



# Safety Data Sheet

## Chemurgic's Copper 5 Ligno +

SDS Revision Date: 02/24/2015

### 1. Identification

#### 1.1. Product identifier

**Product Identity** Chemurgic's Copper 5 Ligno +  
**Alternate Names** Common Name: Fertilizing compound, liquid.  
Chemical Description: Copper lignosulfonate complex, aqueous solution

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Intended use** See Technical Data Sheet.  
**Application Method** See Technical Data Sheet.

#### 1.3. Details of the supplier of the safety data sheet

**Company Name** Chemurgic Agricultural Chemicals, Inc.  
P.O. Box 2106  
Turlock, CA 95381

#### EMERGENCY PHONE NUMBERS:

**Company Phone Number** DAYS: (209) 634-2951  
EVES: (209) 652-7260

**24-Hour Emergency Telephone Number** INFOTRAC: 1-800-535-5053

EPA National Response Center: (800) 424-8802

### 2. Hazard(s) identification

#### 2.1. Classification of the substance or mixture

Acute Toxicity (Oral): Category 5; H303  
Skin Irritation: Category 2; H315  
Eye Irritation: Category 2A; H319

#### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



**Warning**

H303: May be harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

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### [Prevention]:

P264: Wash hands, face, and other affected areas thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

### [Response]:

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P312: Call a POISON CENTER/doctor/physician if you feel unwell.

P321: Specific treatment see Section 4, First Aid Measures, on this SDS.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+313: If skin irritation occurs: Get medical advice / attention.

P337+313: If eye irritation persists: Get medical advice / attention.

P362: Take off contaminated clothing and wash before reuse.

### [Storage]:

No GHS storage statements

### [Disposal]:

No GHS disposal statements

### [Sensitization]:

Not a skin sensitizer.

### [Comments Health]:

Read all precautions of product being handled and follow the most restrictive language for all products to provide the safest work environment.

### [Comments]:

**KEEP OUT OF REACH OF CHILDREN**

## 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	CAS Number	Weight %
Copper sulfate pentahydrate	7758-99-8	1.0 - 10

\*The full texts of the phrases are shown in Section 16.

## 4. First aid measures

### 4.1. Description of first aid measures

#### General

In all cases of doubt, or when symptoms persist, seek medical attention.  
Never give anything by mouth to an unconscious person.

#### Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

#### Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact

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lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. If skin irritation occurs, get medical attention. Wash contaminated clothing before reuse.

**Ingestion** If conscious and alert, drink water or milk to dilute, then induce vomiting. Call a physician or Poison Control Center immediately.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain. Severe eye irritation.

## 5. Fire-fighting measures

### 5.1. Extinguishing media

Water fog, foam, dry chemical, carbon dioxide (CO<sub>2</sub>). Avoid using water jet as an extinguisher as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Thermal degradation at high temperatures above 575 C (1067 F) may produce sulfur trioxide.

### 5.3. Advice for fire-fighters

Wear positive pressure, self-contained breathing apparatus and goggles. Contain any liquid runoff.

**Unusual Fire and Explosion Hazards:** None known.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8). Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### 6.2. Environmental precautions

Do not allow spills to enter drains or waterways. Prevent product spillage from entering drinking water supplies or streams.

### 6.3. Methods and material for containment and cleaning up

Collect liquid or absorb onto absorbent material and package for disposal. After removal of spilled product, flush contaminated area thoroughly with water. Do not return spills to original containers for re-use.

## 7. Handling and storage

### 7.1. Precautions for safe handling

Transfer products using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc. Wear the appropriate personal protective equipment when handling this product. Avoid contact with eyes, skin and clothing. Avoid inhalation of spray mists. Ensure adequate ventilation. Wash hands thoroughly after handling. Do not eat, drink, or

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smoke when using this product.

See section 2 for further details. - [Prevention]:

### 7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Contact with strong oxidizing agents.

Store in plastic or stainless steel container in a cool, well-ventilated, dry place at temperatures above 40° F. Keep container tightly closed. Do not store in contact with incompatible materials. Do not store near food or feeds. Do not stack pallets more than two high. Keep out of reach of children.

See section 2 for further details. - [Storage]:

### 7.3. Specific end use(s)

No data available.

## 8. Exposure controls and personal protection

### 8.1. Control parameters

#### Exposure Limits

Chemical Name	Form	OSHA/PEL	ACGIH TLV	NIOSH REL
Copper Sulfate pentahydrate (CAS No. 7758-99-8)	Dust and mist.	1 mg/m3	1 mg/m3	1 mg/m3

### 8.2. Exposure controls

#### Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

#### Eyes

Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.

