

Safety Data Sheet

Copper (II) Sulfate, 5%

CAROLINA[®]
www.carolina.com

Section 1

Product Description

Product Name: Copper (II) Sulfate, 5%
Recommended Use: Science education applications
Synonyms: Cupric sulfate anhydrous; Cupric sulfate; Copper monosulfate
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;

WARNING



Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life.

GHS Classification:

Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Hazardous to the aquatic environment - Acute Category 2, Acute Toxicity - Oral Category 4

Section 3

Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	92.17
Copper (II) Sulfate, 5-Hydrate	7758-99-8	7.83

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: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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: Sulfur Oxides, Metal Oxides, , In case of fire and/or explosion do not breathe fumes.

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Section 6

Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Isolate area. Keep unnecessary personnel away.

Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container.

Section 7

Handling and Storage

Handling:

Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment. Refer to special instructions/safety data sheet. Do not breathe dust.

Storage:

Suitable for any general chemical 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>
	<u>(TWA)</u>	<u>(STEL)</u>
Copper (II) Sulfate, 5-Hydrate	1 mg/m ³ TWA (dust and mist, as Cu)	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. Good general room ventilation should be sufficient to control airborne contaminants to safe levels.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Respirator Type(s):

NIOSH approved air purifying respirator with dust/mist filter.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

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: This product is a mixture.

Molecular Weight: Mixture

Appearance: Colorless Liquid

Odor: None

Odor Threshold: No data available

pH: 3.5 - 4.5

Melting Point: ≥ 0 °C

Boiling Point: 100 °C

Flash Point: No data available

Flammable Limits in Air: No data available

Vapor Pressure: No data available

Evaporation Rate (BuAc=1): No data available

Vapor Density (Air=1): No data available

Specific Gravity: No data available

Solubility in Water: Soluble

Log Pow (calculated): No data available

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Percent Volatile by Volume: No data available

Section 10

Reactivity Data

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Reactivity:	No data available
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	None known.
Incompatible Materials:	Water-reactive materials, Metals (powdered), Alkali and Alkaline Metals
Hazardous Decomposition Products:	In case of fire and/or explosion do not breathe fumes., Metal Oxides, , Sulfur Oxides
Hazardous Polymerization:	Will not occur

Section 11 Toxicity Data

Routes of Entry	Inhalation, ingestion, eye or skin contact.
Symptoms (Acute):	No data available
Delayed Effects:	No data available

Acute Toxicity:	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Chemical Name				
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg	Dermal LD50 Rat > 2000 mg/kg	Not determined
Copper (II) Sulfate, 5%	7758-99-8	Oral LD50 Rat = 481 mg/kg		

Carcinogenicity:	CAS Number	IARC	NTP	OSHA
Chemical Name				
No data available		Not listed	Not listed	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:	No data
Persistence:	Dissolved into water, Adsorbs to soil., Chemically Transformed
Bioaccumulation:	No data
Degradability:	No data
Other Adverse Effects:	No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Copper (II) Sulfate, 5-Hydrate	7758-99-8	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:	Air - IATA Proper Shipping Name:
Not regulated for transport by US DOT.	Not regulated for air transport by IATA.

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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

Section 16

Additional Information

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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