



Safety Data Sheet

Report Date 03-Jun-15

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1. Identification

Product Name : ELE-MAX COPPER FL 4-0-0
Synonyms : None known
Product Use : Foliar Nutritional Liquid Flowable
Manufacturer/Supplier : Helena Chemical Company
Address : 225 Schilling Blvd. Collierville, TN 38017
General Information : 901-761-0050
Transportation Emergency Number : CHEMTREC:800-424-9300

2. Hazard Identification



Signal Word : Warning
Skin Irritation : Causes mild skin irritation
Eye Irritation : Causes serious eye irritation
Acute Toxicity Oral : LD50 >920 mg/kg (rat) for copper oxide
Acute Toxicity Dermal : LD50 >2,000 mg/kg (rabbit) for copper oxide

Hazard Categories : Oral/Dermal/Inhalation Toxicity-4/5/5; Eye/Skin Irritation-2A/3; Aquatic Toxicity-1

Hazard Statement : Harmful if swallowed
May be harmful in contact with skin
Causes serious eye irritation
Causes mild skin irritation
May be harmful if inhaled
Very toxic to aquatic life with long lasting effects

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Copper oxide (Cu ₂ O)	1317-39-1	>=35 to <50
1,2-Ethanediol	107-21-1	>=5 to <7
Other ingredients		43 to 60
Guaranteed Analysis:		
Total Nitrogen (N):	4.00%	
Copper (Cu):	33.00%	

4. First Aid Measures

Eye : Rinse eyes with plenty of running water. Check for and remove any contact lenses. If irritation persists, get medical attention.
Skin : Wash with soap and water. Get medical attention if irritation develops.
Inhalation : Avoid inhalation of vapor, spray or mist. If inhaled, remove to fresh air. Get medical attention if you feel unwell.
Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Get medical attention if you feel unwell. Get medical attention if adverse health effects persist or are severe.



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Indication of Immediate Medical Attention and Special Treatment Needed : Treat symptomatically. Contact poison control center or physician immediately if large quantities have been ingested. Inhalation of decomposition products in a fire may cause delayed symptoms. Observe exposed person for 48 hours.

5. Fire Fighting Measures

Extinguishing Media : Use extinguishing suitable for underlying cause of fire.
Specific Hazards Arising from the Chemical : May emit oxides of carbon, nitrogen oxides, metal oxide/oxides and ammonia. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained. Do not discharge to any waterways or drains.
Special Fire Fight Proc : Wear self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

Personal Precautions : Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation.
Protective Equipment : Safety shower, eyewash station, splashproof goggles, chemical-resistant gloves, appropriate footwear, and air-purifying respiratory, if needed.
Emergency Procedures : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. May be harmful to the environment if released in large quantities.
Methods and Materials for Containment and Cleanup : Contain and collect spillage with non-combustible, absorbent material and place in container for disposal.

7. Handling and Storage

Precautions for Safe Handling : Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in original container or an approved alternative made from compatible material. Empty containers retain product residue and can be hazardous. Do not reuse container.
Conditions for Safe Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area away from incompatible materials, food and drink. Keep container tightly closed.

8. Exposure Controls / Personal Protection

TLV/PEL : Copper oxide (Cu₂O) - not established; Urea - AIHA WEEL 10 mg/m³ (TWA); 1,2-Ethanediol - 50 ppm (OSHA PEL)
Appropriate Engineering Controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Personal Protective Equipment : Safety shower, eyewash station, splashproof goggles, chemical-resistant gloves, appropriate footwear, and air-purifying respiratory, if needed.

9. Physical and Chemical Properties

Odor/Appearance : Brownish-red liquid with undetermined odor.
Flash Point, °F : Not determined
Boiling Point, °F : Not determined
Melting Point(Freezing point), °C : -8 Degrees C.
Vapor Pressure, mm Hg @ 20 °C : Not determined



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Vapor Density : Not determined
Solubility in Water : Not determined
Molecular Formula : Not applicable, formulated mixture.
Density, g/mL @ 25 °C : 1.523
Evaporation Rate(Butyl Acetate = 1) : Not determined
Octanol/Water Partition Coefficient : Not determined
pH : 9.6
Flammable Limits (approximate volume % in air) : Not determined
Auto-ignition Temperature : Not determined
Decomposition temperature : Not determined

10. Stability and Reactivity

Reactivity : No test data related to reactivity available.
Chemical Stability : Stable
Hazardous Decomposition Products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous Polymerization : Will not occur
Conditions to Avoid : Avoid contamination by any source, including metals, dust and organic materials.
Incompatible Materials : Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.

11. Toxicological Information

Acute Toxicity (Oral LD50) : Copper Oxide (Cu₂O) - >920 mg/kg (rat). Harmful if swallowed.
Acute Toxicity (Dermal LD50) : Copper Oxide (Cu₂O) - >2,000 mg/kg (rabbit). May be harmful in contact with skin.
Acute Toxicity Inhalation LC50 : Copper Oxide (Cu₂O) - 3.34 mg/L (rat). May be harmful if inhaled.
Likely Routes of Exposure : Skin, eye, ingestion.
Skin Irritation : Causes mild skin irritation.
Eye Irritation : Causes serious eye irritation.
Skin Sensitization : No known significant effects or critical hazards.
Carcinogenic : No known significant effects or critical hazards.
Chronic Effects : No known significant effects or critical hazards.
Other Hazards : No known significant effects or critical hazards.

12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.
Persistence and Degradability : No known significant effects or critical hazards.
Bioaccumulative Potential : No known significant effects or critical hazards.
Mobility in Soil : Not available.
Other Adverse Effects : No known significant effects or critical hazards.

13. Disposal Considerations

Waste Disposal Method : This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.



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14. Transport Information

UN Proper Shipping Name : Not regulated by DOT. Regulated by IATA or IMDG: UN3082, Environmentally Hazardous Substance, Liquid, n.o.s. (dicopper oxide), 9, PG III, Marine Pollutant
Transport Hazard Class : Not regulated by DOT
UN Identification Number : Not regulated by DOT
Packaging Group : Not regulated by DOT
Environmental Hazards : Marine Pollutant per GHS.
Transport in Bulk : Not regulated by DOT
Special Precautions for Transportation : Regulated as Class 9, Marine Pollutant for international shipping.
Freight Classification : Fertilizing Compound, (Manufactured Fertilizer), Liquid, NOIBN (NMFC Item 68140, Sub 6, Class 70)

15. Regulatory Information

National Fire Protection Association Rating :

Health: 2 Fire: 0 Reactivity: 0
Rating Level: (4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

S.A.R.A Title III Hazard Classification (Yes/No) :

Immediate(Acute) Health: Y
Delayed (Chronic) Health: N
Sudden Release of Pressure: N
Fire: N
Reactive: N

16. Other Information

Data of Preparation/Revision : 03-June-2015