SECTION 1: IDENTIFICATION

Product Identifier
Product Form: Mixture
Product Name: Liquid Copper Sulfate 25%
EPA Registration #: 83918-4

Intended Use of the Product
Algae control. Disinfection byproduct control.

Name, Address, and Telephone of the Responsible Party
Manufacturer
CHEMTRADE LOGISTICS INC.
155 Gordon Baker Road
Suite 300
Toronto, Ontario M2H 3N5
For SDS Info: (416) 496-5856
www.chemtradelogistics.com

Emergency Telephone Number
Emergency Number:
Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300
INTERNATIONAL: +1-703-741-5970
Chemtrade Emergency Contact: (866) 416-4404
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture
GHS Classification
Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Carc. 1A H350
Aquatic Acute 1 H400
Aquatic Chronic 1 H410

Full text of hazard classes and H-statements : see section 16

Label Elements
GHS Labeling
Hazard Pictograms:

Signal Word: Warning
Hazard Statements:
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H350 - May cause cancer (Inhalation).
H400 - Very toxic to aquatic life.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary Statements:
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 - Specific treatment (see section 4 on this SDS).
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

Other Hazards
Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

Unknown acute toxicity
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%*</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>70 - 90</td>
<td>Not classified</td>
</tr>
<tr>
<td>Sulfuric acid, copper(2+) salt (1:1),</td>
<td>(CAS No) 7758-99-8</td>
<td>10 - 30*</td>
<td>Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315</td>
</tr>
<tr>
<td>pentahydrate</td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319 Aquatic Acute 1, H400</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>Sulfuric acid**</td>
<td>(CAS No) 7664-93-9</td>
<td>0.1 – 1.0*</td>
<td>Met. Corr. 1, H290 Skin Corr. 1A, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318 Carc. 1A, H350</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 3, H402</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16
*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).
*The actual concentration of the ingredient(s) is withheld as a trade secret in accordance with the Hazardous Products Regulations (HPR) SOR/2015-17 and 29 CFR 1910.1200.
** Strong inorganic acid aerosols/mists containing this substance are carcinogenic to humans via inhalation. Under normal conditions of use this route of exposure is not expected.

SECTION 4: FIRST AID MEASURES

Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye irritation. Causes skin irritation. Harmful if swallowed.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.
**Ingestion:** This material is harmful orally and can cause adverse health effects or death in significant amounts.

**Chronic Symptoms:** None expected under normal conditions of use.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

**SECTION 5: FIRE-FIGHTING MEASURES**

**Extinguishing Media**

- **Suitable Extinguishing Media:** Water spray, dry chemical, foam, carbon dioxide.
- **Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**Special Hazards Arising From the Substance or Mixture**

- **Fire Hazard:** Not considered flammable but may burn at high temperatures.
- **Explosion Hazard:** Product is not explosive.
- **Reactivity:** Hazardous reactions will not occur under normal conditions.

**Advice for Firefighters**

- **Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.
- **Firefighting Instructions:** Use water spray or fog for cooling exposed containers.
- **Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.
- **Hazardous Combustion Products:** Sulphur oxides. Copper compounds.
- **Other Information:** Do not allow run-off from fire fighting to enter drains or water courses.

**Reference to Other Sections**

Refer to Section 9 for flammability properties.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**

- **General Measures:** Avoid breathing (vapor, mist, spray). Avoid all contact with skin, eyes, or clothing.
- **For Non-Emergency Personnel**
  - **Protective Equipment:** Use appropriate personal protective equipment (PPE).
  - **Emergency Procedures:** Evacuate unnecessary personnel.
- **For Emergency Personnel**
  - **Protective Equipment:** Equip cleanup crew with proper protection.
  - **Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

**Environmental Precautions**

Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

**Methods and Materials for Containment and Cleaning Up**

- **For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- **Methods for Cleaning Up:** Cautiously neutralize spilled liquid. Liquid spill: neutralize with powdered limestone or sodium bicarbonate. Clear up spills immediately and dispose of waste safely. Contact competent authorities after spill.

