

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product Identifier

**SDS #** OBC-007-EU  
**Product Name** Copper Sulfate Pentahydrate

Contains Copper sulfate pentahydrate

### 1.2. Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

**Recommended Use** For industrial use

### 1.3. Details of the Supplier of the Safety Data Sheet

#### Manufacturer

Old Bridge Chemicals, Inc.  
 554 Waterworks Rd.  
 Old Bridge, NJ 08857

#### For further information, please contact

**Contact Point** (732) 727-2225 (normal business hours)  
 (800) 275-3924 (24-hour number)  
**Email Address** [jsbzura@oldbridgechem.com](mailto:jsbzura@oldbridgechem.com)

### 1.4. Emergency telephone number

**Emergency Telephone (24 hr)** CHEMTREC: 1-703-527-3887 (INTERNATIONAL)  
 1-800-424-9300 (NORTH AMERICA)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

*Regulation (EC) No 1272/2008*

Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Chronic aquatic toxicity	Category 1 - (H410)

### 2.2. Label Elements

#### **Product Identifier**

Contains Copper sulfate pentahydrate



#### **Signal Word**

Warning

**Hazard statements**

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

**Precautionary Statements - EU (§28, 1272/2008)**

P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 P330 - Rinse mouth  
 P501 - Dispose of contents/ container to an approved waste disposal plant  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P332 + P313 - If skin irritation occurs: Get medical advice/attention  
 P362 - Take off contaminated clothing and wash before reuse  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337 + P313 - If eye irritation persists: Get medical advice/attention  
 P273 - Avoid release to the environment  
 P391 - Collect spillage

**2.3. Other Hazards**

No information available

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Copper sulfate pentahydrate	-	7758-99-8	100	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Not determined

**Full text of H- and EUH-phrases: see section 16**

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

**Section 4: FIRST AID MEASURES****4.1. Description of First Aid Measures**

<b>Eye Contact</b>	Rinse immediately with plenty of water and seek medical advice.
<b>Skin Contact</b>	IF ON SKIN: Wash with plenty of water and soap. Take off all contaminated clothing and wash it before reuse. Call a poison center or doctor/physician if you feel unwell.
<b>Inhalation</b>	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
<b>Ingestion</b>	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Promptly drink large quantities of milk, egg white, gelatin solution, or if these are not available, drink large quantities of water. Never give anything by mouth to an unconscious person. Avoid alcohol.

**4.2. Most Important Symptoms and Effects, Both Acute and Delayed****Symptoms**

Causes skin irritation. Repeated or prolonged contact may cause allergic dermatitis. May cause irritation or burns on wet skin. May cause eye irritation. Irritates the digestive tract. Abdominal discomfort. Inhalation of dust can result in irritation of nasal mucous membranes and sometimes of the pharynx. On occasion ulceration with perforation of the nasal septum.

**4.3. Indication of any Immediate Medical Attention and Special Treatment Needed****Notes to Physician**

Treat symptomatically. Material may be corrosive. Possible mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be necessary. Wilson's disease can be aggravated by excessive exposure. Symptoms include nausea, vomiting, epigastric pain, diarrhea, jaundice, and general debility.

**Section 5: FIREFIGHTING MEASURES****5.1. Extinguishing Media****Suitable Extinguishing Media**

Dry chemical, CO<sub>2</sub> or water spray. Copper Sulfate does not burn nor will it support combustion.

**Unsuitable Extinguishing Media**

If dry heated above 600 °C/ 1112 °F, SO<sub>2</sub> is evolved. If water is used it will solubilize the Copper Sulfate and care should be taken to keep such water out of streams or other bodies of water.

**5.2. Special Hazards Arising from the Substance or Mixture**

Thermal decomposition can lead to release of irritating and toxic gases and vapours.

**Hazardous Combustion Products**

If heated above 400°C/ 752°F product can decompose to emit toxic fumes of oxide and sulfur.

**5.3. Advice for Firefighters**

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

**Section 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal Precautions, Protective Equipment and Emergency Procedures****Personal Precautions**

Use personal protective equipment as required.

**For Emergency Responders**

Use personal protection recommended in Section 8.

**6.2. Environmental Precautions**

See Section 12 for additional Ecological Information.

**6.3. Methods and Material for Containment and Cleaning Up****Methods for Containment**

Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up**

Avoid the generation of dusts during clean-up. Dry sweep up, using a sweeping compound. Shovel spill material into plastic bags and seal with tape. Place in appropriate containers for disposal. Dispose of contents/container to an approved waste disposal plant. Prevent run off to storm sewers and ditches leading to natural waterways.

**6.4. Reference to Other Sections**

See Section 13: DISPOSAL CONSIDERATIONS.

**Section 7: HANDLING AND STORAGE****7.1. Precautions for Safe Handling****Advice on Safe Handling**

Use personal protection recommended in Section 8. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wash thoroughly after handling before eating, drinking, smoking, or using toilet facilities. Wear protective gloves/protective clothing. Wash outside of gloves before removing. Wash and change into clean clothing as soon as possible.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for Safe Storage, Including any Incompatibilities****Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Store away from reducing agents. Keep away from galvanized pipe, aluminum and nylon. Store in original containers. Place damaged containers in plastic bags. Iron and moisture should be avoided. With exposure to air it will oxidize and turn whitish.

**Packaging Materials**

Solutions are mildly corrosive to steel. Store in plastic or rubber or 304, 347 or 316 stainless steel.

**7.3. Specific End Use(s)****Specific Use(s)**

For industrial use.

**Risk Management Methods (RMM)**

The information required is contained in this Safety Data Sheet.

