

SAFETY DATA SHEET

PHLOEM MANGANESE

Product ID: MC213100/ 0563

Revised: 01-12-2018, SDS0563.02

Replaces: SDS0563.01

1. IDENTIFICATION

Product Identifier: PHLOEM MANGANESE
Other Identifiers: R35365A
CAS Number: MIXTURE
Recommended Use: FERTILIZER
Restrictions on Use: No data available.



Source to Source
3233 South I Street
Tulare, CA 93274
(866) 727-4572

EMERGENCY RESPONSE NUMBERS:
24 Hour Emergency #: (866) 727-4572
CHEMTREC Emergency #: (800) 424-9300

2. HAZARD(S) IDENTIFICATION

GHS Classification(s): Serious Eye Damage/Eye Irritation Category 1
Skin Corrosion/Irritation Category 2
Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2

GHS Label Elements:

GHS Hazard Symbols:



Signal Word: Danger

Hazard Statements: Causes skin irritation.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Prevention: Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF ON SKIN: Wash with plenty of water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Specific treatment (see First Aid on SDS or on this label).
If skin irritation occurs: Get medical advice or attention.
Take off contaminated clothing and wash before reuse.

Disposal: Dispose of in accordance with local, regional and international regulations.

Hazards Not Otherwise Classified: None known.

Percentage of Components with Unknown Acute Toxicity:

Oral: 21.4 %
Dermal: 21.4 %
Inhalation Vapor: 21.4 %
Inhalation Dust/Mist: 30.5 %

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances/Mixtures:

<u>Chemical or Common Name/Synonyms</u>	<u>CAS Number</u>	<u>% by Wt.</u>
Manganese Sulfate Monohydrate	10034-96-5	< 20 %
Citric Acid	77-92-9	< 10 %

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

4. FIRST-AID MEASURES

Description of Necessary Measures:

Eye Contact: If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention.

Skin Contact: If on skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Wash with soap and water.

Inhalation: If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY. Keep warm and quiet.

Ingestion: If swallowed: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Most Important Symptoms/Effects, Acute and Delayed:

Eye Contact: Causes severe irritation. May cause: redness. conjunctivitis. corneal burns.

Skin Contact: May cause mild to moderate irritation. Contact may cause: irritation. redness. pain. sensitization.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: Causes moderate irritation. May irritate: upper respiratory tract. May cause: coughing. sore throat. shortness of breath. Prolonged or repeated exposure to manganese compounds may result in systemic poisoning known as "manganism", a Parkinsonian-like syndrome which affects the central nervous system.

Ingestion: May cause severe irritation. May cause: gastrointestinal irritation. gastrointestinal disturbances. abdominal pain. nausea. vomiting. diarrhea. Manganese poisoning, as described in inhalation, has been reported in persons drinking manganese-contaminated well water.

Indication of Immediate Medical Attention and Special Treatment Needed: Treatment is symptomatic and supportive.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Not combustible. For fires in area use appropriate media. For example: Water spray. Fog. Dry chemical. Carbon dioxide. Foam.

Specific Hazards Arising from the Chemical:

Fire and Explosion Hazards: None known.

Hazardous Combustion Products: Manganese oxides. Sulfur oxides. Carbon dioxide. Carbon monoxide.

Special Protective Equipment and Precautions for Fire-Fighters: Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers. Use water spray to cool fire exposed containers and disperse vapors.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, Emergency Procedures: Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

Methods and Materials for Containment and Clean Up: Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Manganese Sulfate Monohydrate	5 mg/m ³ Ceiling (as Mn)

ACGIH Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Manganese Sulfate Monohydrate	0.02 mg/m ³ TWA (respirable particulate matter, as Mn); 0.1 mg/m ³ TWA (inhalable particulate matter, as Mn)

Note:

* Exposure Limit for Manganese and inorganic compounds, as Mn. ** Exposure Limit for Manganese compounds, as Mn. (Exposure Limits for Manganese fume, as Mn: C 5 mg/m³ (OSHA); 1 mg/m³ TWA, 3 mg/m³ STEL (Vacated 1989 OSHA PELs). C = Denotes Ceiling Limit.

Engineering Controls: General room ventilation and local exhaust are required. General room ventilation and/or local exhaust are required. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

Individual Protection Measures:

Eye/Face Protection: Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material.

Skin Protection: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Impervious. Chemical-resistant.

Respiratory Protection: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If dust or mist is present, wear: NIOSH-Approved respirator. NIOSH-Approved respirator for dusts and mists. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

Other Protective Equipment: Eye-wash station. Safety shower. Protective clothing. Rubber apron.

General Hygiene Conditions: Handle in accordance with good industrial hygiene and safety practice. Wash with soap and water before meal times and at the end of each work shift.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHLOEM MANGANESE

Product ID: MC213100 / 0563

Physical State:

Color: Brown.

