



## 1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Manganese Sulfate, Monohydrate, ACS Reagent  
PRODUCT NUMBER: M250  
COMPANY INFO: PhytoTech Labs Inc.  
14610 W 106<sup>th</sup> St. Lenexa, KS 66215  
Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442  
www.phytotechlab.com  
EMERGENCY PHONE NUMBER 1-800-535-5053 - US Only  
(INFOTRAC): 1-352-323-3500 - International  
RECOMMENDED USE: For Research Use Only  
Products sold by PhytoTech Labs Inc. are intended for research and laboratory use only.  
RESTRICTIONS ON USE: Products are not to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, in vitro diagnostics, or as household chemicals.

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture:

GHS Classification:

H373 – Specific target organ toxicity – repeated exposure (Category 2)  
H401 – Acute aquatic toxicity (Category 2)  
H411 – Chronic aquatic toxicity (Category 2))

### GHS Label elements, including hazard and precautionary statements:

Pictogram  
:



Signal Word: **Warning**

Hazard Statements:

H373 – May cause damage to organs through prolonged or repeated exposure.  
H411 – Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P260 – Do not breathe dust.  
P273 – Avoid release to the environment.  
P280 – Wear proactive clothing/protective gloves/eye protection.  
P314 – Get medical advice/attention if you feel unwell.

**Hazards not otherwise classified (HNOC) or not covered by GHS:** - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No: 10034-96-5  
Formula:  $\text{MnSO}_4 \cdot \text{H}_2\text{O}$   
Molecular Weight: 169.02 g/mol  
EC No.: 232-089-9

Ingredient	CAS Number	Percent	Hazardous
Manganese Sulfate, Monohydrate	10034-96-5	>98 %	OSHA PEL: 5 mg (Mn)/m <sup>3</sup> ; ACGIH TLV: 0.2 mg (Mn)/m <sup>3</sup>

#### 4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Route of Entry	Symptoms	First Aid Procedures
Ingestion	May cause irritation if swallowed	If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. <b>Get medical attention.</b>
Inhalation	May cause irritation to respiratory tract	Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. <b>Get medical attention.</b>
Eye Contact	Direct contact may cause irritation. May cause redness, tearing, or blurred vision.	Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. <b>Get medical attention if irritation persists.</b>
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. <b>Get medical attention if irritation persists.</b>

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

#### 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.
Special Protective Equipment and Precaution for Firefighters:	In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.
Hazardous Combustion Products:	No data available

#### 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid dust formation. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas.

Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Method of Containment and Cleanup:	Wear suitable protective clothing. Avoid dust formation. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water. Do not let product enter drains.

#### 7. HANDLING AND STORAGE

Precaution for Safe Handling:	Avoid contact with skin and eyes. Avoid dust formation and aerosols. Avoid incompatible substances. Provide adequate ventilation at places where dust is formed. Wash thoroughly after use.
Conditions for Safe Storage:	Keep in a tightly closed container and store in a cool, dry, and well-ventilated area. Product is hygroscopic.
Incompatibilities:	Strong oxidizing agent
Recommended Storage Temperature:	Room Temperature

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA's Permissible Exposure Limits (PELs): 5 mg/m<sup>3</sup>

Threshold Limit Values (TLVs): 0.2 mg/m<sup>3</sup>

Engineering Controls: Handle in accordance to general industrial hygiene and safety practice.

Personal Protective Equipment (PPE):

Eye/Face Protection: Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur.

Skin Protection: Protective gloves

Body Protection: Lab coat

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pale Pink Powder

pH: No data available

Solubility: Soluble in water

Melting Range: 700 °C (1,292 °F)

Vapor Density: No data available

Vapor Pressure: No data available

Specific Gravity: 2.95

Odor: Odorless

Odor Threshold: No data available

Viscosity: No data available

Relative Density: 2.95 g/cm<sup>3</sup>

Evaporation Rate: No data available

Initial Boiling Point and Boiling Range: No data available

Flammability (solid, gas): No data available

Partition coefficient: No data available  
n-octanol/water):

Auto-ignition Temperature: No data available

Decomposition Temperature: No data available

Flash Point (Closed Cup): No data available

Flammable Limits: Upper (%) – No data available Lower (%) – No data available

## 10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical Stability: Stable under normal conditions of use – This material is slightly hygroscopic

Possibility of Hazard Reactions: Will not occur

Conditions to Avoid: Moisture

Incompatibles Materials: Strong oxidizing agents, powdered metals, hydrogen peroxide

Hazardous Decomposition Products: Sulfur oxides, manganese oxides

## 11. TOXICOLOGICAL INFORMATION

Toxicity:	LD <sub>50</sub> (Oral-Rat)(mg/Kg)	No data available
	LD <sub>50</sub> (IPR-Mouse)(mg/Kg)	No data available
	LD <sub>50</sub> (Dermal-Rat)(mg/Kg)	No data available
Carcinogenicity:	NTP:	No
	IARC:	No
	OSHA Reg:	No
Reproductive Toxicity:	No data available	
Specific Target Organ Toxicity:	Single Exposure:	No data available
	Repeated Exposure:	No data available
Target Organs:	No data available	
Routes of Entry:	Inhalation, ingestion, skin and eye contact	
NIOSH/RTECS NO:	OP0893500	

***The toxicological properties of this product have not been thoroughly investigated***

## 12. ECOLOGICAL INFORMATION

Ecotoxicity:	No data available
Persistence and Degradability:	No data available
Bioaccumulative Potential:	No data available
Mobility in Soil:	No data available
Other Adverse Effects:	No data available

## 13. DISPOSAL CONSIDERATION

Disposal Procedure:	Dispose in accordance with all applicable federal, state, and local environmental regulations.
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## 14. TRANSPORT INFORMATION

Domestic (D.O.T.):	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	Reportable Quantity:	N/A
	UN/NA:	N/A
	Labels:	N/A
International:		
IMDG:	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	UN/NA:	N/A
	Labels:	N/A
IATA:	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A

UN/NA: N/A

Labels: N/A

## 15. REGULATORY INFORMATION

**TSCA:** No

### SARA TITLE III:

Section 302 (EHS) Ingredients: No

Section 313 Ingredients: Yes – Manganese compound of concentration >1.0 %

Section 304 (EHS/CERCLA) Ingredients: No

Section 311/312 Hazard: Chronic Health Hazard

**Massachusetts Right to Know Components:** This product is not on the Massachusetts Substance List (MSL).

**Pennsylvania Right to Know Components:** CAS No.: 10034-96-5 Manganese Sulfate Monohydrate

**New Jersey Right to Know Components:** This product is not listed amongst the New Jersey Right to Know Hazardous Substance Fact Sheets

**California Prop. 65 Components:** This product is not known to the State of California to cause cancer or reproductive toxicity.

## 16. OTHER INFORMATION

HMIS Rating:

Health Hazard	Flammability	Physical Hazard	Personal Protection
0	0	0	0
Health Hazard	Fire Hazard	Instability	Special Hazard
0	0	0	

NFPA Rating:

**PhytoTech Labs Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. The above information is intended to be used only as a guide to the appropriate precautionary handling of this material by a properly trained person. PhytoTech Labs Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives or as household chemicals.**

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