## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
<td>Cupric Sulfate Pentahydrate</td>
</tr>
<tr>
<td>Chemical name</td>
<td>Copper Sulfate Pentahydrate</td>
</tr>
<tr>
<td>CAS No</td>
<td>7758-99-8</td>
</tr>
<tr>
<td>Product code</td>
<td>2296, 2301, 2302, 2303</td>
</tr>
<tr>
<td>Formula</td>
<td>( \text{CuSO}_4 \cdot 5\text{H}_2\text{O} )</td>
</tr>
<tr>
<td>Synonyms</td>
<td>blue copper / blue coppermars / blue stone / blue viking / blue vitriol / chalcanthite / chalcanthite, natural / copper sulfate, pentahydrate / copper sulphate, pentahydrate / copper vitriol / copper(2+) sulfate, pentahydrate / couperose bleue / CSP (=copper(II)sulfate, pentahydrate) / cupric sulfate, pentahydrate / Environmentally hazardous substance, solid, n.o.s. / phyto-bordeaux (=copper(II)sulfate, pentahydrate) / phyton-27 (=copper(II)sulfate, pentahydrate) / roman vitriol (=copper(II)sulfate, pentahydrate) / sulfacop / sulfuric acid, copper(2+) salt (1:1), pentahydrate / sulfuric acid, copper(II)salt, pentahydrate / triangle(=copper(II)sulfate, pentahydrate) / vencedor</td>
</tr>
<tr>
<td>BIG no</td>
<td>16466</td>
</tr>
</tbody>
</table>

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture:
- Algicide
- Fungicide
- Molluscicide
- Germicide
- Insecticide
- Food industry: additive
- Industrial use: component
- Chemical raw material

### 1.3. Details of the supplier of the safety data sheet

Jost Chemical Co.
8150 Lackland Rd.
Saint Louis, Missouri 63114
T 314-428-4300 - F 314-428-4366
www.jostchemical.com

### 1.4. Emergency telephone number

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
- Aquatic Acute 1 | H400
- Aquatic Chronic 1 | H410

Full text of H-phrases: see section 16

### 2.2. Label elements

**GHS-US labeling**

<table>
<thead>
<tr>
<th>Hazard pictograms (GHS-US)</th>
<th><img src="image" alt="GHS07" /> <img src="image" alt="GHS09" /></th>
</tr>
</thead>
</table>

**Signal word (GHS-US)**

- Warning

**Hazard statements (GHS-US)**

- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
Cupric Sulfate Pentahydrate
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

##### Precautionary statements (GHS-US)

- **H400** - Very toxic to aquatic life
- **H410** - Very toxic to aquatic life with long lasting effects

**P264** - Wash hands, forearms and face thoroughly after handling
**P270** - Do not eat, drink or smoke when using this product
**P273** - Avoid release to the environment
**P280** - Wear protective gloves, eye protection
**P301+P312** - If swallowed: Call a doctor if you feel unwell
**P302+P352** - If on skin: Wash with plenty of water
**P305+P351+P338** - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
**P321** - Specific treatment (see First aid measures on this label)
**P330** - Rinse mouth
**P332+P313** - If skin irritation occurs: Get medical advice/attention
**P337+P313** - If eye irritation persists: Get medical advice/attention
**P362** - Take off contaminated clothing and wash before reuse
**P391** - Collect spillage
**P501** - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national, and/or international regulation.

### 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

<table>
<thead>
<tr>
<th>Substance type: Mono-constituent</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier (CAS No)</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cupric Sulfate Pentahydrate</td>
<td>(CAS No) 7758-99-8</td>
<td>100</td>
<td>Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures


**First-aid measures after inhalation**: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

**First-aid measures after skin contact**: Wash immediately with lots of water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

**First-aid measures after eye contact**: Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

**First-aid measures after ingestion**: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

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

**Symptoms/injuries after inhalation**: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. ON HEATING: Metal fume fever.

**Symptoms/injuries after skin contact**: Tingling/irritation of the skin.

**Symptoms/injuries after eye contact**: Irritation of the eye tissue.


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: EXTINGUISHING MEDIA FOR SURROUNDING FIRES: Adapt extinguishing media to the environment.
Unsuitable extinguishing media: No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture
Fire hazard: DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard: DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD. No data available on indirect explosion hazard.
Reactivity: Reacts on exposure to water (moisture) with (some) metals. On burning: release of toxic and corrosive gases/vapours (sulphur oxides) and formation of metallic fumes. Reacts exothermically with (some) compounds: (increased) risk of fire. Reacts violently with (strong) reducers.