Odor: Mild odor.

Odor Threshold: N.D.

pH: 1.7 (as is)

Freezing Point (deg. F): N.D.

Melting Point (deg. F): N.D.

Initial Boiling Point or Boiling Range: N.A.

Flash Point: N.A.

Flash Point Method: N.A.

Evaporation Rate (nBuAc = 1): N.D.

Flammability (solid, gas): N.D.

Lower Explosion Limit: N.A.

Upper Explosion Limit: N.A.

Vapor Pressure (mm Hg): N.D.

Vapor Density (air=1): N.D.

Specific Gravity or Relative Density: 1.22 @ 25 Deg. C

Solubility in Water: No Data

Partition Coefficient (n-octanol/water): N.D.

Autoignition Temperature: No Data

Decomposition Temperature: N.D.

Viscosity: N.D.

% Volatile (wt%): N.D.

VOC (wt%): N.D.

VOC (lbs/gal): N.D.

Fire Point: N.D.

10. STABILITY AND REACTIVITY

Reactivity: No data available.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions.

Conditions to Avoid: Avoid excessive heat. Avoid elevated temperatures. Avoid sources of ignition. Avoid static discharges. Avoid heat, sparks or open flames.

Incompatible Materials: Alkalies. Strong oxidizing agents. Bases. Sulfides. Carbonates. Acetates. Potassium Tartrate. Metal Nitrates. Reducing agents. Bicarbonates. Amines. Alkali metals. Copper, aluminum, zinc and their alloys. Lead. Oxides of sulfur. Fiber-reinforced Polyester. Steel. Brass. Cast Iron. Reactive Metals.

Hazardous Decomposition Products: Manganese oxides. Sulfur oxides. Carbon dioxide. Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Eyes. Ingestion. Inhalation. Skin.

Symptoms/Effects: Acute, Delayed and Chronic:

Eye Contact: Causes severe irritation. May cause: redness. conjunctivitis. corneal burns.

Skin Contact: May cause mild to moderate irritation. Contact may cause: irritation. redness. pain. sensitization.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: Causes moderate irritation. May irritate: upper respiratory tract. May cause: coughing. sore throat. shortness of breath. Prolonged or repeated exposure to manganese compounds may result in systemic poisoning known as "manganism", a Parkinsonian-like syndrome which affects the central nervous system.

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Ingestion: May cause severe irritation. May cause: gastrointestinal irritation. gastrointestinal disturbances. abdominal pain. nausea. vomiting. diarrhea. Manganese poisoning, as described in inhalation, has been reported in persons drinking manganese-contaminated well water.

Numerical Measures of Toxicity:

<u>Component</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Citric Acid	Rat: 3000 mg/kg	Rat: > 2000 mg/kg	No Data

Cancer Information:

This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

Medical Conditions Aggravated by Exposure to Product: Impaired respiratory function. Eye disorders. Respiratory system disorders. Skin disorders.

Other: None known.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: No data available.

Chemical Fate Information: No data available.

13. DISPOSAL CONSIDERATIONS

Hazardous Waste Number: D002

Disposal Method: Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

DOT (Department of Transportation):

Identification Number: UN3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS MANGANESE SULPHATE)

Hazard Class: 9

Packing Group: III

Label Required: Class 9

Note: In containers of 119 gallons capacity or less this product is not regulated by the DOT.

15. REGULATORY INFORMATION

TSCA Inventory Status: This product or all components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

SARA Title III Section 311/312 Category Hazards: Please see Section 2 of this SDS.

<u>Regulated Components</u>	<u>CAS</u>	<u>CERCLA</u>	<u>SARA</u>	<u>SARA</u>	<u>U.S.</u>	<u>WI</u>	<u>Prop</u>
<u>Component</u>	<u>Number</u>	<u>RQ</u>	<u>EHS</u>	<u>313</u>	<u>HAP</u>	<u>HAP</u>	<u>65</u>
Manganese Sulfate Monohydrate	10034-96-5	No	No	Yes	Yes	Yes	No

***Prop 65 - May Contain the Following Trace Components:**

No products were found.

Note: * Reportable as Manganese Compound. ** Reportable as Manganese, as Mn, dust and compounds.

16. OTHER INFORMATION

Hazard Rating System

Health: 2*

Flammability: 0

Reactivity: 0

* = Chronic Health Hazard

NFPA Rating System

Health: 2

Flammability: 0

Reactivity: 0

Special Hazard: None

SDS Abbreviations

N.A. = Not Applicable

N.D. = Not Determined

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

C = Ceiling Limit

N.E./Not Estab. = Not Established

SDS Prepared by: csh, revised by jct

Reason for Revision: Updated formulation (minor).

Revised: 01-12-2018, SDS0563.02

Replaces: SDS0563.01

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