



# HI-VALLEY CHEMICAL

LABORATORY PRODUCTS

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# SAFETY DATA SHEET

Hi Valley Chemical

## Copper Sulfate

### 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** Copper Sulfate  
**SDS Number:** R-079  
**Revision Date:** 9/22/2017  
**CAS Number:** 7758-98-7  
**Chemical Formula:** CuSO4  
**Supplier Details:** High Valley Products, Inc.  
1134 West 850 North  
Centerville, Utah 84014  
**Emergency:** PERS: 800-633-8253  
**Phone:** 801-295-9591  
**Email:** sales@hvchemical.com  
**Web:** www.hvchemical.com

### 2 HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

- Health, Acute toxicity, 4 Oral
- Health, Skin corrosion/irritation, 2
- Health, Serious Eye Damage/Eye Irritation, 2 A
- Environmental, Hazards to the aquatic environment - Acute, 1
- Environmental, Hazards to the aquatic environment - Chronic, 1

#### GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **WARNING**

##### GHS Hazard Pictograms:



##### GHS Hazard Statements:

- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects

##### GHS Precautionary Statements:

- P264 - Wash skin thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+352 - IF ON SKIN: Wash with soap and water.
- P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P321 - Specific treatment (see \_ on this label).  
P330 - Rinse mouth.  
P332+313 - If skin irritation occurs: Get medical advice/attention.  
P337+313 - Get medical advice/attention.  
P362 - Take off contaminated clothing and wash before reuse.  
P391 - Collect spillage.  
P501 - Dispose of contents/container to \_

### 3 COMPOSITION/INFORMATION OF INGREDIENTS

#### Ingredients:

Cas#	%	Chemical Name
7758-98-7	100%	Cupric sulfate

### 4 FIRST AID MEASURES

**Inhalation:** If inhaled, remove to fresh air and call a physician for instructions. In case of difficulty breathing, use oxygen assistance. Get medical attention if condition is critical.

**Skin Contact:** Wash with soap and water. Consult a physician.

**Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.

**Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5 FIRE FIGHTING MEASURES

Extinguishing media  
Suitable extinguishing media  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture  
No data available

Advice for firefighters  
Wear self-contained breathing apparatus for firefighting if necessary.

Further information  
No data

### 6 ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:**  
Wear respiratory protection. Avoid dust formation. Avoid breathing dust, vapours, mist or gas. Ensure adequate ventilation.

**Environmental precautions:**  
Do not let product enter drains.

**Methods and materials for containment and cleaning up:**  
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 7 HANDLING AND STORAGE

**Handling Precautions:** Avoid contact with eyes, skin, or clothing. Avoid breathing dust.  
**Storage Requirements:** Keep container tightly closed. Store in cool/dry area.

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Personal Protective Equipment:**

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Personal protective equipment

Eye/face protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact: Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril (KCL 740 / Aldrich Z677272, Size M)

Splash contact: Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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Components with workplace control parameters

TWA 1 mg/m3 USA. NIOSH Recommended Exposure Limits

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**PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Blue crystals
<b>Odor:</b>	No data available
<b>Odor Threshold:</b>	No data available
<b>Solubility:</b>	No data available
<b>Spec Grav./Density:</b>	3.603
<b>Viscosity:</b>	No data available
<b>Boiling Point:</b>	No data available
<b>Freezing/Melting Pt.:</b>	200 °C (392 °F) - dec.
<b>Flash Point:</b>	No data available
<b>Partition Coefficient:</b>	No data available
<b>Vapor Pressure:</b>	9.7 hPa (7.3 mmHg) at 25 °C (77 °F)
<b>Vapor Density:</b>	No data available
<b>pH:</b>	No data available
<b>Evap. Rate:</b>	No data available
<b>Auto-Ignition Temp:</b>	No data available
<b>Decomp Temp:</b>	No data available
<b>UFL/LFL:</b>	No data available

<b>Reactivity:</b>	No data available
<b>Chemical Stability:</b>	Stable under recommended storage conditions.
<b>Conditions to Avoid:</b>	No data available
<b>Materials to Avoid:</b>	Powdered metals, hydroxylamine, Magnesium, Strong reducing agents
<b>Hazardous Decomposition:</b>	Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Borane/boron oxides, Copper oxides

Cupric sulfate cas#:(7758-98-7) [100%]

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - 482 mg/kg

Inhalation: no data available

Dermal: no data available

LD50 Intraperitoneal - rat - 20 mg/kg

LD50 Subcutaneous - rat - 43 mg/kg

LD50 Intravenous - rat - 48.9 mg/kg

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: Germ cell mutagenicity:

rat Liver DNA damage

mouse

Carcinogenicity:

Carcinogenicity - Chicken - Parenteral:

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Endocrine: Tumors.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Reproductive toxicity - mouse - Intravenous:

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

no data available

Developmental Toxicity - mouse - Intravenous:

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Central nervous system.

Specific Developmental Abnormalities: Cardiovascular (circulatory) system.

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: GL8800000

Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilsons disease. It has also been reported that copper poisoning has lead to hemolytic anemia and accelerates arteriosclerosis., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

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## **ECOLOGICAL INFORMATION**

Cupric sulfate cas#:(7758-98-7) [100%]

Information on ecological effects

Toxicity:

Toxicity to fish mortality LC50 - other fish - 1 - 2.5 mg/l - 96.0 h.

Toxicity to daphnia and Immobilization EC50 - Daphnia magna (Water flea) - 0.024 mg/l - 48 h.

other aquatic

invertebrates

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

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## **DISPOSAL CONSIDERATIONS**

Dispose of in accordance with local regulations.

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## **TRANSPORT INFORMATION**

UN3077, Environmentally hazardous substances, solid, n.o.s., 9, PGIII, (Cupric Sulfate)

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## **REGULATORY INFORMATION**

Component (CAS#) [%] - CODES

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RQ(10LBS), Cupric sulfate (7758-98-7) [n/a%] CERCLA, CSWHS, EPCRAWPC, MASS, PA, TSCA

Regulatory CODE Descriptions

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RQ = Reportable Quantity  
CERCLA = Superfund clean up substance  
CSWHS = Clean Water Act Hazardous substances  
EPCRAWPC = EPCRA water Priority Chemicals  
MASS = MA Massachusetts Hazardous Substances List  
PA = PA Right-To-Know List of Hazardous Substances  
TSCA = Toxic Substances Control Act

NFPA: Health = 2, Fire = 0, Reactivity = 0, Specific Hazard = n/a

HMIS III: Health = 2(Chronic), Fire = 0, Physical Hazard = 0



HMIS	
HEALTH	<input checked="" type="checkbox"/> 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	<input type="checkbox"/>

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