

Copper Sulfate

Safety Data Sheet



SECTION 1: Product and company identification

Product name : Copper Sulfate
Use of the substance/mixture : Read label before use
Product code : 160181
Company : Share Corporation
P.O. Box 245013
Milwaukee, WI 53224 - USA
T (414) 355-4000
Emergency number : Chemtrec: (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Irrit. 2A H319

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

Harmful if swallowed
Causes skin irritation
Causes serious eye irritation

Precautionary statements (GHS-US) :

Wash thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves, protective clothing, eye protection
If swallowed: Call a doctor, a POISON CENTER, Do NOT induce vomiting if you feel unwell
If on skin: Wash with plenty of water
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Specific treatment (see First aid measures on this label)
Rinse mouth
If skin irritation occurs: Get medical advice/attention
If eye irritation persists: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Dispose of contents/container to comply with local/regional/national/international regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
copper(II) sulfate, pentahydrate	(CAS No) 7758-99-8	> 99	Acute Tox. 3 (Oral), H301

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Remove the victim into fresh air. Artificial respiration and/or oxygen if necessary. Do not apply mouth-to-mouth resuscitation. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get immediate medical advice/attention.

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- First-aid measures after skin contact : Take off contaminated clothing. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.
- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- Symptoms/injuries after ingestion : Harmful if swallowed. Fatal if swallowed. Gastrointestinal complaints.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Adapt extinguishing media to the environment.

5.2. Special hazards arising from the substance or mixture

- Reactivity : Thermal decomposition may produce : Toxic fumes may be released. sulfur oxides. copper.

5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel

- Protective equipment : Protective goggles. Gloves. Protective clothing.
- Emergency procedures : Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Ventilate spillage area.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Stop leak if safe to do so. Stop release. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers.
- Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing.
- Hygiene measures : Wash thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep container closed when not in use.
- Incompatible products : reducing agents. Strong bases. alkaline substances.
- Incompatible materials : Copper sulfate causes hydroxylamine to ignite and the hydrated salt is vigorously reduced. Solutions of sodium hypobromite are decomposed by powerful catalytic action of cupric ions, even as impurities. Copper salts, including copper sulfate may react to form explosive acetylides when in contact with acetylene or nitromethane. Contact with reducing agents, can cause a vigorous reaction, especially in solution. This product can corrode aluminum, steel and iron. Copper Sulfate Pentahydrate is incompatible with magnesium, strong bases, alkalines, phosphate, acetylene, hydrazine and zirconium.

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Storage area : Meet the legal requirements. Store in a cool area. Store in a well-ventilated place.
Special rules on packaging : meet the legal requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Personal protective equipment : Protective apron. Dust formation: dust mask. Gloves. Protective goggles.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Blue. Crystals.
Odor : No odor
Odor threshold : No data available
pH : 3.7 - 4.2 (10% soln.)
Melting point : No data available
Freezing point : No data available
Boiling point : 1040 °F (decomposes)
Flash point : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : No data available
Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Vapor pressure : No data available
Relative density : No data available
Relative vapor density at 20 °C : No data available
Specific gravity / density : 2.28 g/ml
Solubility : Slightly soluble in: Water.
Log Pow : No data available
Log Kow : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition may produce : Toxic fumes may be released. sulfur oxides. copper.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

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10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

copper(II) sulfate, pentahydrate (7758-99-8)	
LD50 oral rat	300 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 482 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study; OECD 402: Acute Dermal Toxicity)

Skin corrosion/irritation : Causes skin irritation.
pH: 3.7 - 4.2 (10% soln.)

Serious eye damage/irritation : Causes serious eye irritation.
pH: 3.7 - 4.2 (10% soln.)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

Symptoms/injuries after ingestion : Harmful if swallowed. Fatal if swallowed. Gastrointestinal complaints.

SECTION 12: Ecological information

12.1. Toxicity

copper(II) sulfate, pentahydrate (7758-99-8)	
Threshold limit algae 2	0.368 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Read-across)

12.2. Persistence and degradability

copper(II) sulfate, pentahydrate (7758-99-8)	
Persistence and degradability	Biodegradability: not applicable. No (test) data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

copper(II) sulfate, pentahydrate (7758-99-8)	
Bioaccumulative potential	Bioaccumable.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

Transport document description : UN3077 Environmentally hazardous substances, solid, n.o.s., 9, III

UN-No.(DOT) : UN3077

Proper Shipping Name (DOT) : Environmentally hazardous substances, solid, n.o.s.

Transport hazard class(es) (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

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Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



Packing group (DOT) : III - Minor Danger

Marine pollutant : Yes (IMDG only)



DOT Packaging Non Bulk (49 CFR 173.xxx) : 213

DOT Packaging Bulk (49 CFR 173.xxx) : 240

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : 8,146,335,A112,B54,IB8,IP3,N20,T1,TP33

DOT Packaging Exceptions (49 CFR 173.xxx) : 155

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : No limit

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : No limit

DOT Vessel Stowage Location : A

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

California Proposition 65 - This product does not contain substances known to the state of California to cause cancer and/or reproductive toxicity

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER. CORROSIVE. Causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin. Do not breathe dust or spray mist. Wear goggles or face shield, long-sleeved shirt and long pants, socks, shoes and chemical resistant gloves made of any waterproof material.

For applications in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm as metallic copper in these waters.

SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H-phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A

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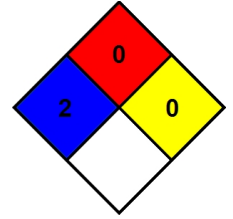


Skin Irrit. 2	Skin corrosion/irritation Category 2
H301	Toxic if swallowed
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Prepared by: Technical Department

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