**Reference to Other Sections**

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for Safe Handling**

- **Additional Hazards When Processed:** Handle in accordance with standard industrial practices, and ensure appropriate ventilation. Do not release into the environment. Do not use metal containers. Contact with metals may evolve flammable hydrogen gas.
- **Precautions for Safe Handling:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing.
- **Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

**Conditions for Safe Storage, Including Any Incompatibilities**

- **Technical Measures:** Comply with applicable regulations.
- **Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.
- **Incompatible Materials:** Bases. Oxidizers. Metals.
Liquid Copper Sulfate 25%

Safety Data Sheet


Specific End Use(s)

Algae control. Disinfection byproduct control.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Sulfuric acid (7664-93-9)

<table>
<thead>
<tr>
<th>Mexico</th>
<th>OEL TWA (mg/m³)</th>
<th>1 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>0.2 mg/m³ (thoracic particulate matter)</td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH chemical category</td>
<td>Suspected Human Carcinogen contained in strong inorganic acid mists</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>USA IDLH</td>
<td>US IDLH (mg/m³)</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td>Alberta</td>
<td>OEL STEL (mg/m³)</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>Alberta</td>
<td>OEL TWA (mg/m³)</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>British Columbia</td>
<td>OEL TWA (mg/m³)</td>
<td>0.2 mg/m³ (Thoracic, contained in strong inorganic acid mists)</td>
</tr>
<tr>
<td>Manitoba</td>
<td>OEL TWA (mg/m³)</td>
<td>0.2 mg/m³ (thoracic particulate matter)</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>OEL STEL (mg/m³)</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>OEL TWA (mg/m³)</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>Newfoundland &amp; Labrador</td>
<td>OEL TWA (mg/m³)</td>
<td>0.2 mg/m³ (thoracic particulate matter)</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>OEL TWA (mg/m³)</td>
<td>0.2 mg/m³ (thoracic particulate matter)</td>
</tr>
<tr>
<td>Nunavut</td>
<td>OEL STEL (mg/m³)</td>
<td>0.6 mg/m³ (thoracic fraction)</td>
</tr>
<tr>
<td>Nunavut</td>
<td>OEL TWA (mg/m³)</td>
<td>0.2 mg/m³ (thoracic fraction)</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>OEL STEL (mg/m³)</td>
<td>0.6 mg/m³ (thoracic fraction, strong acid mists only)</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>OEL TWA (mg/m³)</td>
<td>0.2 mg/m³ (thoracic fraction, strong acid mists only)</td>
</tr>
<tr>
<td>Ontario</td>
<td>OEL TWA (mg/m³)</td>
<td>0.2 mg/m³ (thoracic)</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>OEL TWA (mg/m³)</td>
<td>0.2 mg/m³ (thoracic particulate matter)</td>
</tr>
<tr>
<td>Québec</td>
<td>VECD (mg/m³)</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>Québec</td>
<td>VEMP (mg/m³)</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>OEL STEL (mg/m³)</td>
<td>0.6 mg/m³ (thoracic fraction)</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>OEL TWA (mg/m³)</td>
<td>0.2 mg/m³ (thoracic fraction)</td>
</tr>
<tr>
<td>Yukon</td>
<td>OEL STEL (mg/m³)</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>Yukon</td>
<td>OEL TWA (mg/m³)</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Acid-resistant clothing.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.
Liquid Copper Sulfate 25%
Safety Data Sheet

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, blue</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>2.0 - 2.1</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>-2 °C (28.4 °F)</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Vapor Density at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.18</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.
Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials.
Hazardous Decomposition Products: None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity (Oral): Oral: Harmful if swallowed.
Acute Toxicity (Dermal): Not classified
Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data:

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Copper Sulfate 25%</td>
<td></td>
</tr>
<tr>
<td>ATE (Oral)</td>
<td>1,598.92 mg/kg body weight</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: Causes skin irritation.
pH: 2.0 - 2.1

Eye Damage/Irritation: Causes serious eye irritation.
pH: 2.0 - 2.1

Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Effects After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Effects After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Effects After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Effects After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LD50 Oral Rat</th>
<th>LC50 Fish 1</th>
<th>LC50 Fish 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid, copper(2+) salt (1:1), pentahydrate (7758-99-8)</td>
<td>960 mg/kg</td>
<td>0.66 (0.66 - 1.15) mg/l</td>
<td>500 mg/l</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>&gt; 90000 mg/kg</td>
<td>0.147 (0.147 - 0.227) mg/l</td>
<td>42 mg/l</td>
</tr>
<tr>
<td>Sulfuric acid (7664-93-9)</td>
<td>2140 mg/kg</td>
<td>0.96 (0.96 - 1.8) mg/l</td>
<td></td>
</tr>
</tbody>
</table>

IARC Group 1

OSHA Hazard Communication Carcinogen List: In OSHA Hazard Communication Carcinogen list.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LC50 Fish 1</th>
<th>LC50 Fish 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (7664-93-9)</td>
<td>0.66 (0.66 - 1.15) mg/l</td>
<td>500 mg/l</td>
</tr>
<tr>
<td>Sulfuric acid (7664-93-9)</td>
<td>0.147 (0.147 - 0.227) mg/l</td>
<td>42 mg/l</td>
</tr>
</tbody>
</table>

Persistence and Degradability

Liquid Copper Sulfate 25%

Persistence and Degradability: May cause long-term adverse effects in the environment.

