



Safety Data Sheet

Report Date 27-May-15

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1. Identification

Product Name : TRAFIX ZM
Synonyms : None
Product Use : Chelated Micronutrient - Zinc and Manganese
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 : May cause skin irritation with prolonged or repeated contact.
Eye Irritation : May cause eye irritation after prolonged or repeated contact.
Acute Toxicity Oral : No data available for mixture. Based on components, harmful if swallowed.
Acute Toxicity Dermal : No data available for mixture.

Hazard Categories : Oral/Dermal/Inhalation Toxicity-4/5/5; Eye/Skin Irritation-2A/3; STOT-RE-2 (central nervous system)

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
May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Blend of plant nutrients derived from manganese sulfate and zinc sulfate. The chelating agent is citric acid. The complexing agent is glucoheptonate. GUARANTEED ANALYSIS: Sulfur (S): 3.00% Manganese (Mn): 3.00% Zinc (Zn): 3.00%	Proprietary	100.00

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.



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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 : In the event of an adverse response, treatment should be directed toward control of the symptoms.

5. Fire Fighting Measures

Extinguishing Media : Non-combustible liquid. Use extinguishing media for underlying cause of fire.
Specific Hazards Arising from the Chemical : Product may produce toxic fumes under fire conditions.

Special Fire Fight Proc : Wear self-contained breathing apparatus and full protective equipment. Use water spray to keep fire-exposed containers cool.

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. Respiratory protection not normally needed. Eyewash and emergency shower should be available in work area.

Emergency Procedures : Do not contaminate water supplies.
Methods and Materials for Containment and Cleanup : Contain product and reuse material, if uncontaminated. If contaminated, absorb material with an absorbent such as clay or sand, and place in suitable containers for proper 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. Do not store near heat or open flame. Do not store with oxidizing agents or ammonium nitrate.

8. Exposure Controls / Personal Protection

TLV/PEL : Zinc Sulfate - no PEL or TLV; Manganese Sulfate (Manganese Compounds as Mn) - 5 mg/m³ (PEL) and 0.2 mg/m³ (TLV).

Appropriate Engineering Controls : Local exhaust is sufficient.

Personal Protective Equipment : Splashproof goggles or face shield, impervious gloves, impervious apron and footwear. Respiratory protection not normally needed. Eyewash and emergency shower should be available in work area.

9. Physical and Chemical Properties

Odor/Appearance : Clear dark brown liquid with ammonia odor.

Flash Point, °F : Non-combustible.

Boiling Point, °F : >212 Degrees F.

Melting Point(Freezing point), °C : <32 Degrees F.



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Vapor Pressure, mm Hg @ 20 °C : Not determined
Vapor Density : Not determined
Solubility in Water : Soluble
Molecular Formula : Not applicable, formulated mixture.
Density, g/mL @ 25 °C : 1.252-1.272
Evaporation Rate(Butyl Acetate = 1) : Not determined
Octanol/Water Partition Coefficient : No information found
pH : 8.8 to 9.5
Flammable Limits (approximate volume % in air) : Not applicable
Auto-ignition Temperature : Not applicable
Decomposition temperature : No information found

10. Stability and Reactivity

Reactivity : No information found
Chemical Stability : Stable
Hazardous Decomposition Products : Carbon dioxide, carbon monoxide, ammonium gas and sulfur oxides under fire conditions.
Hazardous Polymerization : Will not occur
Conditions to Avoid : None currently known
Incompatible Materials : Product may react vigorously with alkaline materials. Product pH=9.0; may be corrosive to galvanized steel and aluminum.

11. Toxicological Information

Acute Toxicity (Oral LD50) : No LD50 available. Harmful if swallowed.
Acute Toxicity (Dermal LD50) : No LD50 available. May be harmful in contact with skin.
Acute Toxicity Inhalation LC50 : No LC50 available. May be harmful if inhaled.
Likely Routes of Exposure : Ingestion, skin, eyes, inhalation
Skin Irritation : Causes mild skin irritation.
Eye Irritation : Causes serious eye irritation.
Skin Sensitization : Not listed as a sensitizer
Carcinogenic : Not currently listed.
Chronic Effects : None currently known.
Other Hazards : Specific Target Organ Toxicity - Repeated Exposure: May cause damage to organs (central nervous system) through prolonged or repeated exposure via inhalation. (due to manganese sulfate)

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.



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14. Transport Information

UN Proper Shipping Name : Not regulated for highway transportation in containers less than 1,126 gallons.
Transport Hazard Class : None
UN Identification Number : None
Packaging Group : None
Environmental Hazards : Reportable Quantity (RQ) for zinc sulfate = 1,000 lbs/1,126 gallons.
Transport in Bulk : If >= 1,126 gallons shipped in a single package, ship as: RQ, UN3082, Environmentally Hazardous Substance, Liquid, n.o.s., (Zinc Sulfate), 9, PG III "ERG # 171"
Special Precautions for Transportation : If shipped by air, ship as: UN3266, Corrosive Liquid, Basic, Inorganic, n.o.s., (Zinc Sulfate), 8, PG III
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 : 27-May-2015