

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY ADDRESS:	EMERGENCY TELEPHONE NUMBERS:
MICRO FLO COMPANY	(800) 424-9300 (CHEMTREC, transportation and spills)
P.O. BOX 772099	(800) 900-4044 (Poison Control Center, human health)
MEMPHIS, TN 38117	(800) 345-4735 (ASPCA, animal health)

PRODUCT NAME	: NU-COP 3L
CHEMICAL NAME	: Cupric hydroxide
CHEMICAL FAMILY	: Transition metal
PRODUCT CODE	: EPA Reg. No. 51036-268

SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Copper hydroxide	37.5	20427-59-2	1 mg/m ³ (inhalable dust/mist)	1 mg/m ³ (inhalable dust/mist)

SECTION 3 - HAZARDS IDENTIFICATION SUMMARY

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

EMERGENCY OVERVIEW: Thick, blue-green liquid with no appreciable odor.

- May be harmful if swallowed, inhaled or absorbed through skin.
- Causes severe eye irritation.
- Avoid breathing dusts or spray mist.
- Avoid contact with eyes, skin or clothing.
- Keep out of reach of children.

POTENTIAL HEALTH HAZARDS:

EYE - Severely irritating to the eyes. If not removed promptly, will injure eye tissue, which may result in permanent damage. Degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

SKIN - Prolonged or repeated skin contact may cause irritation.

INHALATION - Moderately irritating to respiratory tract. Prolonged inhalation may be harmful.

INGESTATION - May be harmful if swallowed.

POTENTIAL PHYSICAL HAZARDS: Can decompose at high temperatures forming toxic gases.

ENVIRONMENTAL HAZARDS: Toxic to wildlife and domestic animals.

SECTION 4 - FIRST AID MEASURES

IF SWALLOWED: Call a doctor or get medical attention. Do not induce vomiting. Drink promptly a large quantity of milk, egg white, gelatin solution, or, if these are not available, large quantities of water. Avoid alcohol.

IF IN EYES: Flush with steady stream of water for 15 minutes. Get medical attention.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

IF ON SKIN: Wash skin with plenty of soap and water. Get medical attention.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate use of gastric lavage. No antidote known. Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT (method): Will not flash.

FLAMMABLE LIMITS (LFL-UFL): Not applicable.

FIRE AND EXPLOSION HAZARD: Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

EXTINGUISHING MEDIA: Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.

FIRE FIGHTING INSTRUCTIONS: Evacuate area and fight fire upwind from a safe distance to avoid hazardous decomposition products. Foam or dry chemical fire extinguishing systems are preferred to prevent excessive water run off.

FIRE FIGHTING EQUIPMENT: Self-contained breathing apparatus with full facepiece. Full fire fighting turnout gear (Bunker gear).

HAZARDOUS COMBUSTION PRODUCTS: Oxides of copper.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions in Protective Equipment section. Isolate hazard area. Keep unnecessary personnel from entering.

SMALL SPILL: Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

LARGE SPILL: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow any absorbed material to solidify, and scrape up for disposal. After removal, flush contaminated area thoroughly with water.

SECTION 7 - HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

HANDLING: Use only in a well-ventilated area. Do not reuse this container.

STORAGE: Keep away from food, feed and drinking water. Store in a well ventilated, dry place away from heat and other sources of ignition. Keep container closed when not in use. Keep from freezing.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS (8 HOUR TWA): (Refer to Section 3)

ENGINEERING CONTROLS: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION - Safety goggles or full face shield.

CLOTHING - Long-sleeved shirt and long pants. Shoes plus socks.

GLOVES - Waterproof gloves.

RESPIRATOR - When handling in enclosed areas where exposure limits may be exceeded, use a dust/mist respirator (MSHA/NIOSH number prefix TC-21C).

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Thick, blue-green liquid.

ODOR: No appreciable odor.

MOLECULAR WEIGHT (technical): 97.6

MOLECULAR FORMULA (technical): Cu(OH)₂

BOILING POINT: Not applicable.

FREEZING POINT: Not applicable.

BULK DENSITY: 1.45 (12.13 lbs/gal)

pH: 6.0 (1% w/w in water)

VAPOR PRESSURE: Not applicable.

% VOLATILE: < 1%

WATER SOLUBILITY: Dispersible.

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable, however may decompose if heated.

CONDITIONS TO AVOID: Avoid temperatures above 125°F (50°C).

INCOMPATIBILITY WITH OTHER MATERIALS: Acidic conditions and materials, ammonia. Copper is corrosive to aluminum, especially when in an aqueous state and at temperatures > 75 F.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of copper.

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD ₅₀ (rat)	-	1,200 mg/Kg
Dermal LD ₅₀ (rat)	-	> 2,000 mg/Kg
Inhalation LC ₅₀ (rat)	-	> 2.0 mg/L
Eye Irritation (rabbit)	-	Severe, corrosive
Skin Irritation (rabbit)	-	Slight
Sensitization (guinea pig)	-	Non-sensitizer

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Acute asthma and/or other chronic pulmonary diseases due to inhalation spray mists.

CARCINOGEN STATUS:

OSHA	-	Not listed.
NTP	-	Not listed.
IARC	-	Not listed.

MUTAGENIC DATA: No evidence of effects during *in vivo* or *in vitro* studies.

ADDITIONAL DATA: Not known to exhibit reproductive or teratogenic (birth defect) effects.

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water, or to areas where surface water is present. Do not contaminate water when disposing of equipment washwaters.

FISH TOXICITY: (Technical)

96 hour LC₅₀, Rainbow trout - 25 ug/L

96 hour LC₅₀, Bluegill - 180 ug/L

AVIAN TOXICITY: (Technical)

Oral LD₅₀, Bobwhite quail - 3,400 mg/Kg

Oral LD₅₀, Mallard duck - > 5,000 mg/Kg

BEE TOXICITY: Non-toxic.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE: Pesticide wastes are toxic. Dispose of in accordance with applicable Federal, state and local laws and regulations.

CONTAINER: Refer to product label.

SECTION 14 - TRANSPORT INFORMATION

DOT SHIPPING DESCRIPTION: Agricultural Fungicides, Liquid, N.O.I.B.N.

DOT HAZARD CLASS: NA

UN NUMBER: NA

DOT PACKING GROUP: NA

DOT PRIMARY/SECONDARY LABEL: NA

DOT PRIMARY/SECONDARY PLACARD: NA

DOT EMERGENCY RESPONSE GUIDE #: NA

SECTION 15 - REGULATORY INFORMATION

FIFRA: All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

OSHA HAZARD COMMUNICATION STANDARD STATUS: Regulated

CERCLA REPORTABLE QUANTITY: 5000#s

SARA TITLE III STATUS:

302 Extremely Hazardous Substance - No

311/312 Hazard Categories - Immediate

313 Toxic Chemicals - None

CALIFORNIA PROP 65 STATUS: Not Listed

SECTION 16 - OTHER INFORMATION

DISCLAIMER: The information presented herein is based on available data from reliable sources and is correct to the best of Micro Flo's knowledge. Micro Flo makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

REVISED DATE: July 14, 1999

REVISED FOR: Addition of Poison Control Emergency Numbers

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