

Material Safety Data Sheet



Copper (II) Sulfate, 5-Hydrate

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Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Cupric Sulfate, 5-Hydrate

Product Code(s): 85-6560, 85-6562, 84-0528, 85-6120, 84-1112, GEO385, GEO385A, GEO387, C856550, 89-9022, C55075, C70129, C71514, C71579

Size: Various

Chemical Name: Copper (II) Sulfate Pentahydrate

CAS Number: 7758-99-8

Formula: $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$

Synonyms: Bluestone, Blue Vitriol, Blue Copper AS

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

Chemical Information: 800-227-1150 (8am-5pm (ET) M-F) **Chemtrec** 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Hazard Identification

Emergency Overview: **CAUTION** - Harmful if swallowed. Irritating to eyes and skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation to skin.

Ingestion: May severely irritate or damage digestive tract.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Cupric Sulfate (CAS# 7758-99-8) 95 - 100%

TLV units: ACGIH-TLV 0.05 mg(Cu)/m³ (TWA)

PEL units: OSHA-PEL 0.1 mg(Cu)/m³ (TWA)

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating:

Health: 2

Fire: 0

Reactivity: 0

Extinguisher Media: Use media suitable to extinguish surrounding fire.

Flammable Limits in Air % by Volume: N/A

Autoignition Temperature: N/A

Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.

Section 6 - Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Avoid release to the environment. Refer to special instructions/safety data sheet. Do not breathe dust.

This material and its container must be disposed of as hazardous waste.

Keep container dry. Suitable for any general chemical storage.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.

Ventilation:

Local Exhaust: Acceptable

Mechanical(General): Yes

Special: No

Other: No

Protective Gloves: Natural rubber, Neoprene, PVC or equivalent.

Eye Protection: Splash proof chemical safety goggles should be worn.

Other Protective Clothing or Equipment: Lab coat, apron, eye wash, safety shower.

Section 9 - Physical Data

Molecular Weight: 249.68

Boiling Point: Decomposes

Vapor Density(Air=1): N/A

Percent Volatile by Volume: 0%

Solubility in Water: Soluble

Melting Point: 110°C (Decomposes)

Vapor Pressure: N/A

Specific Gravity (H₂O=1): 2.28 at 15.6 °C

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: Odorless blue solid.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: Heat and sources of ignition.

Incompatibility (Materials to Avoid): Reducing agents, Metals, Oxidizers,

Hazardous Decomposition Products: SO_x,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: orl-rat LD50 300 mg/kg

Effects of Overexposure:

Acute: See Section 2

Chronic: Mutation data cited. Not listed as a carcinogen by IARC, NTP or OSHA.

Conditions Aggravated by Overexposure: Hepatolenticular Degeneration (Wilson's Disease)

Target Organs: Gastrointestinal tract, Kidneys, Liver, Central Nervous System,

Primary Route(s) of Entry: N/A

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 13 - Disposal Information

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Section 14 - Transport Information

DOT Proper Shipping Name: Not regulated by ground transport.

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cupric Sulfate, Pentahydrate),

Class 9,

P.G. III

****SEVERE MARINE POLLUTANT****

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute Chronic

Name List:

Cupric Sulfate - No

Chemical Category:

Cupric Sulfate - Copper compounds

CERCLA Section 103 RQ(lb.): Cupric Sulfate - 10 lbs

RCRA Section 261.33: Cupric Sulfate - No

Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS Number	Chemical Services Abstract Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency of Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value

TSCA Toxic Substances Control Act