

Cupric Sulfate, Anhydrous Powder Reagent

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Cupric Sulfate, Anhydrous Powder Reagent

Synonyms/Generic Names: Copper (II) Sulfate

Product Number: CP-A1418D, CP-B1418D

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: ChemPure Brand Chemicals
39103 Warren Road
Westland, MI 48185

For More Information Call: 734-884-4773 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC – 800-424-9300 (24 Hours/Day, 7Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target organ effect, Toxic by ingestion, Irritant

Target Organs: Liver, Kidney, Blood

Signal Words: Warning

Pictograms:



GHS Classification:

| | |
|------------------------|-------------|
| Acute toxicity, Oral | Category 4 |
| Skin irritation | Category 2 |
| Eye irritation | Category 2A |
| Acute aquatic toxicity | Category 1 |

GHS Label Elements, including precautionary statements:

Hazard Statements:

| | |
|------|--------------------------------|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H400 | Very toxic to aquatic life. |

Precautionary Statements:

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|----------------|--|
| P273 | Avoid release to the environment |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing. |

Potential Health Effects

| | |
|-------------------|---|
| Eyes | Causes eye irritation. |
| Inhalation | Harmful if inhaled. Causes respiratory tract irritation. |
| Skin | Harmful if absorbed through skin. Causes skin irritation. |
| Ingestion | Toxic if swallowed. |

NFPA Ratings

| | |
|------------------------|---------------|
| Health | 2 |
| Flammability | 0 |
| Reactivity | 0 |
| Specific hazard | Not Available |

HMIS Ratings

| | |
|-------------------|---|
| Health | 2 |
| Fire | 0 |
| Reactivity | 0 |
| Personal | E |

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | Weight % | CAS # | EINECS# / ELINCS# | Formula | Molecular Weight |
|--------------------------|----------|-----------|-------------------|--------------------|------------------|
| Cupric Sulfate Anhydrous | 100 | 7758-98-7 | 231-847-6 | CuO ₄ S | 159.61 g/mol |

4. FIRST-AID MEASURES

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| Eyes | In case of eye contact, rinse with plenty of water and seek medical attention. |
| Inhalation | Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention. |
| Skin | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention. |
| Ingestion | Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention. |

5. FIREFIGHTING MEASURES

| | |
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| Suitable (and unsuitable) extinguishing media | Product is not flammable. Do not use water on product. Use appropriate media for adjacent fire. Use flooding quantities of water to cool containers. |
| Special protective equipment and precautions for firefighters | Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. |
| Specific hazards arising from the chemical | Emits toxic fumes (sulfur oxides, copper oxides) under fire conditions. (See also Stability and Reactivity section). |

6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions, protective equipment and emergency procedures | See section 8 for recommendations on the use of personal protective equipment. |
| Environmental precautions | Do not disperse dust into the air during clean-up. Any release to the environment may require reporting to federal/national or local agencies. |

| | |
|--|---|
| Methods and materials for containment and cleaning up | Do not disperse dust into the air during clean-up. Use appropriate tools to pick up any spill. Pick up and arrange disposal without creating dust. Sweep up and shovel. Place in a closed container. Dispose of all waste or clean-up materials in accordance with local regulations. |
|--|---|

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities

Store in a tightly closed container. Store in a dry, cool, and well ventilated area. Isolate from oxidizing materials. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Controls:

| Component | Exposure Limits | Basis | Entity |
|----------------|---------------------|-------|--------|
| Copper Sulfate | 1 mg/m ³ | REL | NIOSH |

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

| | |
|-------------------|---|
| Eyes | Chemical safety glasses. |
| Inhalation | Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator. |
| Skin | Wear neoprene or nitrile gloves, protective clothing appropriate to the risk of exposure. |
| Other | Not Available |

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

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|--|--------------------|
| Appearance (physical state, color, etc.) | Light grey powder. |
| Odor | Pleasant. |
| Odor threshold | Not Available |
| pH | Not Available |
| Melting point/freezing point | 590°C (1,202°F) |
| Initial boiling point and boiling range | Not Available |
| Flash point | Not Available |
| Evaporation rate | Not Available |
| Flammability (solid, gas) | Not Flammable |

| | |
|---|--------------------------------|
| Upper/lower flammability or explosive limit | Not Explosive |
| Vapor pressure | 9.7 hPa (7.3 mmHg) |
| Vapor density | Not Available |
| Relative density | 3.6 g/cm ³ |
| Solubility (ies) | Soluble in water and methanol. |
| Partition coefficient: n-octanol/water | Not Available |
| Auto-ignition temperature | Not Available |
| Decomposition temperature | 650°C (1,094°F) |