5.3. Advice for firefighters
Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions: Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders
Emergency procedures: Avoid contact with skin and eyes.

6.2. Environmental precautions
Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up
For containment: Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray.
Methods for cleaning up: Prevent dispersion by covering with dry sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

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. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid raising dust. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

Storage conditions: Store in a well-ventilated place. Keep container tightly closed. Store in a dry place. Keep cool.

Incompatible products: Acetylene. Magnesium.

Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: reducing agents. (strong) bases. water/moisture.

Storage area: Store in a dry area. Keep container in a well-ventilated place. Meet the legal requirements. Keep out of direct sunlight.

Special rules on packaging: SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Selling packaging materials: SUITABLE MATERIAL: No data available. MATERIAL TO AVOID: No data available.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Cupric Sulfate Pentahydrate (7758-99-8)</th>
<th>ACGIH</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>15 mg/m³ Total Dust 5 mg/m³ Respirable Dust</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Ensure good ventilation of the work station. Extraction to remove dust at its source.

Materials for protective clothing: GIVE GOOD RESISTANCE: butyl rubber. PVC. viton.

Hand protection: Gloves.


SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Crystalline solid. Crystalline powder.</td>
</tr>
<tr>
<td>Color</td>
<td>Blue</td>
</tr>
<tr>
<td>Odor</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>4.0 (3.2 %)</td>
</tr>
<tr>
<td>pH solution</td>
<td>3.2 %</td>
</tr>
<tr>
<td>Melting point</td>
<td>110 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>2.3</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Specific gravity / density : 2286 kg/m³
Molecular mass : 249.68 g/mol
Solubility : Soluble in water. Soluble in methanol. Soluble in glycerol.
           : Water: 23 g/100ml
           : Ethanol: 16 g/100ml (18 °C)
Log Pow : No data available
Log Kow : No data available
Auto-ignition temperature : No data available
Decomposition temperature : > 110 °C
Viscosity : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available

9.2. Other information
VOC content : Not applicable
Other properties : Hygroscopic. Substance has acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reacts on exposure to water (moisture) with (some) metals. On burning: release of toxic and corrosive gases/vapours (sulphur oxides) and formation of metallic fumes. Reacts exothermically with (some) compounds: (increased) risk of fire. Reacts violently with (strong) reducers.

10.2. Chemical stability
Hygroscopic.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
Acetylene. Magnesium.

10.6. Hazardous decomposition products
Sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Likely routes of exposure : Ingestion.
Acute toxicity : Oral: Harmful if swallowed.

<table>
<thead>
<tr>
<th>Cupric Sulfate Pentahydrate (7758-99-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
</tr>
<tr>
<td>ATE US (oral)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Causes skin irritation.
                         : (---------- TO BE COMPLETED ----------)
                         : pH: 4.0 (3.2 %)

Serious eye damage/irritation : Causes serious eye irritation.
                               : (---------- TO BE COMPLETED ----------)
                               : pH: 4.0 (3.2 %)

Respiratory or skin sensitization : Not classified
                                  : (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified
                       : (Based on available data, the classification criteria are not met)
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Carcinogenicity : Not classified  
(Lack of data)

Reproductive toxicity : Not classified  
(Based on available data, the classification criteria are not met)

Specific target organ toxicity (single exposure) : Not classified  
(Lack of data)

Specific target organ toxicity (repeated exposure) : Not classified  
(Lack of data)

Aspiration hazard : Not classified  
(Based on available data, the classification criteria are not met)

Potential Adverse human health effects and symptoms : Harmful if swallowed.

Symptoms/injuries after inhalation : AFTER INHALATION OF DUST: Dry/sore throat. Coughing. ON HEATING: Metal fume fever.

Symptoms/injuries after skin contact : Tingling/irritation of the skin.

Symptoms/injuries after eye contact : Irritation of the eye tissue.


SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Dangerous for the environment.


