

# MATERIAL SAFETY DATA SHEET

## PRODUCT NAME: MANGANESE PLUS (0-0-0)

MSDS No.: 99-57201

Date of Preparation: 05/31/97

Date of Revision: 12/3/02

NFPA HAZARD RATINGS: Health (2) Fire (0) Reactivity (0)

(0) least (1) slight (2) moderate (3) high (4) extreme

### Section 1-CHEMICAL PRODUCT and COMPANY IDENTIFICATION

General Product Composition: Proprietary Polymerous Hydrosol Leachate with Organic Acids, Manganese and Iron. Intended Use: Turf Management. Manufactured for: **Spindler Enterprises, Inc., P.O. Box 6112, Lakeland, FL 33807.** Phone: (863) 619-9822.  
**Emergency Telephone: CHEMTREC 1-800-424-9300.**

### Section 2-COMPOSITION/INFORMATION on INGREDIENTS

HAZARDOUS INGREDIENT NAME	FORMULA	CAS No.
Ferrous Sulfate	FeSO <sub>4</sub>	7720-78-7
Manganese Sulfate	MnSO <sub>4</sub>	7785-87-7

**TRACE IMPURITIES:** organic acids and biostimulants derived from composting. **EXPOSURE LIMITS:** ((REFER TO SECTION 8))

### Section 3-HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Potential Health Effects: **Primary Entry Routes:** Eyes, skin, ingestion. **Target Organs:** Eyes, skin, gastrointestinal tract. **Acute Effects:** *Inhalation:* Not normally a problem. *Eye:* May cause irritation, redness and/or burning. *Skin:* May cause irritation, redness and/or burning. *Ingestion:* May be harmful if swallowed. May cause abdominal cramps, nausea, vomiting and/or diarrhea. **Carcinogenicity:** IARC: NO, NTP: NO, OSHA: NO. **Medical Conditions Aggravated by Long-Term Exposure:** Persons with existing skin lesions should exercise caution when using or handling this product. These individuals should also avoid all contact with possible spray mist. **Chronic Effects:** Prolonged or repeated skin contact may cause dermatitis. Ingestion may irritate gastrointestinal tract.

### Section 4-FIRST AID MEASURES

**Inhalation:** Remove to fresh air. **Eye Contact:** Flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists or develops. **Skin Contact:** Remove any contaminated clothing. Wash affected area with mild soap and water. Get medical attention if irritation persists or develops. Launder contaminated clothing before reuse. **Ingestion:** Give 2 or 3 glasses of water to drink. Induce vomiting by touching back of throat with finger. Get immediate medical attention. *After first aid, get appropriate in-plant, paramedic, or community medical support.* **Note to Physicians:** No specific antidote. Treat symptomatically. **Special Precautions/Procedures:** None known.

### Section 5-FIRE FIGHTING MEASURES

**Flash Point:** NA. **Flammability Classification:** Non-flammable. **Extinguishing Media:** Water spray, dry chemical, carbon dioxide, or foam. **Unusual Fire or Explosion Hazards:** Containers exposed to fire may rupture violently. Keep containers cool with water spray. **Hazardous Combustion Products:** Oxides of nitrogen and sulfur; hydrogen sulfide. **Fire-Fighting Instructions:** Fire fighters should wear full protective equipment and self-contained breathing apparatus. Prevent runoff from entering water systems. Keep non-essential personnel out of fire area.

### Section 6-ACCIDENTAL RELEASE MEASURES

**Spill/Leak Procedures:** Small Spills: Wear protective equipment. Prevent spill from entering water systems. Absorb spill on inert material such as clay, vermiculite or kitty litter. Place absorbed material into labeled container for proper disposal. **Large Spills:** Dike to prevent spill from entering water systems. **Cleanup:** If spill is of major proportions, soil may need to be excavated.

### Section 7- HANDLING and STORAGE

**Handling Precautions:** Avoid contact with skin/eyes/clothing. Do not take internally. Wash after handling. Do not dispose of equipment wash waters, contaminating waters. **Storage Requirements:** Store in a cool, dry area preferably locked and out of reach of children and animals.

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## Section 8-EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use in open, outdoor areas only. **Respiratory Protection:** In confined areas, NIOSH/MSMA approved respirator. **Protective Clothing/Equipment:** Safety glasses/goggles/face shield recommended. Impervious gloves/boots and protective clothing suggested.

**EXPOSURE GUIDELINES:** {Numbers represent mg/M<sup>3</sup> unless otherwise indicated}.

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Ferrous Sulfate	NA	NA	1	NA	1	2	NA
Manganese Sulfate	NA	NA	5	NA	NA	NA	NA

## Section 9-PHYSICAL/CHEMICAL PROPERTIES

**Physical State:** Liquid. **Solubility in Water:** Soluble. **Density:** 11.0 lbs. per gal. **Specific Gravity (@ 68°F):** 1.319. **pH** (@ 68°F): 8.0.

## Section 10-STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions of use and storage. **DO NOT FREEZE.** **Polymerization:** NO. **Chemical Incompatibilities:** None known. **Conditions to Avoid:** Extreme heat. Do not freeze. **Hazardous Decomposition Products:** Oxides of nitrogen and sulfur; hydrogen sulfide.

## Section 11-TOXICOLOGICAL INFORMATION

**No lab tests on this product for the following:** Eye Effects, Skin Effects, Acute Inhalation Effects, Acute Oral Effects, Chronic Effects, Carcinogenicity, Mutagenicity & Teratogenicity.

## Section 12-ECOLOGICAL INFORMATION

**Ecotoxicity:** Accidental spills of undiluted product may cause vegetation kills. **Environmental Fate:** Keep out of any body of water.

## Section 13-DISPOSAL CONSIDERATIONS

**Disposal:** Consult local, state or federal regulatory agencies for acceptable disposal procedures and locations. Disposal in waterways or sewers may be prohibited.

## Section 14-TRANSPORT INFORMATION

**DOT Transportation Data (49 CFR 172.101):** **Shipping Name:** Not regulated.

## Section 15-REGULATORY INFORMATION

**EPA Regulations:** Not regulated by EPA under FIFRA or FQPA. **OSHA Regulations:** Refer to Sections 2 & 8. **State Regulations:** Ferrous sulfate appears on the CA & NJ RTK Chemical List; manganese sulfate appears on the CA RTK Chemical List. Check with specific state authorities since regulations vary within the states. **Other Regulations:** Ferrous sulfate is a Section 304 chemical (CERCLA RQ=1,000 lbs.).

SARA Title III; Sections 311/312: **Sudden Release of Pressure (0), Reactivity (0), Fire (0), Immediate (Acute) Health (Y), Delayed (Chronic) Health (N).**

## Section 16-OTHER INFORMATION

**DISCLAIMER:** The information on this MSDS was obtained from current and reliable sources intended for persons having related technical skills. However, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. It is the users responsibility to determine safe conditions for use of the product and to assume liability for loss, injury, damage, or expense resulting from improper use. ND= Not Determined; NA= Not Applicable; NIA= No Information Available