Bioaccumulative Potential

Liquid Copper Sulfate 25%

Bioaccumulative Potential: Not established.

Sulfuric acid (7664-93-9)

BCF Fish 1: (no bioaccumulation)

Mobility in Soil

Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.
*When shipped in accordance with US DOT 49 CFR part 171.4(c) and other appropriate sections/provisions this material is not designated as a marine pollutant when transported by road or rail.

**When shipped in accordance with the Canada Transport of Dangerous Goods Regulations part 1.45.1 and other appropriate sections/provisions this material is not designated as a marine pollutant when transported by road or rail.

**TRANSPORTATION CLASSIFICATION**

<table>
<thead>
<tr>
<th>TRANSPORTATION CLASSIFICATION</th>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification Number</td>
<td>UN3082</td>
<td>UN3082</td>
<td>UN3082</td>
<td>UN3082</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (CONTAINS COPPER SULFATE)</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (CONTAINS COPPER SULFATE)</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (CONTAINS COPPER SULFATE)</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (CONTAINS COPPER SULFATE)</td>
</tr>
<tr>
<td>Transport Hazard Class(es)</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Environmental Hazards</td>
<td>Marine Pollutant: Yes*</td>
<td>Marine Pollutant: Yes**</td>
<td>Marine Pollutant: Yes</td>
<td>Marine Pollutant: N/A</td>
</tr>
<tr>
<td>Emergency Response</td>
<td>ERG Number: 171</td>
<td>ERAP Index: Not applicable</td>
<td>EMS: F-A, S-F</td>
<td>ERG code (IATA): 9L</td>
</tr>
<tr>
<td>Additional Information</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**SECTION 15: REGULATORY INFORMATION**

**US Federal Regulations**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>CERCLA RQ</th>
<th>EPCRA 304 RQ</th>
<th>SARA 302 TPQ</th>
<th>SARA 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid, copper(2+) salt (1:1), pentahydrate (7758-99-8)</td>
<td>Not present</td>
<td>Not present</td>
<td>Not present</td>
<td>No</td>
</tr>
<tr>
<td>Sulfuric acid (7664-93-9)</td>
<td>1000 lb</td>
<td>1000 lb</td>
<td>1000 lb</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**SARA 311/312**

*Liquid Copper Sulfate 25%*

Immediate (acute) health hazard. Delayed (chronic) health hazard

**US TSCA Flags**

Not present

**US State Regulations**

**California Proposition 65**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Carcinogenicity</th>
<th>Developmental Toxicity</th>
<th>Female Reproductive Toxicity</th>
<th>Male Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid, copper(2+) salt (1:1), pentahydrate (7758-99-8)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sulfuric acid (7664-93-9)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Strong inorganic acid mists containing sulfuric acid (Not applicable)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**State Right-To-Know Lists**

*11/30/2018 EN (English US) SDS#: CHE-50215 7/10*
Liquid Copper Sulfate 25%
Safety Data Sheet

Sulfuric acid (7664-93-9)
U.S. - Massachusetts - Right To Know List - No
U.S. - New Jersey - Right to Know Hazardous Substance List - No
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List - No
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances - No
U.S. - Pennsylvania - RTK (Right to Know) List - No

Canadian Regulations
Sulfuric acid, copper(2+) salt (1:1), pentahydrate (7758-99-8)
Listed on the Canadian DSL (Domestic Substances List)* Anhydrous form is listed on DSL as (7758-98-7)
Not listed on the Canadian NDSL (Non-Domestic Substances List)

Sulfuric acid (7664-93-9)
Listed on the Canadian DSL (Domestic Substances List)
Not listed on the Canadian NDSL (Non-Domestic Substances List)

International Inventories/Lists
Chemical Name (CAS No.) | Australia AICS | Turkey CICR | Korea ECL | EU EINECS | EU ELINCS | EU SVHC | EU NLP | Mexico INSQ
---|---|---|---|---|---|---|---|---
Sulfuric acid, copper(2+) salt (1:1), pentahydrate (7758-99-8) | Yes | No | No | No | No | No | No | No
Sulfuric acid (7664-93-9) | Yes | No | Yes | Yes | No | No | No | No

Chemical Name (CAS No.) | China IECSC | Japan ENCS | Japan ISHL | Japan PDSCL | Japan PRTR | Philippines PICCS | New Zealand NZIOC | US TSCA
---|---|---|---|---|---|---|---|---
Sulfuric acid, copper(2+) salt (1:1), pentahydrate (7758-99-8)* Anhydrous form is listed on TSCA as (7758-98-7) | Yes | No | No | Yes | Yes | Yes | Yes | Yes
Sulfuric acid (7664-93-9) | Yes | Yes | No | Yes | No | Yes | Yes | Yes

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION
Revision Date : 11/30/2018
Revision Summary

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Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Hazardous Products Regulations (HPR).

