

SAFETY DATA SHEET

PHLOEM COPPER

Product ID: MC213300 / 0564

Revised: 01-12-2018, SDS0564.03

Replaces: SDS0564.02

1. IDENTIFICATION

Product Identifier: PHLOEM COPPER
Other Identifiers: R35363A
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

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: 21.6 %
Inhalation Vapor: 21.6 %
Inhalation Dust/Mist: 29.8 %

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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Copper Sulfate Pentahydrate	7758-99-8	< 20 %
Citric Acid	77-92-9	< 10 %

Note: This product may be regulated, have exposure limits or other information identified as the following:
Copper (7440-50-8) and inorganic compounds, as Cu, Copper (7440-50-8) dusts and mists, as Cu and Copper fume, Cu.

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. Washing eyes within 1 minute is essential to achieve maximum effectiveness.

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 for at least 15 minutes. Discard contaminated leather articles such as shoes and belt.

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: 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. Have victim rinse mouth thoroughly with water.

Most Important Symptoms/Effects, Acute and Delayed:

Eye Contact: Causes severe irritation. May cause: redness. pain. conjunctivitis. ulcerations. corneal abnormalities. Permanent eye damage may result from contact with this product.

Skin Contact: May cause mild to severe irritation. Contact may cause: pain. itching. redness. Severe overexposure may cause: burns. Prolonged or repeated exposure may cause: dermatitis (inflammation of the skin). eczema.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: Causes moderate irritation. May irritate: nose. throat. respiratory tract. May cause: sore throat. coughing. shortness of breath. Severe cases may cause: ulceration and perforation of the nasal septum. If this material is heated, inhalation of fumes may lead to development of metal fume fever. This is a flu-like illness with symptoms of metallic taste, fever and chills, aches, chest tightness and cough. Repeated inhalation exposure can cause shrinking of the lining of the inner nose.

Ingestion: May cause severe irritation. Harmful or fatal if swallowed. May cause: gastrointestinal irritation. nausea. vomiting. diarrhea. pain. hemorrhagic gastritis. metallic taste. If vomiting does not occur immediately systemic copper poisoning may occur. Symptoms may include capillary damage, headache, cold sweat, weak pulse, kidney and liver damage, central nervous excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure.

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: Does not burn or support combustion. Use extinguishing agents appropriate for surrounding fire. For fires in area use appropriate media. For example: Water spray. Dry chemical. Carbon dioxide. Alcohol foam.

Specific Hazards Arising from the Chemical:

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Fire and Explosion Hazards: None known. Sealed containers may rupture when heated due to release of water from crystals.

Hazardous Combustion Products: Sulfur oxides. Copper fumes. Sulfuric acid. 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. Run-off from fire control may cause pollution. 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: Shut off source of leak if safe to do so. Contain spill, place into drums for proper disposal. Flush remaining area with water to remove trace residue and dispose of properly. 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. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Avoid dust or mist formation.

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. Avoid sources of intense heat. Do not freeze.

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>
Copper Sulfate Pentahydrate	1 mg/m ³ TWA (dust and mist, as Cu)

Note:

* Follow exposure limits for Copper dusts, mists or fume as Cu. ACGIH = 1 mg/m³ TWA (dusts and mists), ACGIH = 0.2 mg/m³ TWA (fume), OSHA = 1 mg/m³ TWA (dusts and mists), OSHA = 0.1 mg/m³ TWA (fume).

Engineering Controls: General room ventilation and local exhaust are required. Avoid creating dust or mist. Maintain adequate ventilation. Do not use in closed or confined spaces. 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. Do not wear contact lenses.

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 exposure limits are exceeded, wear: NIOSH-Approved respirator

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for dusts and mists. NIOSH-Approved air-purifying respirator with: HEPA filter. 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. Rubber apron. Rubber boots. Protective clothing.

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: Dark Green. Dark brown.

Odor: Mild odor.

Odor Threshold: N.D.

pH: 1.3 (as is)

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

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

Initial Boiling Point or Boiling Range: N.D.

Flash Point: N.D.

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: 1.17 @ 25 Deg. C

Solubility in Water: 100%

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 exposure to air. Avoid high temperatures. Avoid elevated temperatures. Avoid sources of ignition. Avoid static discharges. Avoid heat, sparks or open flames.

Incompatible Materials: Magnesium. Reducing agents. Alkalies. Hydroxylamine. Phosphates. Acetylene. Hydrazine. Nitromethane. Strong bases. Zirconium. Sodium hypobromite. May corrode aluminum, steel and iron.

Hazardous Decomposition Products: Sulfur oxides. Copper oxides. Sulfuric acid. Solutions are acidic and can react with magnesium to evolve flammable hydrogen gas. Carbon dioxide. Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

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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>
Copper Sulfate Pentahydrate	Rat: 960 mg/kg	No Data	No Data
Citric Acid	Rat: 3000 mg/kg	Rat: > 2000 mg/kg	No Data

Acute Toxicity Estimate (ATE):

Oral: 3102 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: Kidney disorders. Liver disorders. Respiratory system disorders. Skin disorders. Wilson's disease. Glucose 6-phosphate-dehydrogenase deficiency. Eye 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):

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Identification Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS COPPER SULFATE)
Hazard Class: 9
Packing Group: III
Label Required: Class 9
Reportable Quantity (RQ): 10# (Cupric Sulfate)

15. REGULATORY INFORMATION

TSCA Inventory Status: Although this compound is not on the TSCA Inventory, it is excepted as a hydrate of a listed compound, Copper Sulfate (CAS# 7758-98-7), per 40 CFR 710.4(d)(3) and 40 CFR 720.30(h)(3). Under this section of TSCA, any chemical substance which is a hydrate of a listed component is excepted. 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:	CAS	CERCLA	SARA	SARA	U.S.	WI	Prop
Component	Number	RQ	EHS	313	HAP	HAP	65
Copper Sulfate Pentahydrate	7758-99-8	Yes	No	Yes	No	Yes	No

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

No data available.

Note: * This product contains cupric sulfate which is subject to reporting under Section 313 (40 CFR 372) as a Copper Compound.

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, SDS0564.03

Replaces: SDS0564.02

The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for

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