

MICRO PLUS™ MANGANESE

Material Safety Data Sheet (rev.05/28)

**SECTION I**
**PRODUCT IDENTIFICATION**

<b>NFPA HAZARD RATINGS</b>	
HEALTH HAZARD 1	FIRE HAZARD 0
REACTIVITY 0	
Based on the National Fire Protection Association rating system (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = High; 4 = Severe)	
<b>SARA/ TITLE III HAZARD CATEGORIES (See Section IX)</b>	
Immediate (ACUTE) Health: Yes	Reactive Hazard: NO
Delayed (Chronic) Health: NO	Fire Hazard: NO
Sudden Release of Pressure: NO	
Company Name:	STOLLER USA, INC.
Address:	4001 W. Sam Houston Parkway, N., Suite 100 Houston, Texas 77043-1226 U.S.A.
Emergency Phone Number:	CHEMTREC: In the U.S. and Canada call Toll- free: 1(800)424-9300 From other countries call collect: 1+(703)527-3887
Phone Number for Information:	1(800)539-5283 or 1(713)461-1493
Chemical Family:	Manganese solution
Chemical Name & Synonyms:	Manganese Chloride
Formula:	Proprietary
Trade name & Synonyms:	<b>MICRO PLUS MANGANESE</b>

**SECTION II**
**COMPOSITION/ INFORMATION ON INGREDIENTS**

<b>INGREDIENTS:</b>	<b>CAS#</b>	<b>Approx. %</b>	<b>TLV</b>
Manganese Chloride	7773-01-5	11%	0.2 mg/ m <sup>3</sup> as Mn

**SECTION III**
**HAZARD IDENTIFICATION**

- A. EXPOSURE LIMITS:**
1. OSHA Permissible Exposure Limit (PEL): N/ E
  2. Threshold Limit Value (TLV): N/ E
- B. CARCINOGEN OR POTENTIAL CARCINOGEN: N/ A**
- C. EFFECTS OF OVEREXPOSURE:**
1. **ACUTE:**  
**EYES:** Prolonged exposure to product vapors may cause eye irritation and eye damage can occur.  
**SKIN:** May cause malaise, discomfort, injury and death unless treated promptly.  
**INHALATION:** Prolonged exposure to low concentrations of vapors may cause sore throat and headache which are temporary.  
**INGESTION:** May cause malaise, nausea, death unless treated promptly.
  2. **CHRONIC:** Chronic test data are not known.

**SECTION IV**
**FIRST- AID MEASURES**

- A. EMERGENCY FIRST AID PROCEDURES:**
- EYES:** Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Call a physician
- SKIN:** Remove product & immediately flush affected area with water for 15 minutes. Do not apply greases or ointments. Launder contaminated clothing.
- INHALATION:** Move patient to fresh air. Supplemental oxygen may be indicated. Assure mucous does not obstruct airway. Call Physician
- INGESTION:** If swallowed, call a physician immediately. Remove stomach contents by gastric suction.
- B. ANIMAL TOXICITY DATA: N/ A**
- MnCl<sub>2</sub> Oral LD<sub>50</sub> (rat): 1484 mg/ Kg (hydrate)
- MnCl<sub>2</sub> LD<sub>50</sub> (mouse): 250 mg/ Kg (anhydrous)

## SECTION V

## FIRE AND EXPLOSION DATA

<b>FLASH POINT:</b>	N/ E	<b>LEL:</b>	<b>UEL:</b>
<b>FLAMMABLE LIMITS:</b>	N/ E		
<b>EXTINGUISHER MEDIA:</b>	In case of fire use: Carbon Dioxide (CO <sub>2</sub> ), Dry Chemical, Alcohol foam.		
<b>SPECIAL FIRE FIGHTING PROCEDURES:</b>	Firefighters should wear butyl rubber boots and clothing.		
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS:</b>	N/ A		

## SECTION VI

## ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED:** It is necessary to contain spill into the smallest area possible by diking, etc. Replace liquid into plastic container. If liquid is absorbed onto dry carrier such as soil or absorbent material, then this material should be held in a dry contained area.

## SECTION VII

## HANDLING AND STORAGE

Keep containers closed and away from oxidizing agents. Store only in shipping container: Pails (PVC), Drums (Polyethylene) and Mini Bulk tanks (Polyethylene). Bulk material should be stored in Polyethylene Tanks with PVC fittings.

## SECTION VIII

## SPECIAL PROTECTION / CONTROL MEASURES

**RESPIRATORY PROTECTION:** As required by conditions. Use and OSHA or NIOSH approved respirator if required.

**VENTILATION:** Work outdoors in the open or well ventilated area with this product.

**PROTECTIVE GLOVES:** Use butyl rubber gloves.

**WORK/ HYGIENIC PRACTICES:** Wash thoroughly after handling. Also wash clothing.

## SECTION IX

## PHYSICAL AND CHEMICAL CHARACTERISTICS

<b>BOILING POINT:</b>	Not Established	<b>VAPOR PRESSURE (mm/ Hg):</b>	N/ E
<b>MELTING POINT:</b>	N/ A	<b>VAPOR DENSITY (air = 1):</b>	N/ E
<b>SPECIFIC GRAVITY:</b>	1.26	<b>REACTIVITY IN WATER:</b>	-0-
<b>SOLUBILITY IN WATER:</b>	100%	<b>EVAPORATION RATE:</b>	N/ A
<b>APPEARANCE AND ODOR:</b>	Clear yellow liquid - with no odor.		

## SECTION X

## PHYSICAL HAZARDS (REACTIVITY DATA)

<b>STABILITY:</b>	Stable: Yes	Unstable:
<b>CONDITIONS TO AVOID:</b>	N/ A	
<b>INCOMPATIBILITY, MATERIALS TO AVOID:</b>	Oxidizing Agents (perchlorates, nitrates, nitrites, etc.) and high concentrations of mineral acids.	
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	Carbon Monoxide, Nitrogen Oxide, Carbon Dioxide and Chloride fumes as well as Ammonia and Hydrogen Cyanide under extreme heat as in a fire.	
<b>MAY OCCUR:</b>	<b>WILL NOT OCCUR: X</b>	

**SECTION XI****TOXICOLOGICAL INFORMATION**

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- A. **TOXICITY DATA:**
- B. **CARCINOGENICITY:**
- C. **MUTAGENICITY:**
- D. **REPRODUCTIVE TOXICITY:**

**SECTION XII****ENVIRONMENTAL EFFECTS DATA**

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The available data on this plant nutrient material does not indicate any undue hazard to the environment under anticipated use and storage. Any waste due to spillage or leakage should be contained and disposed of as a Fertilizer (see above under Waste Disposal Methods). If discharged into the marine environment it may be toxic to fish and other marine organisms. Due to its nutrient value, may contribute to eutrophication in bodies of water.

**SECTION XIII****DISPOSAL CONSIDERATIONS**

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**WASTE DISPOSAL METHODS:** Liquid should be applied to the soil as a fertilizer not to exceed 3 gallons per acre. Product absorbed onto dry carrier should be applied to soil as a fertilizer not to exceed 50 lbs. per acre.

**SECTION XIV****TRANSPORTATION DATA**

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**PROPER SHIPPING NAME:** MICRO PLUS MANGANESE  
**DOT HAZARD CLASS:** Non- Hazardous Material Non- Regulated Material  
**PLACARD:** N/ A  
**DOT Hazardous Material:** Non- Hazardous Material