

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** CUPRIC SULFATE ANHYDROUS

**Other means of identification**

**Product No.:** 4800, 4760, 1850

**Recommended use and restriction on use**

**Recommended use:** Not available.

**Restrictions on use:** Not known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company Name:** Avantor Performance Materials, Inc.  
**Address:** 3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034

**Telephone:** Customer Service: 855-282-6867

**Fax:**  
**Contact Person:** Environmental Health & Safety  
**e-mail:** info@avantormaterials.com

**Emergency telephone number:**

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

## 2. Hazard(s) identification

**Hazard classification**

**Health hazards**

Acute toxicity (Oral)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

**Environmental hazards**

Acute hazards to the aquatic environment	Category 1
Chronic hazards to the aquatic environment	Category 1

**Label elements**

**Hazard symbol:**



**Signal word:** Warning

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

### Precautionary statement

- Prevention:** Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Avoid release to the environment.
- Response:** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

### 3. Composition/information on ingredients

#### Substances

Chemical identity	Common name and synonyms	CAS number	Content in percent (%)*
CUPRIC SULFATE		7758-98-7	100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

- General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- Ingestion:** Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
- Inhalation:** Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration.
- Skin contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

#### Most important symptoms/effects, acute and delayed

**Symptoms:** Irritating to eyes, respiratory system and skin.

#### Indication of immediate medical attention and special treatment needed

**Treatment:** Treat symptomatically. Symptoms may be delayed.

### 5. Fire-fighting measures

**General fire hazards:** In case of fire and/or explosion do not breathe fumes.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** None known.

**Specific hazards arising from the chemical:** Fire may produce irritating, corrosive and/or toxic gases.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Keep unauthorized personnel away. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Methods and material for containment and cleaning up:** Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

**Notification Procedures:** Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

**Environmental precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling:** Use personal protective equipment as required. Do not breathe mist or vapor. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment. Avoid contact with eyes. Avoid contact with skin.

**Conditions for safe storage, including any incompatibilities:** Do not store in metal containers. Keep in a cool, well-ventilated place. Store in a dry place.

**8. Exposure controls/personal protection**

**Control parameters**

**Occupational exposure limits**

None of the components have assigned exposure limits.

**Appropriate engineering controls** No data available.

**Individual protection measures, such as personal protective equipment**

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

**Eye/face protection:** Wear safety glasses with side shields (or goggles) and a face shield.

**Skin protection**

**Hand protection:** Chemical resistant gloves

**Other:** Wear suitable protective clothing.

**Respiratory protection:** In case of inadequate ventilation use suitable respirator.

**Hygiene measures:** Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using the product. Wash contaminated clothing before reuse.

**9. Physical and chemical properties**

**Appearance**

**Physical state:** Solid

**Form:** Crystals or powder.

**Color:** White

**Odor:** Odorless

**Odor threshold:** No data available.

**pH:** No data available.

**Melting point/freezing point:** 590 °C

**Initial boiling point and boiling range:** 650 °C

**Flash Point:** Not applicable

**Evaporation rate:** No data available.

**Flammability (solid, gas):** No data available.

**Upper/lower limit on flammability or explosive limits**

**Flammability limit - upper (%):** No data available.

**Flammability limit - lower (%):** No data available.

**Explosive limit - upper (%):** No data available.

**Explosive limit - lower (%):** No data available.

**Vapor pressure:** No data available.

**Vapor density:** No data available.

**Relative density:** 2.28 (20 °C)

**Solubility(ies)**

**Solubility in water:** 143 g/l (0 °C)

**Solubility (other):** No data available.

**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**

**Molecular weight:** 159.6 g/mol (Cu.H2O4S)

**10. Stability and reactivity**

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Moisture. Contact with incompatible materials.
<b>Incompatible materials:</b>	Strong oxidizing agents. Amines. Magnesium Acetylene.
<b>Hazardous decomposition products:</b>	Thermal decomposition may produce oxides of sulfur.

**11. Toxicological information**

**Information on likely routes of exposure**

<b>Ingestion:</b>	Harmful if swallowed.
<b>Inhalation:</b>	May be harmful if inhaled.
<b>Skin contact:</b>	Causes skin irritation.
<b>Eye contact:</b>	Causes serious eye irritation.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

<b>Oral</b>	
<b>Product:</b>	LD 50 (Rat): 300 mg/kg
<b>Dermal</b>	
<b>Product:</b>	No data available.
<b>Inhalation</b>	
<b>Product:</b>	No data available.
<b>Repeated dose toxicity</b>	
<b>Product:</b>	No data available.

