

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

C5874 -02

CUPRIC NITRATE, N-HYDRATE

PAGE: 1

EFFECTIVE: 01/04/94

ISSUED: 01/15/94

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SECTION I - PRODUCT IDENTIFICATION

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PRODUCT NAME: CUPRIC NITRATE, N-HYDRATE
COMMON SYNONYMS: COPPER (II) NITRATE; COPPER DINITRATE
CHEMICAL FAMILY: COPPER COMPOUNDS
FORMULA: $\text{Cu}(\text{NO}_3)_2 \cdot \text{NH}_2\text{O}$
FORMULA WT.: N/A
CAS NO.: 3251-23-8
NIOSH/RTECS NO.: GL7875000
PRODUCT USE: LABORATORY REAGENT
PRODUCT CODES: 1800,1803

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PRECAUTIONARY LABELING

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BAKER SAF-T-DATA* SYSTEM

| | | | |
|--------------|---|---|-------------------|
| HEALTH | - | 1 | SLIGHT |
| FLAMMABILITY | - | 0 | NONE |
| REACTIVITY | - | 3 | SEVERE (OXIDIZER) |
| CONTACT | - | 2 | MODERATE |

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES; LAB COAT

U.S. PRECAUTIONARY LABELING

DANGER

STRONG OXIDIZER. CONTACT WITH COMBUSTIBLE MATERIALS, FLAMMABLE MATERIALS, OR POWDERED METALS CAN CAUSE FIRE OR EXPLOSION. HARMFUL IF SWALLOWED. CAUSES IRRITATION.

KEEP FROM CONTACT WITH CLOTHING AND OTHER COMBUSTIBLE MATERIALS. DO NOT STORE NEAR COMBUSTIBLE MATERIALS. AVOID CONTACT WITH EYES, SKIN, CLOTHING. KEEP IN TIGHTLY CLOSED CONTAINER. WASH THOROUGHLY AFTER HANDLING. IN CASE OF FIRE, SOAK WITH WATER. IN CASE OF SPILL, SWEEP UP AND REMOVE. FLUSH SPILL AREA WITH WATER.

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PRECAUTIONARY LABELING (CONTINUED)

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INTERNATIONAL LABELING

AVOID CONTACT WITH EYES. AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH
PLENTY OF WATER. KEEP CONTAINER TIGHTLY CLOSED.

SAF-T-DATA* STORAGE COLOR CODE: YELLOW (REACTIVE)

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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> |
|---------------------------|----------------|-----------------|-----------------|------------------|
| CUPRIC NITRATE, N-HYDRATE | N/A | 90-100 | N/E | N/E |

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SECTION III - PHYSICAL DATA

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BOILING POINT: N/A

VAPOR PRESSURE (MMHG): N/A

MELTING POINT: 115 C (239 F)
(AT 760 MM HG)

VAPOR DENSITY (AIR=1): 8.3

SPECIFIC GRAVITY: 2.32
(H2O=1)

EVAPORATION RATE: N/A

SOLUBILITY (H2O): APPRECIABLE (>10%)

% 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: BLUE-GREEN CRYSTALS. ODORLESS.

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT (CLOSED CUP): N/A

NFPA 704M RATING: 0-0-0 OXY

AUTOIGNITION TEMPERATURE: N/A

FLAMMABLE LIMITS: UPPER - N/A

LOWER - N/A

FIRE EXTINGUISHING MEDIA

USE WATER SPRAY.

SPECIAL FIRE-FIGHTING PROCEDURES

FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN POSITIVE PRESSURE MODE. MOVE CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL.

UNUSUAL FIRE & EXPLOSION HAZARDS

STRONG OXIDIZER. CONTACT WITH COMBUSTIBLE MATERIALS, FLAMMABLE MATERIALS, OR POWDERED METALS CAN CAUSE FIRE OR EXPLOSION. WHEN EXPOSED TO HEAT, CLOSED CONTAINERS MAY EXPLODE; MAY ALSO GIVE OFF HIGHLY TOXIC OR IRRITATING FUMES.

TOXIC GASES PRODUCED

OXIDES OF NITROGEN

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): NOT ESTABLISHED

SHORT-TERM EXPOSURE LIMIT (STEL): NOT ESTABLISHED

PERMISSIBLE EXPOSURE LIMIT (PEL): NOT ESTABLISHED

TOXICITY OF COMPONENTS

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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ORAL RAT LD50 FOR CUPRIC NITRATE, N-HYDRATE 940 MG/KG
CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

CARCINOGENICITY
NONE IDENTIFIED.

REPRODUCTIVE EFFECTS
NONE IDENTIFIED.

EFFECTS OF OVEREXPOSURE

INHALATION: IRRITATION OF NOSE AND THROAT, HEADACHE, COUGHING,
DIZZINESS, DIFFICULT BREATHING

SKIN CONTACT: IRRITATION

EYE CONTACT: IRRITATION

SKIN ABSORPTION: NONE IDENTIFIED

INGESTION: NAUSEA, VOMITING, UNCONSCIOUSNESS

CHRONIC EFFECTS: NONE IDENTIFIED

TARGET ORGANS
NONE IDENTIFIED

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
NONE IDENTIFIED

PRIMARY ROUTES OF ENTRY
INHALATION, INGESTION, SKIN CONTACT, EYE CONTACT

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: CALL A PHYSICIAN. IF SWALLOWED, IF CONSCIOUS, IMMEDIATELY
INDUCE VOMITING.

