



Safety Data Sheet

Report Date 07-May-15

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1. Identification

Product Name : COPPER-Z 4/4
Synonyms : None
Product Use : Algicide/Herbicide
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 : Danger
Skin Irritation : Slightly irritating
Eye Irritation : Moderately irritating with reversible
Acute Toxicity Oral : LD50 1,680 mg/kg (rat).
Acute Toxicity Dermal : LD50 >2,020 mg/kg (rabbit).
Hazard Categories : Oral/Dermal/Inhalation Toxicity - 4/5/5; Eye Irritation - 1; Skin Irritation - 2
Hazard Statement : Harmful if swallowed
May be harmful in contact with skin
Causes serious eye damage
Causes skin irritation
May be harmful if inhaled

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
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4. First Aid Measures

Eye : Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Skin : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation : Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Ingestion : Call a poison control center or doctor immediately for treatment advice. Rinse mouth with water. Do not induce vomiting. Do not give anything by mouth if unconscious.

Indication of Immediate Medical Attention and Special Treatment Needed : Treatment should be directed toward control of the symptoms.

5. Fire Fighting Measures

Extinguishing Media : Not flammable. Use extinguishing media suitable for underlying cause of fire.



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Specific Hazards Arising from the Chemical : May produce toxic fumes under fire conditions.
Special Fire Fight Proc : Wear self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

Personal Precautions : Keep unprotected and unnecessary personnel out of spill area.
Protective Equipment : Splashproof goggles or face shield, impervious gloves, impervious apron and footwear. Use NIOSH-approved respirator with cartridge for ammonia. Eyewash and emergency shower should be available in work area.
Emergency Procedures : Do not contaminate water supplies.
Methods and Materials for Containment and Cleanup : If uncontaminated, recover spilled product for reuse as intended. If contaminated, cover spilled product with inert absorbent, such as clay or sand. Collect and place in suitable containers for proper disposal.

7. Handling and Storage

Precautions for Safe Handling : Keep out of reach of children. Do not contaminate water, food or feed by storage, handling or disposal. Do not put concentrate or dilute into food or drink containers.
Conditions for Safe Storage : Store in a cool, dry place. Keep container closed when not in use. Keep in original container. Do not store or transport near feed or food.

8. Exposure Controls / Personal Protection

TLV/PEL : Copper sulfate pentahydrate TLV = 1 mg/m³ (as copper dust).
Appropriate Engineering Controls : Local exhaust is sufficient.
Personal Protective Equipment : Splashproof goggles or face shield, impervious gloves, impervious apron and footwear. Use NIOSH-approved respirator with cartridge for ammonia. Eyewash and emergency shower should be available in work area.

9. Physical and Chemical Properties

Odor/Appearance : Clear blue to black liquid; ammonia odor.
Flash Point, °F : Non-combustible
Boiling Point, °F : >100 Degrees C.
Melting Point(Freezing point), °C : No information found
Vapor Pressure, mm Hg @ 20 °C : 21 mmHg
Vapor Density : Not established
Solubility in Water : 97.50% soluble
Molecular Formula : Not applicable, formulated mixture.
Density, g/mL @ 25 °C : 1.225-1.250
Evaporation Rate(Butyl Acetate = 1) : No information found
Octanol/Water Partition Coefficient : No information found
pH : 7.9 to 8.2
Flammable Limits (approximate volume % in air) : No information found
Auto-ignition Temperature : No information found
Decomposition temperature : No information found



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10. Stability and Reactivity

- Reactivity** : No information found.
- Chemical Stability** : Stable
- Hazardous Decomposition** : Sulfur dioxide, oxides of carbon and ammonia under fire conditions.
- Products**
- Hazardous Polymerization** : Will not occur
- Conditions to Avoid** : None currently known.
- Incompatible Materials** : Product may react vigorously with alkaline materials.

11. Toxicological Information

- Acute Toxicity (Oral LD50)** : 1,680 mg/kg (rat). Harmful if swallowed.
- Acute Toxicity (Dermal LD50)** : >2,020 mg/kg (rat). May be harmful in contact with skin.
- Acute Toxicity Inhalation LC50** : >5.64 mg/L (rats exposed to undiluted aerosol). May be harmful if inhaled.
- Likely Routes of Exposure** : Eyes, skin, ingestion
- Skin Irritation** : Causes skin irritation.
- Eye Irritation** : Causes serious eye damage. Moderately irritating with reversible necrosis.
- Skin Sensitization** : Not a contact sensitizer.
- Carcinogenic** : Not listed.
- Chronic Effects** : None currently known
- Other Hazards** : None currently known

12. Ecological Information

- Ecotoxicity** : No information found
- Persistence and Degradability** : No information found
- Bioaccumulative Potential** : No information found
- Mobility in Soil** : No information found
- Other Adverse Effects** : Marine pollutant per 49 CFR 172.101, Appendix B.

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.

14. Transport Information

- UN Proper Shipping Name** : Not regulated by DOT in packages \leq 6 gallons.
- Transport Hazard Class** : None
- UN Identification Number** : None
- Packaging Group** : None
- Environmental Hazards** : Marine Pollutant (copper sulfate pentahydrate) - if shipped in any size package by air (IATA) or water (IMDG), ship as UN3082, Environmentally Hazardous Substance, Liquid, n.o.s., (Copper Sulfate Pentahydrate), 9, PG III, Marine Pollutant
- Transport in Bulk** : If shipped in single package >6 gallons, ship as RQ, UN3082, Environmentally Hazardous Substance, Liquid, n.o.s., (Copper Sulfate Pentahydrate), 9, PG III (Add Marine Pollutant if bulk package).
- Special Precautions for Transportation** : No information found
- Freight Classification** : Pesticides, NOI, Herbicides, Other than Poison (NMFC Item 155050, Sub 11, Class 70)



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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 N
Pressure:
Fire: N
Reactive: N

FIFRA Information : This Chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Registration Number : 5905-496
FIFRA Signal Word : Danger
FIFRA Label Statement : Keep out of reach of children.
FIFRA Label Statement : Corrosive.
FIFRA Label Statement : Causes irreversible eye damage.
FIFRA Label Statement : Harmful if swallowed.
FIFRA Label Statement : Harmful if absorbed through skin.
FIFRA Label Statement : Do not get in eyes, on skin or on clothing.
FIFRA Label Statement : No additional label statements.

16. Other Information

Data of Preparation/Revision : 07-May-2015