

J.T.BAKER INC. 222 RED SCHOOL LANE, PHILLIPSBURG, NJ 08865

M A T E R I A L S A F E T Y D A T A S H E E T

24-HOUR EMERGENCY TELEPHONE -- (908) 859-2151

CHEMTREC # (800) 424-9300 -- NATIONAL RESPONSE CENTER # (800) 424-8802

C5170 -04

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SECTION I - PRODUCT IDENTIFICATION

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PRODUCT NAME: COPPER
COMMON SYNONYMS: BRONZE POWDER; C.I. 77400; ARWOOD COPPER
CHEMICAL FAMILY: METALS
FORMULA: CU
FORMULA WT.: 63.55
CAS NO.: 7440-50-8
NIOSH/RTECS NO.: GL5325000
PRODUCT USE: LABORATORY REAGENT
PRODUCT CODES: 1714,1732,1720,1736

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PRECAUTIONARY LABELING

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BAKER SAF-T-DATA* SYSTEM

HEALTH	-	0	NONE
FLAMMABILITY	-	0	NONE
REACTIVITY	-	0	NONE
CONTACT	-	1	SLIGHT

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES; LAB COAT

U.S. PRECAUTIONARY LABELING

DURING USE AVOID CONTACT WITH EYES, SKIN, CLOTHING. WASH THOROUGHLY AFTER HANDLING. WHEN NOT IN USE KEEP IN TIGHTLY CLOSED CONTAINER.

INTERNATIONAL LABELING

DO NOT BREATHE DUST.

SAF-T-DATA* STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

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SECTION II - COMPONENTS
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<u>COMPONENT</u>	<u>CAS NO.</u>	<u>WEIGHT %</u>	<u>OSHA/PEL</u>	<u>ACGIH/TLV</u>
COPPER	7440-50-8	90-100	1 MG/M	1 MG/M

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SECTION III - PHYSICAL DATA
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BOILING POINT: 2595 C (4703 F) VAPOR PRESSURE (MMHG): N/A
(AT 760 MM HG)

MELTING POINT: 1083 C (1981 F) VAPOR DENSITY (AIR=1): N/A
(AT 760 MM HG)

SPECIFIC GRAVITY: 8.92 EVAPORATION RATE: N/A
(H2O=1)

SOLUBILITY(H2O): NEGLIGIBLE (<0.1%) % VOLATILES BY VOLUME: 0
(21 C)

PH: N/A

ODOR THRESHOLD (P.P.M.): N/A PHYSICAL STATE: SOLID

COEFFICIENT WATER/OIL DISTRIBUTION: N/A

APPEARANCE & ODOR: RED METAL. ODORLESS.

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA
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FLASH POINT (CLOSED CUP): N/A

AUTOIGNITION TEMPERATURE: N/A

FLAMMABLE LIMITS: UPPER - N/A LOWER - N/A

FIRE EXTINGUISHING MEDIA

USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE. WARNING -
APPLICATION OF WATER TO HOT METAL MAY GENERATE STEAM.

SPECIAL FIRE-FIGHTING PROCEDURES

FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF-CONTAINED
BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN POSITIVE PRESSURE
MODE.

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA (CONTINUED)
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UNUSUAL FIRE & EXPLOSION HAZARDS

DUST MAY FORM EXPLOSIVE MIXTURE WITH AIR.

TOXIC GASES PRODUCED

COPPER FUMES

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT

NONE IDENTIFIED.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE

NONE IDENTIFIED.

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SECTION V - HEALTH HAZARD DATA
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THRESHOLD LIMIT VALUE (TLV/TWA): 1.0 MG/M

TLV IS FOR COPPER, DUSTS AND MISTS, AS CU.

SHORT-TERM EXPOSURE LIMIT (STEL): NOT ESTABLISHED

PERMISSIBLE EXPOSURE LIMIT (PEL): 1.0 MG/M

PEL IS FOR COPPER DUST AND MIST, AS CU.

TOXICITY OF COMPONENTS

NO INFORMATION IS AVAILABLE

CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

CARCINOGENICITY

NONE IDENTIFIED.

REPRODUCTIVE EFFECTS

NONE IDENTIFIED.

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SECTION V - HEALTH HAZARD DATA (CONTINUED)
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EFFECTS OF OVEREXPOSUR

INHALATION: IRRITATION OF UPPER RESPIRATORY TRACT, HEADACHE, NAUSEA,
 VOMITING, DIARRHEA, CHILLS, FEVER, ACHING MUSCLES

SKIN CONTACT: IRRITATION

EYE CONTACT: IRRITATION

SKIN ABSORPTION: NONE IDENTIFIED

INGESTION: NAUSEA, VOMITING, DIARRHEA

CHRONIC EFFECTS: DAMAGE TO LIVER, KIDNEYS, LUNGS

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

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: IF SWALLOWED AND THE PERSON IS CONSCIOUS, IMMEDIATELY GIVE
 LARGE AMOUNTS OF WATER. GET MEDICAL ATTENTION.

INHALATION: IF A PERSON BREATHES IN LARGE AMOUNTS, MOVE THE EXPOSED
 PERSON TO FRESH AIR.

SKIN CONTACT: IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH PLENTY OF
 SOAP AND WATER FOR AT LEAST 15 MINUTES.

