

Section 1. Product and Company Identification

Product Name Copper Amino Acid Chelate (Cu 10%)
CAS Number Mixture

Parchem - fine & specialty chemicals
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New Rochelle, NY 10801
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EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

OSHA/HCS Status: The material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification of the substance or mixture

Combustible Dusts
Acute Toxicity (oral) - Category 4
Skin Corrosion/Irritation - Category 2
Serious Eye Damage/ Eye Irritation - Category 2B
Aquatic Hazard (Acute) - Category 1
Aquatic Hazard (Long-Term) - Category 1

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statements

May form combustible dust concentrations in air.
Harmful if swallowed.
Causes skin and eye irritation.
Very toxic to aquatic life with long lasting effects.



Precautionary Statements

General

Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention

Wear protective gloves. Wear eye or face protection. Avoid release to the environment. Do not eat, drink, or smoke when using this product. Wash hands thoroughly after handling.

Response

Collect spillage. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage

Not applicable.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified: Fine dust clouds may form explosive mixtures with air. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose, and throat.

Section 3. Composition / Information on Ingredients

Common Name Copper Amino Acid Chelate (Cu 10%)

CAS Number Mixture

COMPONENT	CAS NUMBER	CONCENTRATION
Copper Citrate	866-82-0	30 – 60%
Copper Bisglycinate	13479-54-4	10 – 30%
Copper Sulfate	7758-99-8	5 – 10%

Section 4. First Aid Measures

Description of necessary first aid measures

Eye Contact: In case of contact, immediately flush eyes with water for at least 15 minutes, preferably using an eyewash station. Remove any contact lens as soon as practical to do so. Get immediate medical attention if irritation occurs.

Inhalation: Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

Skin Contact: Wash with soap and water for at least 15 minutes. Get immediate medical attention if irritation develops.

Ingestion: Do NOT induce vomiting. Rinse mouth. Do not give anything by mouth to an unconscious person.



Most important symptoms/effects, acute, and delayed

Potential Acute Health Effects

Inhalation: No known significant effects or critical hazards.

Ingestion: No known significant effects or critical hazards.

Skin contact: Causes skin irritation.

Eye contact: Causes serious eye irritation.

Over-exposure signs/symptoms

Eye Contact: Adverse symptoms may include the following: pain or irritation; watering; redness

Skin contact: Adverse symptoms may include the following: irritation; redness

Ingestion: No known significant effects or critical hazards.

Inhalation: No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Section 5. Firefighting Measures

Extinguishing media

Suitable extinguishing media: Use dry chemical powder

Unsuitable extinguishing media: Do not use water jet or water-based fire extinguishers.

Specific hazards arising from the chemical: Fine dust clouds may form explosive mixtures with air. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

Decomposition products may include the following materials: Carbon dioxide; carbon monoxide; nitrogen oxides; Sulfur oxides; metal oxide/oxides

Special protective actions for firefighters: Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for firefighters: Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.



Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

For non-emergency personnel: Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental Precautions: Not applicable

Methods and materials for containment and cleaning up

Spill: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 13 for waste disposal.

Section 7. Handling and Storage

Precautions for safe handling

Protective Measures: Put on appropriate personal protective equipment (see Section 8). Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation.

Advice on general occupational hygiene: Normal, good industrial hygiene

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use.

Section 8. Exposure Controls / Personal Protection

Control Parameters

Occupational Exposure Limits: None

Appropriate Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Environmental Exposure Controls: In some cases, dust collection, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.



Eye/Face Protection: Safety glasses with side-shields conforming to EN166/ANSI Z87 additional eye/face protection may be appropriate.

Skin Protection

Hand Protection: Handle with gloves. Gloves must be inspected prior to use to ensure there are no holes or tears. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of gloves after use in accordance with applicable laws and good industry practices. Wash and dry hands.

Body Protection: Wear appropriate clothing such as long sleeves and/or protective coveralls. The type of protective clothing must be selected according to the type, concentration and amount of the substance(s) at the specific workplace.

Other Skin Protection: Not required under normal conditions of use.