**Skin corrosion/irritation**

**Product:** Causes skin irritation.

**Serious eye damage/eye irritation**

**Product:** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Product:** Not a skin sensitizer.

**Carcinogenicity**

**Product:** This substance has no evidence of carcinogenic properties.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ cell mutagenicity**

**In vitro**

**Product:** No mutagenic components identified

**In vivo**

**Product:** No mutagenic components identified

**Reproductive toxicity**

**Product:** No components toxic to reproduction

**Specific target organ toxicity - single exposure**

**Product:** No data available.

**Specific target organ toxicity - repeated exposure**

**Product:** No data available.

**Aspiration hazard**

**Product:** Not classified

**Other effects:** None known.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

CUPRIC SULFATE  
LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 0.77 mg/l Mortality  
LC 50 (Catfish (*Mystus bleekeri*), 96 h): 0.85 mg/l Mortality  
LC 50 (Pumpkinseed (*Lepomis gibbosus*), 96 h): 1.18 - 1.31 mg/l Mortality  
LC 50 (Flagfish (*Jordanella floridae*), 96 h): 1.27 mg/l Mortality  
LC 50 (Western mosquitofish (*Gambusia affinis*), 4 d): 0.128 mg/l Mortality

**Aquatic invertebrates**

**Product:** No data available.

**Specified substance(s):**

CUPRIC SULFATE  
LC 50 (Harpacticoid copepod (*Tisbe holothuriae*), 48 h): 0.3142 mg/l Mortality  
LC 50 (Oligochaete, worm (*Lumbriculus variegatus*), 48 h): 0.17 - 0.31 mg/l Mortality  
LC 50 (Tubificid worm (*Tubifex tubifex*), 48 h): 0.26 mg/l Mortality  
LC 50 (Snail (*Viviparus bengalensis*), 48 h): 0.2 - 0.35 mg/l Mortality  
LC 50 (Snail (*Indoplanorbis exustus*), 48 h): 0.29 mg/l Mortality

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Specified substance(s):**

CUPRIC SULFATE  
 LC 50 (Blue-green algae (Spirulina platensis), 60.8 h): 1.3 mg/l Mortality  
 LC 50 (Green algae (Chlorella pyrenoidosa), 72 h): 3.1 mg/l Mortality  
 LC 50 (Blue-green algae (Spirulina platensis), 77.6 h): 0.9 mg/l Mortality  
 LC 50 (Blue-green algae (Spirulina platensis), 86.4 h): 0.7 mg/l Mortality

**Persistence and degradability**

**Biodegradation**

**Product:** There are no data on the degradability of this product.

**BOD/COD ratio**

**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration factor (BCF)**

**Product:** No data available on bioaccumulation.

**Partition coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility in soil:** The product is water soluble and may spread in water systems.

**Other adverse effects:** Very toxic to aquatic life with long lasting effects.

**13. Disposal considerations**

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**

UN number:	UN 3288
UN proper shipping name:	Toxic solid, inorganic, n.o.s.(CUPRIC SULFATE)
Transport hazard class(es)	
Class(es):	6.1
Label(s):	6.1
Packing group:	III
Marine Pollutant:	No

**IMDG**

UN number: UN 3288  
 UN proper shipping name: TOXIC SOLID, INORGANIC, N.O.S.(CUPRIC SULFATE)  
 Transport hazard class(es)  
   Class(es): 6.1  
   Label(s): 6.1  
   EmS No.: F-A, S-A  
 Packing group: III  
 Marine Pollutant: No

**IATA**

UN number: UN 3288  
 Proper Shipping Name: Toxic solid, inorganic, n.o.s.(CUPRIC SULFATE)  
 Transport hazard class(es):  
   Class(es): 6.1  
   Label(s): 6.1  
 Marine Pollutant: No  
 Packing group: III

**15. Regulatory information**

**US federal regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**  
 None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**  
 CUPRIC SULFATE Reportable quantity: 10 lbs.

**Superfund amendments and reauthorization act of 1986 (SARA)**

**Hazard categories**

Acute (Immediate)  Chronic (Delayed)  Fire  Reactive  Pressure Generating

**SARA 302 Extremely hazardous substance**  
 None present or none present in regulated quantities.

**SARA 304 Emergency release notification**

Chemical identity	RQ
CUPRIC SULFATE	10 lbs.

**SARA 311/312 Hazardous chemical**

Chemical identity	Threshold Planning Quantity
CUPRIC SULFATE	10 lbs.

**SARA 313 (TRI reporting)**

Chemical identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
CUPRIC SULFATE	10000 lbs	25000 lbs.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**  
 CUPRIC SULFATE Reportable quantity: 10 lbs.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**  
 None present or none present in regulated quantities.

**US state regulations**



**US. California Proposition 65**

No ingredient regulated by CA Prop 65 present.

**US. New Jersey Worker and Community Right-to-Know Act**

CUPRIC SULFATE Listed

**US. Massachusetts RTK - Substance List**

CUPRIC SULFATE Listed

**US. Pennsylvania RTK - Hazardous Substances**

CUPRIC SULFATE Listed

**US. Rhode Island RTK**

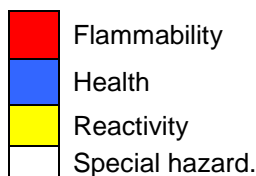
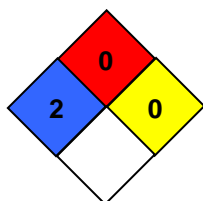
CUPRIC SULFATE Listed

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

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

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

<b>Issue date:</b>	08-04-2014
<b>Revision date:</b>	No data available.
<b>Version #:</b>	1.0
<b>Further information:</b>	No data available.

**Disclaimer:**

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