#### Skin

Impervious gloves and clothes.

#### Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

#### Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

## 9. Physical and chemical properties

**Appearance**

Dark brown liquid

**Odor**

Lignin

**Odor threshold**

Not available

**pH**

3.9

**Melting point / freezing point**

230° F (110° C) estimated

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Initial boiling point and boiling range	302° F (150° C) estimated
Flash Point	Not available
Evaporation rate (Ether = 1)	Not available
Flammability (solid, gas)	Noncombustible
Upper/lower flammability or explosive limits	<b>Lower Explosive Limit:</b> Not available <b>Upper Explosive Limit:</b> Not available
Vapor pressure (Pa)	0.00001 hPa estimated
Vapor Density	< 1.0
Specific Gravity	1.18
Solubility in Water	Not available
Partition coefficient n-octanol/water (Log Kow)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity (cSt)	Not available
Density	9.9 lbs/gal

### 9.2. Other information

No other relevant information.

## 10. Stability and reactivity

### 10.1. Reactivity

Stable and non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal circumstances.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Avoid contact with incompatible materials.

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

No hazardous decomposition product are known.

## 11. Toxicological information

### Acute toxicity

Product	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Chemurgic's Copper 5 Ligno + (CAS Mixture)	4789.4106 estimated	No data available	No data available	No data available	No data available

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Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	5	May be harmful if swallowed
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	2A	Causes serious eye irritation
Respiratory sensitization	---	Not available
Skin sensitization	---	Not a contact sensitizer.
Germ cell mutagenicity	---	No data available to indicate product or components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	---	Not a listed carcinogen by IARC, AGGIH, NTP, or OSHA.
Reproductive toxicity	---	Not expected to cause reproductive or developmental effects.
STOT-single exposure	---	Not classified.
STOT-repeated exposure	---	Not classified
Aspiration hazard	---	Not available.
Chronic effects		Prolonged inhalation may be harmful.
<b>Likely routes of exposure</b>	Ingestion:	May be harmful if swallowed
	Inhalation:	Prolonged inhalation may be harmful
	Skin contact:	Causes skin irritation.
	Eye contact:	Causes serious eye irritation.
<b>Symptoms</b>	May cause stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain.	

## 12. Ecological information

### 12.1. Toxicity

Toxic to aquatic life with long lasting effects.

#### Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Copper sulfate - (7758-99-8)	0.66 – 1.15 mg/l 96 hours Species: Bluegill ( <i>Lepomis macrochirus</i> )	0.0037 mg/l 48 hours Species: Water flea ( <i>Bosmina longirostris</i> )	Not Available

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### 12.2. Persistence and degradability

No data available.

### 12.3. Bioaccumulative potential

Not available.

### 12.4. Mobility in soil

No data available.

### 12.6. Other adverse effects

No other adverse environmental effects are expected from this component.

## 13. Disposal considerations

### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

## 14. Transport information

**DOT CLASSIFICATION:** Not DOT regulated in domestic (USA ground) transportation in package sizes less than 50 lbs. (5.1 gallons); 22.7 kg (19.3 liters). The following DOT transportation information pertains to shipments with package sizes equal to or exceeding this value. DOT Regulated Marine Pollutant.

<b>UN Number</b>	UN3082
<b>Proper shipping name</b>	Environmentally hazardous substance, Liquid, N.O.S. (copper sulfate, pentahydrate RQ = 50 lbs)
<b>Hazard class</b>	9
<b>Packing group</b>	III

**Environmental Hazards:** Marine pollutant.

## 15. Regulatory information

<b>Regulatory Overview</b>	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
<b>Toxic Substance Control Act ( TSCA)</b>	All components of this material are either listed or exempt from listing on the TSCA Inventory.
<b>CERCLA Hazardous Substance List</b>	Not listed.
<b>SARA 304 Emergency Release Notification</b>	Not regulated.
<b>OSHA Specifically Regulated Substances</b>	Not listed.
<b>SARA Title III Classification</b>	Section 302 – Extremely hazardous substances: Not listed. Section 311/312 – Hazardous chemical: No. Section 313: Copper Sulfate, pentahydrate (7758-99-8)

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### US EPA Tier II Hazards

Fire: No

Sudden Release of Pressure: No

Reactive: No

Immediate (Acute): Yes

Delayed (Chronic): No

**California Proposition 65:** This product does not contain any chemicals known to the state of California to cause cancer and/or reproductive harm.

### State Right to Know:

Copper Sulfate, pentahydrate (CAS 7758-99-8) – MA, NJ, PA

## 16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

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