Section I - Product Identification
A solution of copper sulfate in water.

Section II - Hazards Identification
Warning. Harmful if swallowed. Wear protective gloves and clothing. Wash thoroughly after handling. If swallowed, rinse mouth with water and call a poison control center. Ingestion will cause vomiting, gastric distress, dizziness, anemia, convulsions, jaundice and death.

<table>
<thead>
<tr>
<th>Safety Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health: Hazardous</td>
</tr>
<tr>
<td>Storage: General storage</td>
</tr>
<tr>
<td>NFPA Ratings</td>
</tr>
<tr>
<td>Health = 2</td>
</tr>
</tbody>
</table>

Potential Health Effects
The toxicology of this compound have not been completely examined. It is presumed that the toxicity of this item is similar to other copper compounds.

Inhalation: May be irritating.

Ingestion: While the toxicity of this compound is low, large doses may cause nausea, vomiting, diarrhea, etc. Ingestion of even small amounts of copper sulfate may be fatal if not treated immediately.

Skin contact: Not normally a problem but prolonged contact with broken or burned skin may cause copper poisoning.

Eye contact: May be irritating.

Aggravation of preexisting conditions: Unknown.

Section III - Composition/Information on Components

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS#</th>
<th>OSHA Pel (TWA) as Cu</th>
<th>ACGIH TLV (TWA) as Cu</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulfate</td>
<td>7758-98-7</td>
<td>1 mg/m^3</td>
<td>1 mg/m^3</td>
<td>about 8.4% w/v</td>
</tr>
</tbody>
</table>

Section IV - First Aid Measures

Inhalation: Remove from source of exposure and get medical attention immediately.

Ingestion: If the victim is conscious, induce vomiting. Never give anything by mouth to an unconscious person.

Skin Contact: Wash affected area with soap and water. Get medical advice if irritation develops.

Eye Contact: Rinse thoroughly with running water. Get medical advice if irritation develops.
Section V - Fire Fighting Measures

Flash point: Not applicable.
Flammable Limits: Not applicable.
Fire: Not normally a fire Hazard.
Explosion: Not Normally an explosion hazards.
Fire Extinguishing Media: Any means suitable for surrounding fire.
Special information: Pyrolysis will release corrosive and toxic copper oxides.

Section VI - Accidental Release Measures

Absorb with a suitable absorbent (such as paper towels) and store in a suitable container for disposal.

Section VII - Handling and Storage

Store in a closed container, protected from freezing.

Section VIII - Exposure Control/Personal Protection

Airborne Exposure Limits: See section III.
Ventilation System: Usually not required. When required, Refer to the ACGIH document, “Industrial Ventilation, a Manual of Recommended Practices” for details about ventilation.
Personal Respirator: Usually not required. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied respirator.
Skin protection: Protective gloves are not required but recommended as part of good laboratory practice.
Eye Protection: Laboratory safety goggles or similar products are not required but recommended as part of good laboratory practice.

Section IX - Physical and Chemical Properties

Boiling Point: 100 °C
Vapor pressure (mm Hg): 18 @ 20 °C
Vapor Density (air = 1): 0.6
Appearance and Odor: A clear blue liquid with a metallic odor.
Density: About 1.05 g/ml
Evaporation Rate (water = 1): 1
Solubility: Infinitely miscible with water

Section X - Stability and Reactivity

Stability: Freezes at low temperature.
Hazardous Decomposition Products: Nothing unusual.
Hazardous polymerization: Will not occur.
Incompatibilities: Nothing unusual.
Conditions to avoid: Excessive cold/heat and light.

Section XI - Toxicological Information

Mutagenic and teratogenic data has been reported for copper sulfate.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Known Carcinogenicity?</th>
<th>NTP?</th>
<th>Anticipated?</th>
<th>IARC Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>copper sulfate</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>none</td>
</tr>
</tbody>
</table>

Section XII - Ecological Information

Environmental Fate: Copper sulfate is not biodegradable and does not evaporate.
Environmental Toxicity: Copper sulfate is toxic to fish and other organisms.

Section XIII - Disposal Considerations

Local governments often restrict the amounts of copper sulfate that may be flushed down drain. Dispose of contents and container in accordance with all government regulations.
Section XIV - Transportation Information
Not regulated.

Section XV - Regulatory Information

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>TSCA</th>
<th>EC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulfate</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Federal, State and International Regulations

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>SARA 302</th>
<th>SARA 313</th>
<th>RCRA</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulfate</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>RQ</th>
<th>TPQ</th>
<th>List</th>
<th>Category</th>
<th>261.33</th>
<th>8(D)</th>
<th>Ca. Prop 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulfate</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Copper cmpd</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Chemical Weapons Convention: No
TSCA 12(b): No
CDTA: No

SARA 311/312: Acute: Yes, Chronic: Yes

Section XVI - Other Information

This information is believed to be correct but is not warranted as such, nor does it purport to be all inclusive.
Revision Date: Nov. 2, 2017