

SAFETY DATA SHEET

PHLOEM IRON

Product ID: MC213000 / 0562

Revised: 01-12-2018, SDS0562.02

Replaces: SDS0562.01

1. IDENTIFICATION

Product Identifier: PHLOEM IRON
Other Identifiers: R35364A
CAS Number: MIXTURE
Recommended Use: For use in fertilizer applications.
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

GHS Label Elements:

GHS Hazard Symbols:



Signal Word: Danger

Hazard Statements: Causes skin irritation.
Causes serious eye damage.

Precautionary Statements:

Prevention: 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.

Hazards Not Otherwise Classified: None known.

Percentage of Components with Unknown Acute Toxicity:

Dermal: 24.4 %
Inhalation Vapor: 24.4 %
Inhalation Dust/Mist: 30.8 %

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances/Mixtures:

<u>Chemical or Common Name/Synonyms</u>	<u>CAS Number</u>	<u>% by Wt.</u>
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Ferrous Sulfate Heptahydrate	7782-63-0	< 20 %
Citric Acid	77-92-9	< 10 %
Urea	57-13-6	< 5 %

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 while removing contaminated clothing and shoes. Do not reuse clothing or shoes until cleaned. If irritation develops or persists, get medical attention. 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.

Ingestion: If swallowed: If fully conscious, give two glasses of water, then induce vomiting by touching back of throat with finger. Keep head below hips to prevent aspiration of liquid into the lungs. CALL A PHYSICIAN immediately. Never induce vomiting or give anything by mouth to an unconscious victim.

Most Important Symptoms/Effects, Acute and Delayed:

Eye Contact: May be corrosive to the eyes. Severe irritation and burns may result. Effects depend on concentration and duration of exposure. Prolonged contact may cause: redness. burning sensation.

Skin Contact: May cause mild to moderate irritation. Repeated exposure may cause: dermatitis (inflammation of the skin). Prolonged and repeated exposure may cause: drying. cracking. itching. redness. burning sensation. severe irritation.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: May cause mild irritation. May irritate: respiratory tract. mucous membranes. May cause: coughing.

Ingestion: May cause mild to severe irritation. May cause: heartburn. nausea. discomfort. constipation. diarrhea. severe hemorrhagic gastritis. abdominal pain. retching. violent diarrhea and vomiting. shock. rapid, weak pulse. no pulse. severe hypotension. pulmonary changes. dyspnea. emphysema. Symptoms of severe poisoning may occur within 30 minutes or be delayed for several hours. The average lethal dose of iron is about 200 to 250 mg per kg of body weight. May irritate or burn: mucous membranes.

Indication of Immediate Medical Attention and Special Treatment Needed: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: For fires in area use appropriate media. For example: Dry chemical. Carbon dioxide. Foam. Water spray.

Specific Hazards Arising from the Chemical:

Fire and Explosion Hazards: None known.

Hazardous Combustion Products: Sulfur oxides. Carbon dioxide. Carbon monoxide. Ammonia. Biuret. Nitrogen oxides. Carbon oxides. Cyanuric acid. Unidentified toxic and/or irritating compounds.

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. Move containers from fire area if possible without hazard. 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: Do not touch or walk through spilled material. Shut off source of leak if safe to do so. Flush remaining area with water to remove trace residue and dispose of properly. Contain spill, place into drums for proper disposal. Soak up residue with inert absorbent material. Place in non-leaking containers for immediate disposal. 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. Low temperatures may cause crystallization. Protect from moisture. Keep away from metals. Corrosive to metals (as aqueous solution). Keep away from all sources of ignition. Avoid containers, piping or fittings made of brass, bronze, or other copper-bearing alloys, or galvanized metal. HYGROSCOPIC MATERIAL. Avoid contact with moisture. At temperatures under 65F (18C), product may begin to crystallize. Crystals are readily dissolved by reheating product. Keep containers tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
No components found.	

ACGIH Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Ferrous Sulfate Heptahydrate	1 mg/m ³ TWA (as Fe)

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. Do not wear contact lenses.

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

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. NIOSH-Approved air-purifying respirator with: Dust/mist filter. NIOSH-Approved self-contained breathing apparatus. 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. If exposure limits are exceeded, wear:

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

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General Hygiene Conditions: Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.

Color: Brown.

Odor: Mild odor.

Odor Threshold: N.D.

pH: 1.8 (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: 1.15 @ 25 Deg. C

Solubility in Water: Complete

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 elevated temperatures.

Incompatible Materials: Alkalies. Arsenic trioxide + sodium nitrate. Methyl isocyanacetate. 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. Acids. Nitrates. Sodium hypochlorite. Calcium hypochlorite. Hypochlorites. Halogens. Caustics. Nitric Acid. Gallium perchlorate. Moisture. Mild steel. Aluminum. Zinc. Copper.

Hazardous Decomposition Products: Sulfur oxides. Carbon dioxide. Carbon monoxide. Biuret. Ammonia. Nitrogen oxides. Carbon oxides. Cyanuric acid.

11. TOXICOLOGICAL INFORMATION

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

Symptoms/Effects: Acute, Delayed and Chronic:

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Numerical Measures of Toxicity:

<u>Component</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Ferrous Sulfate Heptahydrate	Mouse: 1520 mg/kg	No Data	No Data
Citric Acid	Rat: 3000 mg/kg	Rat: > 2000 mg/kg	No Data
Urea	Rat: 8471 mg/kg	No Data	No Data

Acute Toxicity Estimate (ATE):

Oral: 3270 mg/kg

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: Eye disorders. Respiratory system disorders. Skin disorders.

Other: Chronic effects of ingestion: Reproductive effects have been reported in animals.

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 accordance with 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. Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.

14. TRANSPORT INFORMATION

DOT (Department of Transportation):

Identification Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.
(CONTAINS FERROUS SULFATE)
Hazard Class: 9
Packing Group: III

Label Required: Class 9

15. REGULATORY INFORMATION

TSCA Inventory Status: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

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

Regulated Components: Component	CAS Number	CERCLA RQ	SARA EHS	SARA 313	U.S. HAP	WI HAP	Prop 65
Ferrous Sulfate Heptahydrate	7782-63-0	Yes	No	No	No	Yes	No

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: JAK, revised by JCT

Reason for Revision: minor reformulation

Revised: 01-12-2018, SDS0562.02

Replaces: SDS0562.01

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