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

SKIN CONTACT: IN CASE OF CONTACT, FLUSH SKIN WITH WATER.

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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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: YES PRESSURE: NO REACTIVITY: NO

EXTREMELY HAZARDOUS SUBSTANCE: NO

CERCLA HAZARDOUS SUBSTANCE: YES CONTAINS CUPRIC NITRATE (RQ = 100 LBS)

SARA 313 TOXIC CHEMICALS: YES CONTAINS COPPER

GENERIC CLASS: GENERIC CLASS REMOVED FROM CFR: 7/1/91

TSCA INVENTORY: YES

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SECTION VI - REACTIVITY DATA

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STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: HEAT, SHOCK, FRICTION

INCOMPATIBLES: COMBUSTIBLE MATERIALS, ORGANIC MATERIALS, STRONG
REDUCING AGENTS

DECOMPOSITION PRODUCTS: OXIDES OF NITROGEN

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SECTION VII - SPILL & DISPOSAL PROCEDURES

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

WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. KEEP
COMBUSTIBLES (WOOD, PAPER, OIL, ETC.) AWAY FROM SPILLED MATERIAL. WITH
CLEAN SHOVEL, CAREFULLY PLACE MATERIAL INTO CLEAN, DRY CONTAINER AND
COVER; REMOVE FROM AREA. FLUSH SPILL AREA WITH WATER.

DISPOSAL PROCEDURE

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

EPA HAZARDOUS WASTE NUMBER:

D001 (IGNITABLE WASTE)

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SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

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VENTILATION: USE ADEQUATE GENERAL OR LOCAL EXHAUST VENTILATION TO
KEEP FUME OR DUST LEVELS AS LOW AS POSSIBLE.

RESPIRATORY PROTECTION: NONE REQUIRED WHERE ADEQUATE VENTILATION CONDITIONS
EXIST. IF AIRBORNE CONCENTRATION IS HIGH, USE AN
APPROPRIATE RESPIRATOR OR DUST MASK.

EYE/SKIN PROTECTION: SAFETY GOGGLES, UNIFORM, PROPER GLOVES ARE
RECOMMENDED.

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SECTION IX - STORAGE AND HANDLING PRECAUTIONS

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SAF-T-DATA* STORAGE COLOR CODE: YELLOW (REACTIVE)

STORAGE REQUIREMENTS

KEEP CONTAINER TIGHTLY CLOSED. STORE SEPARATELY AND AWAY FROM FLAMMABLE
AND COMBUSTIBLE MATERIALS.

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

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DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: NITRATES, INORGANIC, N.O.S. (CUPRIC NITRATE, N-HYDRATE)
HAZARD CLASS: 5.1
UN/NA: UN1477 REPORTABLE QUANTITY: 100 LBS. PACKAGING GROUP: II
LABELS: 5.1 OXIDIZER
REGULATORY REFERENCES: 49CFR 172.101

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME: NITRATES, INORGANIC, N.O.S. (CUPRIC NITRATE, N-HYDRATE)
HAZARD CLASS: 5.1 I.M.O. PAGE: 5162
UN: UN1477 MARINE POLLUTANTS: NO PACKAGING GROUP: II
LABELS: OXIDIZING AGENT
REGULATORY REFERENCES: 49CFR PART 176; IMDG CODE

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (CONTINUED)

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AIR (I.C.A.O.)

PROPER SHIPPING NAME: NITRATES, INORGANIC, N.O.S. (CUPRIC NITRATE, N-HYDRATE)
HAZARD CLASS: 5.1
UN: UN1477 PACKAGING GROUP: II
LABELS: OXIDIZER
REGULATORY REFERENCES: 49CFR PART 175; ICAO=== WE BELIEVE THE TRANSPORTATION
DATA AND REFERENCES CONTAINED HEREIN TO BE FACTUAL AND
THE OPINION OF QUALIFIED EXPERTS. THE DATA IS MEANT AS
A GUIDE TO THE OVERALL CLASSIFICATION OF THE PRODUCT
AND IS NOT PACKAGE SIZE SPECIFIC, NOR SHOULD IT BE
TAKEN AS A WARRANTY OR REPRESENTATION FOR WHICH THE
COMPANY ASSUMES LEGAL RESPONSIBILITY.=== THE
INFORMATION IS OFFERED SOLELY FOR YOUR CONSIDERATION,
INVESTIGATION, AND VERIFICATION. ANY USE OF THE
INFORMATION MUST BE DETERMINED BY THE USER TO BE IN
ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL
LAWS AND REGULATIONS. SEE SHIPPER REQUIREMENTS 49CFR
171.2, CERTIFICATION 172.204, AND EMPLOYEE TRAINING 49
CFR 173.1(B).

U.S. CUSTOMS HARMONIZATION NUMBER: 28342900005

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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
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

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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 HEEDDED. 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.