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control Parameters****Exposure Limits**

Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Copper sulfate pentahydrate 7758-99-8	-	-	-	TWA: 0.02 mg/m <sup>3</sup>	-
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Copper sulfate pentahydrate 7758-99-8	STEL 4 mg/m <sup>3</sup> STEL 0.4 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	STEL: 0.2 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>	-	-

**8.2. Exposure Controls****Engineering Controls**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Eyewash stations. Showers.

**Personal Protective Equipment****Eye/Face Protection**

Wear safety glasses with side shields (or goggles).

**Hand Protection**

Wear waterproof gloves.

**Skin and Body Protection**

Wear long-sleeved shirt, long pants, and shoes plus socks.

**Respiratory Protection**

If necessary, refer to appropriate regulations and standards.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

<b>Physical state</b>	Solid		
<b>Appearance</b>	Transparent blue crystals or blue powder	<b>Odour</b>	Odourless
<b>Colour</b>	Blue	<b>Odour Threshold</b>	Not determined
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH	Not Applicable		
Melting Point/Freezing Point	110 °C / 230 °F		
Boiling Point/Boiling Range	150 °C / 302 °F		
Flash Point	Not determined		
Evaporation Rate	Not Applicable		
Flammability (Solid, Gas)	Not determined		
Flammability Limits in Air			
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapour Pressure	Not Applicable		
Vapour Density	Not Applicable		
Relative Density	2.284		
Water Solubility	22.37%	@ 0 °C / 32 °F	
Solubility(ies)	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidising Properties	Not determined		

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Not reactive under normal conditions.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of Hazardous Reactions

#### **Hazardous Polymerisation**

Hazardous polymerisation does not occur.

#### **Possibility of Hazardous Reactions**

None under normal processing. Does not react with water.

### 10.4. Conditions to Avoid

Keep out of reach of children. Solutions are mildly corrosive to steel. Store in plastic or rubber or 304, 347 or 316 stainless steel.

### 10.5. Incompatible Materials

Aluminum powders. Acetylene. Hydroxylamine. Magnesium. Moisture. Contact with magnesium can generate dangerous levels of hydrogen gas.

### 10.6. Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. If dry heated above 600°C/ 1112°F toxic sulfur may evolve.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects

#### Acute Toxicity

#### Product Information

<b>Inhalation</b>	Do not inhale.
<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	Avoid contact with skin.
<b>Ingestion</b>	Harmful if swallowed.

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	500.00 mg/kg
<b>ATEmix (dermal)</b>	2,002.00 mg/kg

#### Unknown Acute Toxicity

- 100 % of the mixture consists of ingredient(s) of unknown toxicity.
- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapour).
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

#### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Copper sulfate pentahydrate	= 472 mg/kg (Rat)	> 2 g/kg (Rat)	> 2.95 mg/L (Rat)

<b>Skin corrosion/irritation</b>	Causes mild skin irritation.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Sensitisation</b>	Not classified.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classified.
<b>Reproductive toxicity</b>	Not classified.
<b>STOT - single exposure</b>	Not classified.
<b>STOT - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not classified.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Copper sulfate pentahydrate		0.66 - 1.15: 96 h Lepomis macrochirus mg/L LC50 semi-static 0.6752: 96 h Pimephales promelas mg/L LC50 static 0.09 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 static 0.1478 - 0.165: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.96 - 1.8: 96 h Lepomis macrochirus mg/L LC50 static	0.147 - 0.227: 48 h Daphnia magna mg/L EC50 Static

### 12.2. Persistence and Degradability

Not determined.

### 12.3. Bioaccumulative Potential

Not determined.

### 12.4. Mobility in Soil

#### **Mobility**

Not determined.

### 12.5. Results of PBT and vPvB Assessment

Not determined.

### 12.6. Other Adverse Effects

Not determined.

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste Treatment Methods

#### **Waste from Residues / Unused Products**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

#### **Contaminated Packaging**

Improper disposal or reuse of this container may be dangerous and illegal.

## Section 14: TRANSPORT INFORMATION

### IMDG

14.1 UN/ID No	UN3077
14.2 Proper Shipping Name	Environmentally Hazardous Substance, solid, n.o.s. (Cupric Sulfate)
14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Marine Pollutant	This product contains a chemical which is listed as a severe marine pollutant according to IMDG/IMO

### RID

14.1 UN/ID No	UN3077
14.2 Proper Shipping Name	Environmentally Hazardous Substance, solid, n.o.s. (Cupric Sulfate)
14.3 Hazard Class	9
14.4 Packing Group	III

**ADR**

14.1 UN/ID No	UN3077
14.2 Proper Shipping Name	Environmentally Hazardous Substance, solid, n.o.s. (Cupric Sulfate)
14.3 Hazard Class	9
14.4 Packing Group	III

**IATA**

14.1 UN/ID No	UN3077
14.2 Proper Shipping Name	Environmentally Hazardous Substance, solid, n.o.s. (Cupric Sulfate)
14.3 Hazard Class	9
14.4 Packing Group	III

**Section 15: REGULATORY INFORMATION****15.1. Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture****European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorisations and/or restrictions on use:**

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**International Inventories**

Component	TSCA	DSL/NDL	EINECS/ELINCS	PICCS	ENCS	IECSC	AICS	KECL
Copper sulfate pentahydrate 7758-99-8 (100)	X	-	-	X	-	X	X	-

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances

**15.2. Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

**Section 16: OTHER INFORMATION****Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed  
H318 - Causes serious eye damage  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

**Legend**

SVHC: Substances of Very High Concern for Authorisation:



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<b>Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION</b>			
<b>Legend</b>			
TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

**Classification Procedure**

Calculation method

**Issue Date:** 02-May-2013**Revision Date:** 18-Dec-2017**Revision Note:** New format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended by Regulation (EU) No. 453/2010

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet