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## 1. PRODUCT IDENTIFICATION

**Product Name:** Manganese Nutriboosters™

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS Number	Percent
Manganese (Mn)	10034-96-5	5.0%

Derived from: Manganese Sulfate

Information regarding the contents and levels of metals in this product is available on the Internet at <http://www.aapfco.org/metals.htm>

## 3. HAZARDS IDENTIFICATION

**Primary Route of Exposure:** Ingestion

**Exposure/Health Effects:**

**Eye Contact:** May cause irritation.

**Skin Contact:** May cause irritation.

**Respiratory/Inhalation:** May cause irritation.

**Ingestion:** May cause irritation.

## 4. FIRST AID MEASURES

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

**Skin Contact:** Wash with soap and water. Cold water may be used. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt, or waistband.

**Notes to Physician:** No specific antidote is available. Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

**Fire Extinguishing Media:** Not considered a fire hazard. Use any means suitable for extinguishing surrounding fire.

**Special Fire-Fighting Procedures:** In the event of a fire, wear full protective clothing and a NIOSH approved, self-contained breathing apparatus with a full face-piece operated in the pressure demand or other positive pressure mode.

**Fire and Explosion Hazards:** Not considered to be an explosion hazard.

## 6. ACCIDENTAL RELEASE MEASURES

**Action to Take for Spills:** Ventilate area of spill. Contain spill, and then soak up with absorbent material. Dispose as waste in a suitable container. Prevent runoff.

Ensure compliance with local, State, and Federal regulations.

## 7. HANDLING AND STORAGE

**Precautions to be Taken in Handling and Storage:** Keep out of reach of children. Avoid container breakage. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Wash exposed clothing before reuse. Store in a cool, dry area in closed container or pack.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Airborne Exposure Limits:** ACGIH Threshold Limit Value (TLV) for Manganese: 5 mg (Mn)/m<sup>3</sup> (TWA) ceiling

**Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures below the manganese Airborne Exposure Limit. Local exhaust ventilation is preferred because it controls the emissions of the contaminate at its source, preventing dispersion into the general work area.

**Personal Protective Equipment (PPE):** Wear safety glasses, chemical-resistant gloves, and clean body-covering clothing when handling this product. Use a NIOSH approved respirator if the TLV is exceeded. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Pale pink to clear liquid

**Odor:** Odorless

**Bulk Density:** 1.120 gram/ml

**Specific Gravity:** 1.0 (8.34 pounds/gallon)

**Solubility in Water:** Complete

**Boiling Point:** 212°F

**Melting Range:** Not applicable

**Vapor Pressure:** Not determined

**Vapor Density:** Not determined

**pH:** 7.0

**Volatile Components:** Not applicable

**Freezing Point:** 32°F

**Evaporation Rate:** Not determined

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions

**Conditions to Avoid:** None known

**Incompatibility (Materials to Avoid):** Powdered metals, strong oxidizers

**Hazardous Decomposition Products:** Manganese emits toxic fumes of sulfur and manganese oxides when heated to decomposition.

**Hazardous Polymerization:** Does not occur

## 11. TOXICOLOGICAL INFORMATION

**General Information:** Very low toxicity for humans and animals. Health injuries are not known or expected under normal use.

**Eye:** May cause slight irritation or eye damage if untreated.

**Skin:** Prolonged exposure may cause slight skin irritation.

**Ingestion:** May cause gastrointestinal upset, abdominal pain, and diarrhea.

**Inhalation:** Vapors are unlikely due to physical properties.

## 12. ECOLOGICAL INFORMATION

**Environmental Data:** Do not apply directly to water bodies (lakes, rivers, streams) or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes.



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### 13. DISPOSAL CONSIDERATIONS

**Disposal Method:** Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site per label use directions, or at an approved waste disposal facility. Follow all local, State, and Federal requirements for disposal.

### 14. TRANSPORT INFORMATION

**DOT Classification:** Not a DOT controlled material.

**Identification:** Not applicable

**Special Provisions for Transport:** Not applicable

### 15. REGULATORY INFORMATION

**SARA/OSHA:** Components present in this product at a level that could require reporting under the SARA or OSHA hazardous chemical reporting requirements: None

**Extremely Hazardous Substance (EHS):** None

**States Right-to-Know (RTK):** No components in this product are present on state lists from CA, PA, MN, MA, FL, or NJ.

**Toxic Substance Control Act (TSCA) Status:** The ingredients of this product are on the TSCA inventory.

**CA SCAQMD Rule 443.1 VOCs:** Not presently available

**Other Regulatory Information:** None known

### 16. OTHER INFORMATION

Revision: 05/08

Supersedes: 08/01 and 04/08 versions

*The information provided herein was believed to be accurate at the time of preparation from a compilation of sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling, storage, and use of this product and to determine the suitability of the product for its intended use. **IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.***

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