EYE CONTACT: IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH WITH PLENTY OF
 WATER FOR AT LEAST 15 MINUTES.

SARA/TITLE III HAZARD CATEGORIES AND LISTS

ACUTE: YES CHRONIC: YES FLAMMABILITY: NO PRESSURE: NO REACTIVITY: NO

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

EXTREMELY HAZARDOUS SUBSTANCE: NO
CERCLA HAZARDOUS SUBSTANCE: YES CONTAINS COPPER (RQ = 5000 LBS)
SARA 313 TOXIC CHEMICALS: YES CONTAINS COPPER
GENERIC CLASS: GENERIC CLASS REMOVED FROM CFR: 7/1/91
TSCA INVENTORY: YES

SECTION VI - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: HEAT, DUSTING
INCOMPATIBLES: STRONG ACIDS, STRONG OXIDIZING AGENTS, STRONG BASES,
ACETYLENE, ACETALDEHYDE, MAGNESIUM

DECOMPOSITION PRODUCTS: COPPER FUMES

SECTION VII - SPILL & DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN THE EVENT OF A SPILL OR DISCHARGE

WEAR SUITABLE PROTECTIVE CLOTHING. CAREFULLY SWEEP UP AND REMOVE.

DISPOSAL PROCEDURE

DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

VENTILATION: USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

RESPIRATORY PROTECTION: NONE REQUIRED WHERE ADEQUATE VENTILATION CONDITIONS EXIST. IF AIRBORNE CONCENTRATION EXCEEDS TLV, A DUST/MIST RESPIRATOR IS RECOMMENDED. IF CONCENTRATION EXCEEDS CAPACITY OF RESPIRATOR, A SELF-CONTAINED BREATHING APPARATUS IS ADVISED.

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SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT (CONTINUED)
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EYE/SKIN PROTECTION: SAFETY GOGGLES, PROPER GLOVES ARE RECOMMENDED.

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SECTION IX - STORAGE AND HANDLING PRECAUTIONS
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SAF-T-DATA* STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

STORAGE REQUIREMENTS

KEEP CONTAINER TIGHTLY CLOSED. SUITABLE FOR ANY GENERAL CHEMICAL STORAGE AREA.

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION
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DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: CHEMICALS, N.O.S. (NON-REGULATED)

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME: CHEMICALS, N.O.S. (NON-REGULATED)
MARINE POLLUTANTS: NO

AIR (I.C.A.O.)

PROPER SHIPPING NAME: CHEMICALS, N.O.S. (NON-REGULATED)

U.S. CUSTOMS HARMONIZATION NUMBER: 74101100006

NOTE: WHEN HANDLING LIQUID PRODUCTS, SECONDARY PROTECTIVE CONTAINERS MUST BE USED FOR CARRYING.

-N/A = NOT APPLICABLE, OR NOT AVAILABLE;

N/E = NOT ESTABLISHED.-

THE INFORMATION IN THIS MATERIAL SAFETY DATA SHEET MEETS THE REQUIREMENTS OF THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ACT AND REGULATIONS PROMULGATED THEREUNDER (29 CFR 1910.1200 ET. SEQ.) AND THE CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PERSON TRAINED IN, OR SUPERVISED BY A PERSON TRAINED

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IN, CHEMICAL HANDLING. THE USER IS RESPONSIBLE FOR DETERMINING THE PRECAUTIONS AND DANGERS OF THIS CHEMICAL FOR HIS OR HER PARTICULAR APPLICATION. DEPENDING ON USAGE, PROTECTIVE CLOTHING INCLUDING EYE AND FACE GUARDS AND RESPIRATORS MUST BE USED TO AVOID CONTACT WITH MATERIAL OR BREATHING CHEMICAL VAPORS/FUMES.

EXPOSURE TO THIS PRODUCT MAY HAVE SERIOUS ADVERSE HEALTH EFFECTS. THIS CHEMICAL MAY INTERACT WITH OTHER SUBSTANCES. SINCE THE POTENTIAL USES ARE SO VARIED, BAKER CANNOT WARN OF ALL OF THE POTENTIAL DANGERS OF USE OR INTERACTION WITH OTHER CHEMICALS OR MATERIALS. BAKER WARRANTS THAT THE CHEMICAL MEETS THE SPECIFICATIONS SET FORTH ON THE LABEL. BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

THE USER SHOULD RECOGNIZE THAT THIS PRODUCT CAN CAUSE SEVERE INJURY AND EVEN DEATH, ESPECIALLY IF IMPROPERLY HANDLED OR THE KNOWN DANGERS OF USE ARE NOT HEEDED. READ ALL PRECAUTIONARY INFORMATION. AS NEW DOCUMENTED GENERAL SAFETY INFORMATION BECOMES AVAILABLE, BAKER WILL PERIODICALLY REVISE THIS MATERIAL SAFETY DATA SHEET.

NOTE: CHEMTREC, CANUTEC, AND NATIONAL RESPONSE CENTER EMERGENCY TELEPHONE NUMBERS ARE TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS. ALL NON-EMERGENCY QUESTIONS SHOULD BE DIRECTED TO CUSTOMER SERVICE (1-800-JTBAKER) FOR ASSISTANCE.

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APPROVED BY QUALITY ASSURANCE DEPARTMENT.