



Safety Data Sheet

Report Date 25-Jan-15

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1. Identification

Product Name : ELE-MAX ENC+MN 5-4-2 WITH 2% MANGANESE
Synonyms : None
Product Use : Liquid nutrient for foliar feeding of plants
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 : Slightly irritating
Eye Irritation : Mildly irritating in nonwashed eyes. Minimally irritating in washed eyes (rabbit).
Acute Toxicity Oral : >5,010 mg/kg (rats)
Acute Toxicity Dermal : >2,020 mg/kg (rabbits)
Hazard Categories : Oral/Dermal Tox - (each) 5; Eye irritation - 2B; Skin - 3; Skin Sensitization - 1B
Hazard Statement : Maybe harmful if swallowed, in contact with skin or if inhaled
Causes eye irritation
Causes mild skin irritation

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Proprietary blend of plant nutrients derived from potassium hydroxide, ammonium polyphosphate, urea and manganese EDTA. The chelating agent is EDTA (ethylenediaminetetraacetic acid). Guaranteed Analysis: Total Nitrogen (N): 5.00% Available Phosphate (P ₂ O ₅): 4.00% Soluble Potash (K ₂ O): 2.00% Manganese (Mn): 2.00%		100.00

4. First Aid Measures

Eye : Rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing eyes. Immediately call a poison control center or doctor.

Skin : Remove contaminated clothing and wash skin with soap and water. If skin irritation occurs, get medical attention.

Inhalation : Call a poison control center or doctor if you feel unwell.

Ingestion : Call a poison control center or doctor if feel unwell. Rinse mouth with water.

Indication of Immediate Medical Attention and Special Treatment Needed : Treat symptomatically.



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5. Fire Fighting Measures

- Extinguishing Media** : Use extinguishing media suitable for underlying cause of fire.
Specific Hazards Arising from the Chemical : Toxic fumes and vapors may be emitted under fire conditions.
Special Fire Fight Proc : Wear self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

- Personal Precautions** : Use suitable protective equipment.
Protective Equipment : Splashproof goggles, impervious gloves, eyewash station, impervious apron and footwear.
Emergency Procedures : Dike and contain spilled product. Do not allow spilled product to enter waterways.
Methods and Materials for Containment and Cleanup : If uncontaminated, collect and reuse. If contaminated, absorb with clay, sand or sawdust. Collect and place in suitable containers for proper disposal. Wash spill area with large amounts of water. Collect water and dispose of with spilled material.

7. Handling and Storage

- Precautions for Safe Handling** : Do not contaminate water sources by cleaning of equipment or disposal of rinse water.
Conditions for Safe Storage : Keep container tightly closed. May be stored in unheated area, but protect from freezing.

8. Exposure Controls / Personal Protection

- TLV/PEL** : Not established
Appropriate Engineering Controls : Local exhaust is sufficient.
Personal Protective Equipment : Splashproof goggles, impervious gloves, eyewash station, impervious apron and footwear.

9. Physical and Chemical Properties

- Odor/Appearance** : Clear, dark green liquid with strong vitamin odor.
Flash Point, °F : Not flammable
Boiling Point, °F : >200 Degrees F.
Melting Point(Freezing point), °C : <32 Degrees F.
Vapor Pressure, mm Hg @ 20 °C : Not determined
Vapor Density : Not determined
Solubility in Water : 100%
Molecular Formula : Not applicable, formulated mixture.
Density, g/mL @ 25 °C : 1.215-1.235
Evaporation Rate(Butyl Acetate = 1) : Not determined
Octanol/Water Partition Coefficient : Not determined
pH : 4.8-7.0
Flammable Limits (approximate volume % in air) : Not applicable
Auto-ignition Temperature : Not applicable
Decomposition temperature : Not determined



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10. Stability and Reactivity

- Reactivity** : No information available.
- Chemical Stability** : Stable
- Hazardous Decomposition** : May emit ammonia gas and phosphoric acid under fire conditions.
- Products**
- Hazardous Polymerization** : Will not occur
- Conditions to Avoid** : Stable under normal conditions of use and storage.
- Incompatible Materials** : Avoid contact with alkaline materials.

11. Toxicological Information

- Acute Toxicity (Oral LD50)** : >5,010 mg/kg
- Acute Toxicity (Dermal LD50)** : >2,020 mg/kg
- Acute Toxicity Inhalation LC50** : Not determined
- Likely Routes of Exposure** : Skin and eyes.
- Skin Irritation** : Slightly irritating.
- Eye Irritation** : Mildly irritating in nonwashed eyes. Minimally irritating in wash eyes. (rabbit)
- Skin Sensitization** : A sensitization reaction was produced in the test group at 0.1% v/v in 0.9% saline (Guinea pigs).
- Carcinogenic** : None currently known.
- Chronic Effects** : None currently known.
- Other Hazards** : None currently known.

12. Ecological Information

- Ecotoxicity** : No information available.
- Persistence and Degradability** : No information available.
- Bioaccumulative Potential** : No information available.
- Mobility in Soil** : No information available.
- Other Adverse Effects** : None currently known.

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, IATA or IMDG.
- Transport Hazard Class** : None
- UN Identification Number** : None
- Packaging Group** : None
- Environmental Hazards** : None
- Transport in Bulk** : None required
- Special Precautions for Transportation** : None required
- Freight Classification** : Fertilizing Compound, (Manufactured Fertilizer), Liquid, NOIBN (NMFC Item 68140, Sub 6, Class 70)



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15. Regulatory Information

National Fire Protection Association Rating :

Health: 2 Fire: 1 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 : 23-January-2015