



Safety Data Sheet

Report Date 25-Oct-21

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1. Identification

Product Name : ECO-MATE OPTI MZ
Synonyms : None
Product Use : Complexed micronutrient - Manganese and Zinc
Manufacturer/Supplier : Helena Agri-Enterprises, LLC
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 eye irritation
Acute Toxicity Oral : No LD50 available. Harmful if swallowed. Ingestion may cause vomiting and abdominal cramps.
Acute Toxicity Dermal : No LD50 available. May be harmful in contact with skin.
Hazard Categories : Oral/Dermal/Inhalation Toxicity-4/5/5; Eye/Skin Irritation-2B/3
Hazard Statement : Harmful if swallowed
May be harmful in contact with skin
May be harmful if inhaled
Causes eye irritation
Causes mild skin irritation

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Water based blend of plant nutrients derived from manganese sulfate and zinc sulfate.	Proprietary	100.00
GUARANTEED ANALYSIS:		
Sulfur (S):		4.00%
4.00% Combined Sulfur		
Manganese (Mn):		4.00%
4.00% Water Soluble Manganese		
Zinc (Zn):		3.00%
3.00% Water Soluble Zinc		

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.



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Indication of Immediate Medical Attention and Special Treatment Needed : In the event of an adverse response, treatment should be directed toward control of the symptoms.

5. Fire Fighting Measures

Extinguishing Media : Use extinguishing media suitable for underlying cause of fire.
Specific Hazards Arising from the Chemical : May emit 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. No respiratory protection needed under normal conditions. Eyewash should be available in work area.
Emergency Procedures : Do not contaminate water supplies with spilled product.
Methods and Materials for Containment and Cleanup : Contain spilled product. Reuse if uncontaminated. If contaminated, absorb with an inert material, such as clay, sand or sawdust. Collect and place in suitable container for disposal.

7. Handling and Storage

Precautions for Safe Handling : Keep locked up and out of reach of children. Do not contaminate water, food or feed by storage, handling or disposal. Keep container tightly closed. Do not allow water to be introduced into the contents of the container.
Conditions for Safe Storage : Store in original container only.

8. Exposure Controls / Personal Protection

TLV/PEL : Manganese compounds - OSHA PEL 5 mg/m³
Appropriate Engineering Controls : Local exhaust is sufficient.
Personal Protective Equipment : Splashproof goggles or face shield, impervious gloves, impervious apron and footwear. No respiratory protection needed under normal conditions. Eyewash should be available in work area.

9. Physical and Chemical Properties

Odor/Appearance : Brown liquid; no odor specified.
Flash Point, °F : Not determined
Boiling Point, °F : Not determined
Melting Point(Freezing point), °C : Not determined
Vapor Pressure, mm Hg @ 20 °C : Not determined
Vapor Density : Not determined
Solubility in Water : Not determined
Molecular Formula : Not applicable, formulated mixture.
Density, g/mL @ 25 °C : 1.230-1.250
Evaporation Rate(Butyl Acetate = 1) : Not determined
Octanol/Water Partition Coefficient : No information found



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pH : 2.5 to 4.5
Flammable Limits (approximate volume % in air) : Not determined
Auto-ignition Temperature : Not applicable
Decomposition temperature : No information found

10. Stability and Reactivity

Reactivity : No information found
Chemical Stability : Stable
Hazardous Decomposition Products : No information available
Hazardous Polymerization : Will not occur
Conditions to Avoid : None currently known.
Incompatible Materials : No information available

11. Toxicological Information

Acute Toxicity (Oral LD50) : No LD50 available. Harmful if swallowed. Ingestion may cause vomiting and abdominal cramps.
Acute Toxicity (Dermal LD50) : No LD50 available. May be harmful in contact with skin.
Acute Toxicity Inhalation LC50 : No LC50 known. May be harmful if inhaled. Spray mist inhalation may cause nose/throat irritation.
Likely Routes of Exposure : Skin, eyes, ingestion, inhalation
Skin Irritation : Causes mild skin irritation.
Eye Irritation : Causes eye irritation.
Skin Sensitization : No information found
Carcinogenic : None currently known.
Chronic Effects : None currently known.
Other Hazards : CA PROPOSITION 65 WARNINGS: No listed ingredient appears on the CA PROPOSITION 65 WARNINGS listing.

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 : No information found

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



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Environmental Hazards : Reportable Quantity (RQ) for Zinc Sulfate=1,000 lbs. RQ will not be met/exceeded as currently packaged.
Transport in Bulk : No information found
Special Precautions for Transportation : No information found
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 N
Pressure:
Fire: N
Reactive: N

16. Other Information

Data of Preparation/Revision : 25-October-2021