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### 1. IDENTIFICATION

**Product Name:** Iron/Manganese Nutriboosters®

**Chemical Name:** Liquid Fertilizer Solution

### 2. HAZARD(S) IDENTIFICATION



**WARNING**

**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.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS Number	Percent
Iron (Fe)	1185-57-5	12.5%
Manganese (Mn)	7785-87-7	3.5%

Derived from: Ammonium Ferric Citrate, 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>

### 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:** 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:** None known

### 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 AND 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:** Dark brown liquid

**Odor:** Odorless or slight ammoniacal

**Bulk Density:** 1.405 gram/ml

**Solubility in Water:** Virtually complete

**Boiling Point:** Not applicable

**Melting Point:** Not determined

**Percent Volatile:** Not determined

**Vapor Pressure:** Not determined

**Vapor Density:** Not determined

**pH:** Not determined

**Freezing Point:** Not determined

**Evaporation Rate:** Not determined

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions.

**Conditions to Avoid:** None known.

**Incompatibility (Materials to Avoid):** None known.

**Hazardous Decomposition Products:** Ammonia, 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 (NON-MANDATORY)

**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.

## 13. DISPOSAL CONSIDERATIONS (NON-MANDATORY)

**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 (NON-MANDATORY)

**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

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.

Follow all local/regional/national/international regulations.

Please consult supplier if further information is needed.

All tests were conducted following OECD guidelines for Good Laboratory Practices (GLP).

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

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Revision: 05/2014

Supersedes: 04/2012, 12/96, 05/06, 04/08 and 05/08 versions

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