GHS Full Text Phrases:

- **Acute Tox. 4 (Oral)**: Acute toxicity (oral) Category 4
- **Aquatic Acute 1**: Hazardous to the aquatic environment - Acute Hazard Category 1
- **Aquatic Acute 3**: Hazardous to the aquatic environment - Acute Hazard Category 3
- **Aquatic Chronic 1**: Hazardous to the aquatic environment - Chronic Hazard Category 1
- **Eye Dam. 1**: Serious eye damage/eye irritation Category 1
Liquid Copper Sulfate 25%
Safety Data Sheet

| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Met. Corr. 1 | Corrosive to metals Category 1 |
| Skin Corr. 1A | Skin corrosion/irritation Category 1A |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| Carc. 1A | Carcinogenicity Category 1A |
| H290 | May be corrosive to metals |
| H302 | Harmful if swallowed |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H350 | May cause cancer |
| H400 | Very toxic to aquatic life |
| H402 | Harmful to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |

**NFPA 704**

**NFPA Health Hazard:** 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

**NFPA Fire Hazard:** 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

**NFPA Reactivity Hazard:** 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

**HMIS Rating**

- Health: 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability: 0 Minimal Hazard
- Physical: 0 Minimal Hazard
- PPE: See Section 8

**Indication of Changes**

**Abbreviations and Acronyms**

- AICS – Australian Inventory of Chemical Substances
- ACGIH – American Conference of Governmental Industrial Hygienists
- AIHA – American Industrial Hygiene Association
- ATE - Acute Toxicity Estimate
- BCF - Bioconcentration factor
- BEI - Biological Exposure Indices (BEI)
- CAS No. - Chemical Abstracts Service number
- CERCLA RQ - Comprehensive Environmental Response, Compensation, and Liability Act - Reportable Quantity
- CERCLIS - Comprehensive Environmental Response, Compensation, and Liability Act - Information System
- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
- CICR - Turkish Inventory and Control of Chemicals
- EC50 - Median effective concentration
- ECLOG - Economic Logarithm
- ECOSafety - European Chemical Safety Data Sheet
- EINECS - European Inventory of Existing Chemical Substances
- ELINCS - European List of Notified Chemical Substances
- EnCAs - Environmental Chemicals Assessment System
- ENCS - Japanese Existing and New Chemicals Inventory
- EPA – Environmental Protection Agency
- EPCRA 304 – Emergency Planning and Community Right-to-Know Act – Reportable Quantity
- ERG code (IATA) - Emergency Response Drill Code as found in the International Civil Aviation Organization (ICAO)
- ERAP Index – Emergency Response Assistance Plan Quantity Limit
- LOAEL - Lowest Observed Adverse Effect Level
- LOEC - Lowest-observed-effect Concentration
- Log Pow - Octanol/water Partition Coefficient
- LD50 - Median Lethal Dose
- LC50 - Median Lethal Concentration
- LNL - Life Line List
- NIOSH - National Institute for Occupational Safety and Health
- NLP - Europe No Longer Polymers List
- NOAEL - No-Observed Adverse Effect Level
- NOEC - No-Observed Effect Concentration
- NZIOC - New Zealand Inventory of Chemicals
- OEL - Occupational Exposure Limits
- OSHA – Occupational Safety and Health Administration
- PEL - Permissible Exposure Limits
- PICCS - Philippine Inventory of Chemicals and Chemical Substances
- PDSCL - Japan Poisonous and Deleterious Substances Control Law
- PRTR - Japan Pollutant Release and Transfer Register
- REL - Recommended Exposure Limit
- SADT - Self Accelerating Decomposition Temperature
- SARA – Superfund Amendments and Reauthorization Act
- SARA 302 - Section 302, 40 CFR Part 355
- SARA 311/312 - Sections 311 and 312, 40 CFR Part 370 Hazard Categories
- SARA 313 - Section 313, 40 CFR Part 372

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Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA’S “Right to Know” (29 CFR 1910.1200) and Canada’s WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.