MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

Product Name: CUPRIC SULFATE
Chemical Name: Cupric Sulfate
Synonyms: Copper Sulfate, "Blue Vitriol", "Bluestone"
Chemical Family: Copper Compounds
Molecular Formula: CuSO₄•5H₂O

HAZARDOUS INGREDIENTS OF MATERIALS

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>LD₅₀ (or LC₅₀)</th>
<th>TLV/TWA</th>
<th>CAS NO.</th>
<th>(mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cupric sulfate</td>
<td>100</td>
<td></td>
<td></td>
<td>7758-99-8</td>
<td></td>
</tr>
</tbody>
</table>

Not a controlled product

PHYSICAL PROPERTIES

Appearance and Odour: Blue crystals or blue crystalline powder, odourless
Vapour Density: –
Evaporation Rate: Not applicable
Solubility: Soluble: 203.3 g/100 g H₂O at 100°C; 31.6 g/100 g H₂O at 0°C
% Volatile by Volume: Not applicable
pH: Not applicable
FIRST AID PROCEDURES

Inhalation: None reported
Contact with Skin: Wash promptly and thoroughly with soap and water
Contact with Eyes: Wash with water immediately for at least 15 minutes
Ingestion: Drink 1-2 glasses of water to dilute and induce vomiting
Other Medical Care: Not available/reported

REACTIVITY DATA

Stability: Stable (under normal conditions)
Hazardous Polymerization: Will not occur
Conditions to Avoid: Not applicable
Materials to Avoid: Not applicable
Hazardous Decomposition or Combustion Products: If heated above 400°C, it can decompose to evolve toxic sulfur

FIRE AND EXPLOSION DATA

Flash Point (method): Not determined Autoignition Point: Not applicable
Flammability Limits in air: UEL (%): Not determined LEL(%): Not determined
Fire Extinguishing Media: Copper sulfate does not burn, nor will it support combustion.
Fire Fighting Procedures: Not determined
Other Fire or Explosion Hazards: If heated above 400°C, it can decompose and evolve sulfur dioxide (toxic!).

TOXICOLOGICAL AND HEALTH DATA

Recommended Exposure Limit (ACGIH TLV-TWA): 1 mg/m³ (as Cu) ACGIH-TWA daily 8-hour exposure
Toxicological Data: LD₅₀ (oral, rat) = 950 mg/kg;
Carcinogenicity Data: None reported
Reproductive Effects: None reported
Mutagenicity Data: None reported
Teratogenicity Data: None reported
Synergistic Materials: None reported
Effects of Exposure from:
  Inhalation: Not reported
  Skin Contact: Dermatitis
  Eye Contact: Irritation
  Ingestion: Gastric irritation - vomiting
  Other Health Effects: Irritation at mucous membrane, pharynx; nasal ulceration.

PREVENTATIVE MEASURES

Engineering Controls: Local exhaust
Respiratory Protection: NIOSH-approved respirator
Skin Protection: Rubber gloves, avoid skin contact
Eye Protection: Goggles
Other Personal Protective Equipment: Wear protective clothing to prevent repeated or prolonged skin contact.

Handling Procedures and Equipment: Not applicable
Storage Requirements: Store in a dry place
Other Precautions: Not determined
Steps to be taken in the event of a spill or leak: Recover dry - do not generate dust. Vacuum loose material.

Environmental Effects: Not available/reported
Deactivating Chemicals: Not applicable
Waste Disposal Methods: In accordance with federal, provincial, state, and local regulations on chemical waste disposal.
Shipping Name: Cupric Sulfate

Shipping Class: 9  UN: 3077  Packing Group: III

WHMIS Class:  D2B

Date Issued:  October 31, 1988  Date Revised:  July 11, 2012

Prepared By:  Thomas Kyron  MSDS Index No.: