

MATERIAL SAFETY DATA SHEET

July 1, 1987

SECTION I NAME

Product CUPROUS CHLORIDE, ANHYDROUS

Chemical Synonyms Nantokite

Formula CuCl (Cu₂ Cl₂)

Unit(s) Size 100, 500 grams, 2.5 Kg.

C.A.S. No. 7758-89-6

CHEMTREC
800-424-9300
Day 716-228-6177
Night 716-334-4222

NFPA
HAZARD RATING

HEALTH	2
FIRE	0
REACTIVITY	0

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)

Cuprous Chloride, Anhydrous

%	TLV Units
100%	See Section V

WARNING! CAUSES SKIN AND EYE IRRITATION-MAY CAUSE SKIN ALLERGIC REACTION-HARMSFUL IF SWALLOWED OR INHALED

SECTION III PHYSICAL DATA

Melting Point (°F)	422° C	Specific Gravity (H₂O=1)	4.14 at 25/4° C
Boiling Point (°F)	1366° C	Percent Volatile by Volume (%)	Non-volatile (NA)
Vapor Pressure (mm Hg)	1 mm at 546° C	Evaporation Rate = 1)	Non-volatile (NA)
Vapor Density (Air = 1)	Data not listed		
Solubility in Water	0.0062 grams per 100 ml water at 20° C with partial decomposition.		
Appearance and Odor	Tan to grayish white powder; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA)	Flammable Limits in Air	NA
Extinguisher	Use any media suitable for extinguishing supporting fire.		

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions; wear a NIOSH-approved self-contained breathing apparatus and full protective clothing.

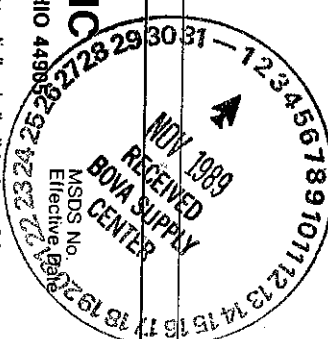
UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products of copper dust or fume and hydrogen chloride.

D.O.T. NON-REGULATED



FREY SCIENTIFIC
905 HICKORY LANE MANSFIELD OHIO 44905
Approved by U.S. Department of Labor "essentially similar" to form OSHA-20



SECTION V HEALTH HAZARD DATA

Threshold Limited Value

TMA as copper fume: 0.2 milligrams per cubic meter; as Copper dusts and mists: 1 milligram per cubic meter. TDS: Oral-rat LD50: 265 mg/kg.

Effects of Overexposure

INGESTION: Can cause copper poisoning and/or death. **SYMPTOMS:** Nausea, vomiting, diarrhea and gastric pain. **EYES:** Corrosive; causes conjunctivitis. **SKIN:** May cause allergic skin reaction. **INHALATION:** Causes upper respiratory irritation and congestion of the nasal and mucous membranes.

Emergency and First Aid Procedures

INGESTION: If swallowed, if conscious, give one or two glasses of water to drink. Induce vomiting and call a physician. **EYES:** Immediately flush eyes thoroughly with large amounts of water for 15 minutes. Get immediate medical attention. **SKIN:** Flush with water; follow by washing with mild soap and water. **INHALATION:** Remove to fresh air. If ill effects or discomfort develop, get medical attention.

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SECTION VI REACTIVITY DATA

Stability Unstable

Conditions to Avoid Moisture, sunlight; solutions oxidize rapidly in air.

Incompatibility (Materials to avoid)

Reacts violently with potassium and with strong oxidizing materials. In presence of moisture, may corrode metals.

Hazardous Decomposition Products

Decomposition emits toxic copper dust, fume or chlorine gas.

Hazardous Polymerization

Will Not Occur

May Occur

Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Small Amounts: Dissolve in water and flush to sewer with copious amounts of water. Large amounts: Sweep onto paper and place in fiber carton. Contract with licensed waste disposal agency.

Waste Disposal Method

Dispose of in an approved chemical landfill or contract with a licensed waste disposal service.

Discharge, treatment, or disposal may be subject to federal, state, or local laws.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection None should be needed in normal laboratory handling. If dusty or fume conditions prevail, work in ventilation hood or wear a NIOSH-approved dust mask or respirator.

Ventilation Local Exhaust Recommended

Mechanical (General) Recommended

Protective Gloves Rubber

Eye Protection Chemical safety glasses

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Store in a cool, dry place away from strong oxidizing materials and protect from light. Wash thoroughly after handling.

Other Precautions

Read label on container before using.

Stable to air and light if dry, but in the presence of moisture turns green on exposure to air and blue to brown on exposure to light.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No. 6/1 Date 11/2/87 Approved [Signature] Chemical Safety [Signature]

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees.

Mallinckrodt Material Safety Data

Emergency Phone Number: 314-982-5000

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Mallinckrodt, Inc., Science Products Division, P.O. Box M, Paris, KY 40361.

Addendum to Material Safety Data Sheet

REGULATORY STATUS

This Addendum Must Not Be Detached from the MSDS
Identifies SARA 313 substance(s)
Any copying or redistribution of the MSDS must include a copy of this addendum
 (Chem. Key: CUPCL)

Hazard Categories for SARA
 Section 311/312 Reporting
 Acute Chronic Fire Pressure Reactive

X X

Product or Components
 of Product:

CUPROUS CHLORIDE (7758-89-6)

SARA EHS Sect. 302 RO (lbs.)	TPO (lbs.)	SARA Section 313 Chemicals Name List	Chemical Category	CERCLA Sec.103 RO (lbs.)	RCRA Sec. 261.33
No	No	No	Copper compound	No	No

SARA Section 302 EHS RQ: Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

SARA Section 302 EHS TPO: Threshold Planning Quantity of Extremely Hazardous Substance. An asterisk (*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

SARA Section 313 Chemicals: Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

CERCLA Sec. 103: Comprehensive Environmental Response, Compensation and Liability Act (Superfund). Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center, (800-424-8802). Listed at 40 CFR 302.4

RCRA: Resource Conservation and Reclamation Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.33

Effective Date: 08-28-85

CUPROUS CHLORIDE