Respiratory Protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type P100 (US) or type P3 (EU EN 143) respirator cartridges. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Section 9. Physical and Chemical Properties

Physical State: Solid [Powder]

Color: Blue-Green

Odor: Characteristic

Odor Threshold: Not available

pH: Not available

Melting Point: Not available

Boiling Point: Not available

Flash Point: Not applicable

Evaporation Rate: Not applicable

Flammability (Solid, Gas): Not available

Lower and Upper Explosive (Flammable) Limits: Not available

Vapor pressure: Not applicable

Relative density: Not available

Vapor density: Not applicable

Solubility: Not available

Partition coefficient (n-Octanol/water): Not available

Auto-ignition temperature: Not available

Decomposition temperature: Not available

Viscosity: Not applicable



Section 10. Stability and Reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical Stability: The product is stable

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials, acids, and alkalis.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
Copper Citrate	LD50 Oral	Rat	1580 mg/kg	-
Copper Sulfate	LD50 Oral	Rat	300 mg/kg	-
	LD50 Oral	Rat	960 mg/kg	-

Irritation/Corrosion: No data available

Sensitization: No data available

Carcinogenicity: No data available

Specific target organ toxicity (single exposure): No data available

Specific target organ toxicity (repeated exposure): No data available

Aspiration Hazard: No data available

Potential Acute Health Effects

Inhalation: No known significant effects or critical hazards.

Ingestion: No known significant effects or critical hazards.

Skin contact: Causes skin irritation.

Eye contact: Causes serious eye irritation.

Over-exposure signs/symptoms

Eye Contact: Adverse symptoms may include the following: pain or irritation; watering; redness

Skin contact: Adverse symptoms may include the following: irritation; redness

Ingestion: No known significant effects or critical hazards.

Inhalation: No known significant effects or critical hazards.



Delayed and immediate effects and also chronic effects from short and long term exposure

Short-term Exposure

Potential immediate effects: No known significant effects or critical hazards

Potential delayed effects: No known significant effects or critical hazards

Long-term Exposure

Potential immediate effects: No known significant effects or critical hazards

Potential delayed effects: No known significant effects or critical hazards

Potential Chronic Health Effects

General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity: No known significant effects or critical hazards

Mutagenicity: No known significant effects or critical hazards

Teratogenicity: No known significant effects or critical hazards

Developmental Effects: No known significant effects or critical hazards

Fertility Effects: No known significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE Value
Oral	1325.5 mg/kg

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Copper Sulfate	Acute EC50 182 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.032 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability: There is no data available

Bioaccumulative Potential: There is no data available

Mobility in Soil

Soil/water partition coefficient (KOC): Not available.

Other adverse Effects: No known significant effects or critical hazards



Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT Classification: Not regulated

IMDG: Not regulated

IATA: Not regulated

Environmental Hazards: Yes

Additional Information: N/A

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available.

Section 15. Regulatory Information

US Federal Regulations

TSCA 4(a) proposed test rules: Glycine

TSCA 8(a) CDR Exempt/Partial Exemption: Not determined

United States Inventory (TSCA 8b): All components are listed or exempted

Clean Water Act (CWA) 307: Dicopper citrate; Bis(glycinato)copper; Copper sulfate pentahydrate

Clean Water Act (CWA) 311: Copper sulfate pentahydrate

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs): Not listed

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals): Not listed

SARA 302/304

Composition/Information on ingredients: No products were found

SARA 304 RQ: Not applicable.

SARA 311/312 Classification: Fire hazard; Immediate (acute) health hazard



Composition/information on ingredients

Name	Percentage	Fire Hazard	Sudden Release of Pressure	Reactive	Immediate (acute) Health Hazard	Delayed (Chronic) Health Hazard
Copper Citrate	30 - 60%	No	No	No	Yes	No
Copper Bisglycinate	10 - 30%	No	No	No	Yes	No
Copper Sulfate	5 - 10%	No	No	No	Yes	No

SARA 313

	Product Name	CAS Number	Percentage
Form R - Reporting Requirements	Copper Citrate	866-82-0	30 - 60%
	Copper Bisglycinate	13479-54-4	10 - 30%
	Copper Sulfate	7758-99-8	5 - 10%
Supplier Notifications	Copper Citrate	866-82-0	30 - 60%
	Copper Bisglycinate	13479-54-4	10 - 30%
	Copper Sulfate	7758-99-8	5 - 10%

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State Regulation

Massachusetts: None of the components are listed

New York: None of the components are listed

New Jersey: The following components are listed: Dicopper citrate; Bis(glycinato)copper; Copper sulfate pentahydrate

Pennsylvania: The following components are listed: Dicopper citrate; Bis(glycinato)copper; Copper sulfate pentahydrate

California Prop. 65: No products were found

International Regulations

International Lists

Australia inventory (AICS): Not determined.

China inventory (IECSC): Not determined.

Japan inventory: All components are listed or exempted.



Korea inventory: Not determined.

Malaysia Inventory (EHS Register): Not determined.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): Not determined.

Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals: Not listed

Chemical Weapons Convention List Schedule II Chemicals: Not listed

Chemical Weapons Convention List Schedule III Chemicals: Not listed

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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