROUGHLY AFTER USING. AVOID BREATHING DUST OR MIST. USE WITH ADEQUATE VENTILATION.

STORAGE AND HANDLING: STORE IN A COOL, DRY, PLACE AND ISOLATED FROM INCOMPATIBLE MATERIALS.

PROTECT FROM PHYSICAL DAMAGE.

## 8. Exposure Controls and Personal Protection

VENTILATION: A SYSTEM OF LOCAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURE BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST IS USUALLY PREFERRED BECAUSE IT CONTROLS THE EMISSION AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. REFER TO THE ACGIH DOCUMENT INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICES FOR DETAILS.

RESPIRATORY PROTECTION: NIOSH/MSHA APPROVED RESPIRATOR IF EXPOSURE MAY, OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS. GENERALLY, A DUST/MIST RESPIRATOR MAY BE WORN IN AREAS WHERE THE TLV IS EXCEEDED UP TO TEN TIMES. ALTERNATIVELY, A SUPPLIED AIR FULL FACEPIECE RESPIRATOR OR AIRLINED HOOD MAY BE WORN.

EYE PROTECTION: CHEMICAL SPLASH GOGGLES AND/OR FACE SHIELD. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS MATERIAL.

AN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES SHOULD BE MAINTAINED IN THE WORK AREA.

SKIN PROTECTION: USE RUBBER OR PLASTIC IMPERVIOUS GLOVES AND BODY-COVERING CLOTHING.

PERSONAL HYGIENE: WASH THOROUGHLY AFTER HANDLING.

INGREDIENTS WT PCT PEL TLV(TWA)  
(CAS NO.) (APPROX) MG/M3 PPM MG/M3 PPM

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CUPRIC OXIDE 95-100 1(CU) 1(CU)  
(1317-38-0)

THE TLV'S ARE GIVEN FOR GUIDANCE; LOCAL APPLICABLE REGULATIONS SHOULD ALWAYS BE FOLLOWED. INGREDIENTS ARE THOSE PRESENT AT 1% OR GREATER, OR AT 0.1% OR GREATER IF LISTED AS POTENTIAL CARCINOGENS BY OSHA/IARC/NTP. PROPRIETARY INGREDIENT IDENTITIES ARE AVAILABLE IN ACCORDANCE WITH 29 CFR 1910.1200.

CARCINOGEN: NTP - NO  
IARC - NO  
OSHA - NO

## 9. Physical and Chemical Properties

**Molecular Formula**      CUO

D = DECOMPOSES

BOILING POINT, 760 MM HG (DEG C): NA

MELTING/FREEZING POINT (DEG C): D AT 1026 C

SPECIFIC GRAVITY (WATER = 1): DENSITY : 6.32

VAPOR PRESSURE (MM HG): ND

VAPOR DENSITY (AIR = 1): ND

WATER SOLUBILITY (% BY WT): INSOLUBLE IN WATER

VOLATILES (% BY WT): ND

EVAPORATION RATE (BUTYL ACETATE = 1): ND

PH OF SOLUTION: NA

APPEARANCE/ODOR: ODORLESS, FINE BLACK OR BROWNISH-BLACK POWDER.

## 10. Stability and Reactivity

THERMAL STABILITY: STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE.

INCOMPATIBILITY: ALUMINUM, BORON, CESIUM ACETYLENE CARBIDE, HYDRAZINE, MAGNESIUM, PHOSPHAM, POTASSIUM, RUBIDIUM ACETYLENE CARBIDE, SODIUM, TITANIUM, AND ZIRCONIUM.

CONDITIONS TO AVOID: NOT DETERMINED.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

HAZARDOUS DECOMPOSITION PRODUCTS: WHEN HEATED TO DECOMPOSITION, TOXIC COPPER FUME IS GENERATED.

## 11. Toxicological Information

TOXICITY DATA:

ACUTE ORAL: LD50: >5050 MG/KG (MALE & FEMALE RAT)

ACUTE DERMAL: LD50: >2020 MG/KG (RABBIT)

ACUTE INHALATION: LC50: >2.08 MG/KG (MALE & FEMALE RAT)

INTRATRACHEAL: LDLO: 278 MG/KG (RAT)

AQUATIC: LC50: 310-850 UG/L 2DAYS (STRIPED BASS)

PRIMARY EYE IRRITATION: SLIGHT IRRITANT (RABBIT)  
PRIMARY DERMAL IRRITATION: SLIGHT IRRITANT (RABBIT)  
DERMAL SENSITIZATION: NON-SENSITIZER (GUINEA PIGS)

## 12. Ecological Information

## 13. Disposal Considerations

DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL AND REGULATORY REQUIREMENTS.

## 14. Transportation Information

DOT SHIPPING NAME: CUPRIC OXIDE  
DOT HAZARD CLASS: NOT DOT REGULATED  
HAZARDOUS INGREDIENTS:  
IDENTIFICATION NUMBER:  
PACKING GROUP:  
LABEL:

## 15. Regulatory Information

TOXIC SUBSTANCES CONTROL ACT(TSCA): CHEMICAL INGREDIENTS ARE ON THE TSCA INVENTORY.

SUPERFUND REPORTABLE QUANTITY(RQ): NOT REGULATED.

HAZARDOUS WASTE NO.: NOT REGULATED. ?

SARA TITLE III: THIS PRODUCT IS A COPPER COMPOUND WHICH IS SUBJECT (SECTION 313) TO REPORTING.

CANADIAN (WHMIS) LIST: THIS PRODUCT IS SUBJECT TO REPORTING. (COPPER COMPOUNDS)

NEW JERSEY LIST: EMPLOYERS WHO PRODUCE, USE, OR STORE THIS MATERIAL ARE REQUIRED TO FILE AN ANNUAL SURVEY DUE ON MARCH 1 OF EACH YEAR. (COPPER COMPOUNDS)

FOR STATES NOT LISTED: PLEASE CHECK WITH THE APPROPRIATE AGENCIES.

WARNING: THIS PRODUCT MAY CONTAIN A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, OR BIRTH DEFECTS, AND/OR OTHER REPRODUCTIVE HARM.

## 16. Other Information

IT IS REASONABLE TO ASSUME THAT COPPER COMPOUNDS CONTAIN ARSENIC, CADMIUM, CHROMIUM, AND LEAD IN CONCENTRATIONS RANGING FROM A FEW PARTS PER BILLION TO SEVERAL HUNDRED PARTS PER MILLION.

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