10. STABILITY AND REACTIVITY

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|---|--|
| Chemical Stability | Stable |
| Possibility of Hazardous Reactions | Will not occur. |
| Conditions to Avoid | Moisture, air. |
| Incompatible Materials | Powdered metals, hydroxylamine, magnesium, strong reducing agents. |
| Hazardous Decomposition Products | Sulfur oxides, copper oxides. |

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

| | |
|------------------------|----------------------------------|
| Skin | LD50 Dermal – rat - > 2000 mg/kg |
| Eyes | Not Available |
| Respiratory | Not Available |
| Ingestion | LD50 Oral – rat – 300 mg/kg |
| Intraperitoneal | LD50 – Rat – 20 mg/kg |
| Subcutaneous | LD50 – Rat – 43 mg/kg |
| Intravenous | LD50 – Rat – 48.9 mg/kg |

Carcinogenicity

| | |
|--------------|--|
| IARC | No components 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 components 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 components 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 components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |

Signs & Symptoms of Exposure

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|-------------------|--|
| Eyes | May cause eye irritation. Symptoms include eye burns, pain, watering eyes |
| Inhalation | Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath, burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache or nausea. |
| Skin | Contact causes redness, irritation, itching and pain. Prolonged or repeated skin exposure may cause dermatitis |
| Ingestion | Repeated ingestion of small amounts may cause weakness, confusion, central nervous system effects, nausea and skin eruptions. |

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|---------------------------------------|---------------|
| Chronic Toxicity | Not Available |
| Teratogenicity | Not Available |
| Mutagenicity | Not Available |
| Embryotoxicity | Not Available |
| Specific Target Organ Toxicity | Not Available |

12. ECOLOGICAL INFORMATION

Ecotoxicity

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|-----------------------------|--|
| Aquatic Vertebrate | Not Available |
| Aquatic Invertebrate | EC50 – Daphnia magna – 0.024 mg/l – 48 hours |
| Terrestrial | Not Available |

| | |
|--------------------------------------|-------------------------------------|
| Persistence and Degradability | Not Available |
| Bioaccumulative Potential | Not Available |
| Mobility in Soil | Not Available |
| PBT and vPvB Assessment | Not Available |
| Other Adverse Effects | Very toxic to all aquatic organisms |

13. DISPOSAL CONSIDERATIONS

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|---------------------------|--|
| Waste Residues | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container. |
| Product Containers | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container. |

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORT INFORMATION

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| US DOT | UN3077, Environmentally hazardous substances, solid, n.o.s. (copper(II) sulfate), 9, pg III |
| TDG | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (COPPER (II) SULFATE), 9, pg III |
| IMDG | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (COPPER (II) SULFATE), 9, pg III |
| Marine Pollutant | Yes |
| IATA/ICAO | UN3077, Environmentally hazardous substances, solid, n.o.s. (copper(II) sulfate), 9, pg III |

15. REGULATORY INFORMATION

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|---------------------------|--|
| TSCA Inventory Status | All ingredients are listed on the TSCA inventory. |
| DSCL (EEC) | All ingredients are listed on the DSCL inventory. |
| California Proposition 65 | Not Listed |
| SARA 302 | Not Listed |
| SARA 304 | Not Listed |
| SARA 311 | Cupric Sulfate |
| SARA 312 | Cupric Sulfate |
| SARA 313 | Listed: Cupric Sulfate |
| WHMIS Canada | Class D-1B: Poisonous and infectious material- Immediate and serious effects- Toxic Class D-2B: Poisonous and infectious material- Other effects- Toxic |

16. OTHER INFORMATION

| Revision | Date |
|------------|------------|
| Revision 1 | 07-12-2011 |
| Revision 2 | 08/16/2013 |
| Revision 3 | 09/26/2023 |

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