

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.04.2014

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Cupric Sulfate, Anhydrous

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Cupric Sulfate, Anhydrous

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25285

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education
Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:



Irritant

Acute toxicity (oral, dermal, inhalation), category 4
Skin irritation, category 2
Eye irritation, category 2A



Environmentally Damaging

Acute hazards to the aquatic environment, category 1
Chronic hazards to the aquatic environment, category 1

Acute Toxicity 4 (oral).
Skin Irritation 2.
Eye Irritation 2.
Aquatic Acute Toxicity 1.
Aquatic Chronic Toxicity 1.

Signal word: Warning

Hazard statements:

Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Precautionary statements:

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Wash ... thoroughly after handling.
Do not eat, drink or smoke when using this product.

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Wear protective gloves/protective clothing/eye protection/face protection.

Avoid release to the environment.

Do not eat, drink or smoke when using this product.

Rinse mouth.

Specific treatment (see ... on this label).

Take off contaminated clothing and wash before reuse.

Collect spillage.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN: Wash with soap and water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

If skin irritation or a rash occurs: Get medical advice/attention.

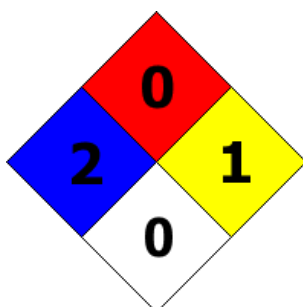
If eye irritation persists get medical advice/attention.

Other Non-GHS Classification:

WHMIS



NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	0
Physical Hazard	1
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3: Composition/information on ingredients

Ingredients:		
CAS 7758-98-7	Cupric Sulfate, Anhydrous	100 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

After skin contact:

Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation persists or if concerned.

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After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek immediate medical attention or advice.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water or milk. Seek immediate medical attention or advice.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath. Harmful if swallowed; causes digestive and respiratory tract irritation with possible burns. Causes eye and skin irritation and possible burns. Chronic copper poisoning in man is recognized in the form of Wilson's disease.

Indication of any immediate medical attention and special treatment needed:

Individuals with Wilson's disease are more susceptible to chronic copper poisoning. The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel. If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

Protective equipment:

Wear protective equipment. Wear protective equipment Use respiratory protective device against the effects of fumes/dust/aerosol Keep unprotected persons away Ensure adequate ventilation Keep away from ignition sources Protect from heat.

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Avoid contact with skin and eyes, and clothing. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13. Severe Marine Pollutant.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Collect solids in powder form using a vacuum or by carefully sweeping so as not to generate dust. Have adequate ventilation during clean up. Clean up spills immediately.

Reference to other sections: None

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SECTION 7: Handling and storage

Precautions for safe handling:

Wash thoroughly after handling. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Avoid generation of dust or fine particulate. Use only in well ventilated area. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Do not ingest or inhale. Handle under an inert atmosphere.

Conditions for safe storage, including any incompatibilities:

Store in a tightly closed container. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly sealed. Store protected from air. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not expose to air. Store protected from moisture. Store under an inert atmosphere. Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs.

SECTION 8: Exposure controls/personal protection



Control Parameters:

7758-98-7, OSHA PEL: TWA (as Cu), 1 mg/m³.
7758-98-7, ACGIH TLV: TWA (as Cu), 1 mg/m³.
7758-98-7, NIOSH REL: TWA (as Cu), 1 mg/m³.

Appropriate Engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection: Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable. Normal ventilation is adequate.

Protection of skin: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection: Safety glasses with side shields or goggles.

General hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Gray powder	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Odorless	Vapor pressure at 20°C:	Not determined

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Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	Not determined	Relative density:	Not determined
Melting/Freezing point:	200 C	Solubilities:	Soluble in water.
Boiling point/Boiling range:	Not determined	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not applicable	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not applicable	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not applicable
Density at 20°C:	Not determined Specific Gravity: 3.6 Additional property: Hygroscopic.		

SECTION 10: Stability and reactivity

Reactivity: None

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions: None

Conditions to avoid:

High temperatures, dust generation, exposure to moist air or water. Store away from oxidizing agents, strong acids or bases.

Incompatible materials:

Aqueous solution of copper(2+) sulfate is an acid. Incompatible with strong bases, hydroxylamine, magnesium. Strong acids. Strong bases.

Hazardous decomposition products:

Oxides of sulfur. Copper fumes. Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

Acute Toxicity:

Oral:

300 mg/kg LD50 oral-rat (7758-98-7)

Chronic Toxicity:

Oral:

Wilson's disease Chronic copper poisoning in man is recognized as

Corrosion Irritation:

Dermal:

May cause itching eczema

Causes skin irritation and possible burns

May cause ulceration and perforation of the nasal septum if inhaled in excessive quantities

Ocular:

Exposure to particulates or solution may cause conjunctivitis, ulceration, and corneal abnormalities

Sensitization:

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May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Numerical Measures:

ATE (oral): Not calculated.

Carcinogenicity:

IARC: Not listed

NTP: Not listed

Mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Fish: NOEC (30d) *P. fluviatilis* (7758-98-7): 39 µg/l

Fish: LC50 (96h) Unspecified Goldfish (7758-98-7): 0.1-2.5 mg/L

Fish: LC50 (96h) Unspecified Harlequin fish (7758-98-7): 0.1-2.5 mg/L

Fish: LC50 (96h) Rainbow trout (7758-98-7): 0.1-2.5 mg/L

Crustacea: EC50 (48h) Unspecified flea Daphnia (7758-98-7): 0.24 mg/L

Fish: LC50 (96 hr) *C. caprio* (7758-98-7 copper sulphate) : 810 µg/l

Crustacea - LC50 values (48 h) for *D. magna* (7758-98-7): 33.8 µg/L

Algae: NOEC (72h) *Phaeodactylum tricornutum* (7758-98-7): 5.7 µg/L

Crustacea: NOEC (27d) *D. polymorpha* (7758-98-7): 21 µg Cu/l

Persistence and degradability: No additional information.

Bioaccumulative potential:

Copper is accumulated by plants and animals, but it does not appear to biomagnify from plants to animals. This lack of biomagnification appears common with heavy metals. In air, copper aerosols (in general) have a residence time of 2 to 10 days in an unpolluted atmosphere and 0.1 to > 4 days in polluted, urban areas.

Mobility in soil:

This soluble substance is likely to be mobile in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

US DOT

UN Number:

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ADR, ADN, DOT, IMDG, IATA

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Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Toxic solid, Inorganic, N.O.S., (Cupric Sulfate).

Hazard Class: 6

Packing Group: III.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Toxic solid, Inorganic, N.O.S., (Cupric Sulfate).

Hazard Class: 6

Packing Group: III.

Marine Pollutant (if applicable): No additional information.

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

7758-98-7 Cupric sulfate, Copper compounds.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7758-98-7 Cupric sulfate (Copper compounds) 10 lbs.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

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None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

7758-98-7 Copper (II) sulfate.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA Resource Conservation and Recovery Act (USA).
TSCA Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

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