

Safety Data Sheet

Copper Sulfate, 20%



Section 1 Product Description

Product Name: Copper Sulfate, 20%
Recommended Use: Science education applications
Synonyms: Blue Vitriol, Roman Vitriol
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Toxic to aquatic life.

GHS Classification:

Hazardous to the aquatic environment - Acute Category 2

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	80
Copper (II) Sulfate, 5-Hydrate	7758-99-8	20

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Copper compounds, Sulfur containing gases

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

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Handling: Avoid release to the environment. Avoid contact with skin and eyes.
Storage: Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>	<u>OSHA PEL</u>
	(TWA) (STEL)	(TWA) (STEL)
Copper (II) Sulfate, 5-Hydrate	1 mg/m ³ TWA (dust and mist, as Cu) N/A	N/A N/A

Control Parameters

Engineering Measures: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: NIOSH approved air purifying respirator with dust/mist filter.

Respirator Type(s): Wear chemical splash goggles when handling this product. Have an eye wash station available.

Eye Protection:

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: No information available

Section 9 Physical Data

Formula: See Section 3	Vapor Pressure: No data available
Molecular Weight: No data available	Evaporation Rate (BuAc=1): No data available
Appearance: Colorless Blue Liquid	Vapor Density (Air=1): No data available
Odor: None	Specific Gravity: > 1
Odor Threshold: No data available	Solubility in Water: Soluble
pH: No data available	Log Pow (calculated): No data available
Melting Point: No data available	Autoignition Temperature: No data available
Boiling Point: No data available	Decomposition Temperature: No data available
Flash Point: No data available	Viscosity: No data available
Flammable Limits in Air: No data available	Percent Volatile by Volume: No data available

Section 10 Reactivity Data

Reactivity: Not generally reactive under normal conditions.

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: None known.

Incompatible Materials: Water-reactive materials, Hydroxylamine, Hypobromite, Strong reducing agents, Magnesium

Hazardous Decomposition Products: Sulfur containing gases, Copper compounds

Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Symptoms (Acute): No data available
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Copper (II) Sulfate, 5-Hydrate	7758-99-8	Oral LD50 Rat = 300 mg/kg	Dermal LD50 Rat > 2000 mg/kg	

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Carcinogenicity:**Chemical Name**

No data available

CAS Number

7732-18-5

7758-99-8

IARC

Not listed

NTP

Not listed

OSHA

Not listed

Chronic Effects:**Mutagenicity:**

No evidence of a mutagenic effect.

Teratogenicity:

No evidence of a teratogenic effect (birth defect).

Sensitization:

No evidence of a sensitization effect.

Reproductive:

No evidence of negative reproductive effects.

Target Organ Effects:**Acute:**

No data available

Chronic:

No data available

Section 12

Ecological Data

Overview:

Severe ecological hazard. This product may be toxic to plants and/or wildlife.

Mobility:

This material is expected to have only slight mobility in soil. It absorbs strongly to most soil types.

Persistence:

Dissolved into water, Adsorbs to soil., Chemically Transformed

Bioaccumulation:

Bioconcentration is expected to occur.

Degradability:

Does not biodegrade readily.

Other Adverse Effects:

No data

Chemical Name

Water

Copper (II) Sulfate, 5-Hydrate

CAS Number

7732-18-5

7758-99-8

Eco Toxicity

No data available

96 HR LC50 PIMEPHALES PROMELAS 0.6752 MG/L [STATIC]

Section 13

Disposal Information

Disposal Methods:

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

Waste Disposal Code(s):

Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name:

UN3082

Environmentally Hazardous Substances, Liquid, N.O.S. (Copper II Sulfate)

Class 9

P.G. III

R.Q 10 lbs (4.54 kg)

Air - IATA Proper Shipping Name:

UN3082

Environmentally Hazardous Substances, Liquid, N.O.S. (Copper II Sulfate)

Class 9

P.G. III

Section 15

Regulatory Information

TSCA Status:

All components in this product are on the TSCA Inventory.

Chemical Name**CAS****Number****§ 313 Name****§ 304 RQ****CERCLA RQ****§ 302 TPQ****CAA 112(2)
TQ**

Copper (II) Sulfate, 5-hydrate

7758-99-8

No

No

No

No

No

California Prop 65:

No California Proposition 65 ingredients

Section 16

Additional Information

Safety Data Sheet

Revised: 08/21/2018

Replaces: 06/15/2018

Printed: 08-25-2018

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.

Glossary

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