Cupric Sulfate Pentahydrate (7758-99-8)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>1.5 mg/l (24 h; Lepomis macrochirus; Toxicity test)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>0.109 - 0.798 mg/l (48 h; Daphnia magna; Anhydrous form)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>0.17 mg/l (24 h; Salmo gairdneri (Oncorhynchus mykiss); Anhydrous form)</td>
</tr>
<tr>
<td>TLM fish 1</td>
<td>3.8 ppm 24 h; Salmo gairdneri (Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
<td>0.01 - 0.28,72 h; Selenastrum capricornutum; Anhydrous form</td>
</tr>
<tr>
<td>Threshold limit algae 2</td>
<td>0.368 mg/l (72 h; Pseudokirchneriella subcapitata; Anhydrous form)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Cupric Sulfate Pentahydrate (7758-99-8)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability: not applicable. No (test)data on mobility of the substance available.</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

Cupric Sulfate Pentahydrate (7758-99-8)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>13 mg/kg (Cyprinus carpio)</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
Cupric Sulfate Pentahydrate
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Cupric Sulfate Pentahydrate (7758-99-8)

Ecology - soil
Toxic to flora.

12.5. Other adverse effects

Effect on the global warming
No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods: Dispose in a safe manner in accordance with local/national regulations.

Waste disposal recommendations: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Precipitate/make insoluble. Remove to an authorized dump (Class I). Do not discharge into the sewer.

Additional information: LWCA (the Netherlands): KGA category 05. Hazardous waste according to Directive 2008/98/EC.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with 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.

Hazard Classes (DOT): 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

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

Packing group (DOT): III - Minor Danger

Dangerous for the environment: Yes

Marine pollutant: Yes

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 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.,” as appropriate. In addition, for solid materials, special provision B54 applies.

146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.

335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s.,” UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.

A112 - Notwithstanding the quantity limits shown in Column (9A) and (9B) for this entry, the following IBCs are authorized for transportation aboard passenger and cargo-only aircraft. Each IBC may not exceed a maximum net quantity of 1,000 kg:
- Metal: 11A, 11B, 11N, 21A, 21B and 21N
- Rigid plastics: 11H1, 11H2, 21H1 and 21H2
- Composite with plastic inner receptacle: 11HZ1, 11HZ2, 21HZ1 and 21HZ2
- Fiberboard: 11G
- Wooden: 11C, 11D and 11F (with inner liners)
- Flexible: 13H2, 13H3, 13H4, 13H5, 13L2, 13L3, 13L4, 13M1 and 13M2 (flexible IBCs must be silt-proof and water resistant or must be fitted with a silt-proof and water resistant liner).

B54 - Open-top, silt-proof rail cars are also authorized.

IBB - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).

IP3 - Flexible IBCs must be silt-proof and water-resistant or must be fitted with a silt-proof and water-resistant liner.

N20 - A 5M1 multi-wall paper bag is authorized if transported in a closed transport vehicle.

T1 - 1.5 178.274(d)(2) Normal............. 178.275(d)(2)

TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

### DOT Packaging Exceptions (49 CFR 173.xxx)

- DOT Quantity Limitations Passenger aircraft/rail: No limit
- DOT Quantity Limitations Cargo aircraft only: No limit
- DOT Vessel Stowage Location: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

### DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

DOT Vessel Stowage Location: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

### Additional information

Other information: No supplementary information available.

### Transport by sea

| UN-No. (IMDG) | 3077 |
| Proper Shipping Name (IMDG) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Class (IMDG) | 9 - Miscellaneous dangerous compounds |
| Packing group (IMDG) | III - substances presenting low danger |
| EmS-No. (1) | F-A |
| EmS-No. (2) | S-F |

### Air transport

| UN-No.(IATA) | 3077 |
| Proper Shipping Name (IATA) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Class (IATA) | 9 - Miscellaneous Dangerous Goods |
Cupric Sulfate Pentahydrate
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Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

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.

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acute Tox. 4 (Oral) H302
Eye Irrit. 2 H319
Skin Irrit. 2 H315
Aquatic Acute 1 H400
Aquatic Chronic 1 H410
Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Xn; R22
Xi; R36/38
N; R50/53
Full text of R-phrases: see section 16

National regulations

Cupric Sulfate Pentahydrate (7758-99-8)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)

Cupric Sulfate Pentahydrate (7758-99-8)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)

15.3. US State regulations

SECTION 16: Other information

Full text of H-phrases:

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral) Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment - Acute Hazard Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment - Chronic Hazard Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>
Cupric Sulfate Pentahydrate
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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.

HMIS III Rating
Health
: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability
: 0 Minimal Hazard - Materials that will not burn
Physical
: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal Protection
: E
  E - Safety glasses, Gloves, Dust respirator

SDS US Custom (-ADR)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.