



BIOPHARM INC.

SAFETY DATA SHEET

1. Identification:

Product Identifier: Copper Sulfate, Aqueous Solutions

Product code: BC8190 = 1.6 % w/v BC8107= 0.016 M BC8144 = 0.050 M
BC8115= 0.010 M BC4096= 10% w/v BC8112 = 0.100 M

Synonym(s): Copper Sulfate, Aqueous Solutions

Recommended use: Manufacture of other chemical products, professional, scientific, and technical activities.

Recommended restrictions: None known.

Manufacturer/Supplier/Distributor Information

Company name: Biopharm Inc.

Address: 187 South Tilley Road
Hatfield, AR 71945

Telephone: (870) 389-6114

Website: www.bphchem.com

E-mail: support@bphchem.com

Emergency phone number: Chemtrec 800-424-9300

2. Hazard(s) identification:

Classification: This product is not categorized as hazardous in any GHS hazard class.

Label elements: None required.

Signal word: None required.

Hazard statement: None required.

Precautionary statement:

- Prevention** Observe good industrial hygiene practices.
- Response** Wash hands after handling.
- Storage** Store bottles tightly capped and upright. Keep in a cool place away from direct sunlight.
- Disposal** Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: None.

3. Composition/information on ingredients

Mixtures

<u>Chemical Name</u>	<u>CAS number</u>	<u>%</u>
Copper sulfate pentahydrate	7758-99-8	0.15 to 10
Water	7732-18-5	balance

4. First-aid measures

Inhalation:	Move to fresh air. Call a physician if symptoms develop or persist.
Ingestion:	Rinse mouth. Get medical attention if symptoms occur.
Skin contact:	Wash with warm water and soap. Get medical attention if irritation develops and persists.
Eye contact:	Irrigate with cool running water. If irritation develops, obtain medical care.
Most important symptoms/effects, acute and delayed:	Direct contact with eyes may cause temporary irritation.
General information:	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media:	Any media necessary for extinguishing the surrounding fire.
Unsuitable extinguishing media:	No information available.
Specific hazards arising from the chemical	None known.
Special protective equipment and precautions for firefighters	Wear approved self-contained protective clothing.
Fire-fighting equipment/instructions	Any media necessary for extinguishing the surrounding fire.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures:	Keep unnecessary personnel away.
Methods and materials for containment and cleaning up:	Wash spill area with soap and water. Prevent further leakage or spillage if safe to do so. Never return spills to original containers for reuse. For waste disposal, see section 13 of the SDS.
Environmental precautions:	None identified.

7. Handling and storage

Precautions for safe handling:	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities:	Store bottles tightly capped and upright. Keep in a cool place away from direct sunlight. Store away from incompatible materials.

8. Exposure controls/personal protection

Exposure Guidelines:

<u>Component</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Copper sulfate pentahydrate	1 mg/m ³ ppm (TWA)	0.1 mg/m ³ ppm (TWA)

Engineering measures: Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment:

Eye/face protection:	Wear protective eyeglasses or chemical safety goggles.
Skin and body protection:	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance:	Clear, blue solutions
Odor:	Odorless.
Odor threshold:	No data available.
Vapor Pressure (mm Hg):	No data available.
Vapor density (Air = 1):	No data available.
pH:	No data available.
Relative density:	1.01
Melting point/freezing point:	0.0°C
Solubility in Water:	Infinite
Boiling Point (°F):	No data available.
Flash point:	Non-flammable.
Evaporative Rate (H₂O = 1):	No data available.
Flammability (solid, gas):	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit - lower	Not applicable.
Flammability limit - upper	Not applicable.
Explosive limit - lower	Not applicable.
Explosive limit - upper	Not applicable.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature:	No data available

Decomposition temperature:	No data available
Viscosity:	No data available
Other information:	
Specific Gravity (H₂O = 1):	No data available.
Percent Volatile by Volume:	No data available.

10. Stability and reactivity

Reactivity:	Product is stable and non-reactive under ordinary conditions of use, storage and transport.
Chemical stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization will not occur.
Conditions to avoid:	None known.
Incompatible materials:	None known.
Hazardous decomposition products:	None known.

11. Toxicological information

Information on likely routes of exposure:

Ingestion:	Expected to be a low ingestion hazard.
Inhalation:	Prolonged inhalation may be harmful.
Skin Contact:	No adverse effects due to skin contact are expected.
Eye Contact:	May cause mild irritation.

Information on toxicological effects

Acute toxicity

<u>Component</u>	<u>LD50 Oral</u>	<u>LD50 Dermal</u>	<u>LC50 Inhalation</u>
Copper sulfate pentahydrate	Not applicable	Not applicable	Not applicable

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	May cause irritation to skin on contact.
Serious eye damage/irritation	May cause irritation to eyes on contact.
Respiratory Sensitization	No data available.
Skin sensitization	No data available.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, NTP, or OSHA.
Mutagenic effects	No data available.
Reproductive effects	No data available.
STOT – single exposure	No data available.

STOT – repeated exposure	No data available.
Aspiration hazard	No data available.
Chronic effects	No data available.

12. Ecological information

Ecotoxicity:	Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.
Persistence and degradability:	No data available
Bioaccumulation/ Accumulation:	No data available
Mobility in soil:	No data available
Other adverse effects:	No adverse environmental effects (e.g. ozone depletion, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Waste disposal methods:	To be performed in compliance with all current local, state and federal regulations. Spills onto sand, soil, or other absorbent may be handled by placing the affected soil into approved containers then label and store for proper treatment or disposal.
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14. Transport information

DOT:	Not regulated as dangerous goods.
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15. Regulatory information

U.S. Federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not listed
U.S. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed
CERCLA Hazardous Substances List (40 CFR 302.4)	Not listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories	Immediate Hazard – No
	Delayed Hazard – No
	Fire Hazard – No
	Pressure Hazard – No
	Reactivity Hazard – No

Other Federal regulations

Clean Air Act	Not applicable
Clean Water Act	Not applicable
California Prop 65	This product does not contain any Proposition 65 chemicals.

16. Other information, including date of preparation or last revision

Revision date January 27, 2017

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