



# Dominion Veterinary Laboratories Limited

Quality Animal Health Pharmaceuticals - Dedicated Service Since 1950

1199 Sanford Street - Winnipeg, Manitoba R3E 3A1

Telephone: (204) 589.7361 / 589.7362 - Fax: (204) 943.9612

Toll Free: 1.800.465.7122 - [www.domvet.com](http://www.domvet.com)

## Safety Data Sheet

**Date:** August 8, 2021

**Product:** **COPPER SULFATE**

**Product Code:** 00P-COPP2, OOP-COPP3

**Supplier:** Dominion Veterinary Labs LTD.  
1199 Sanford St.  
Winnipeg, Manitoba R3E 3A1  
Telephone: (204)-589-7361 Fax: (204)-943-9612

### 1. PRODUCT AND IDENTIFICATION

**1.1 Product identifiers** Product name : Copper sulphate pentahydrate

Other Names : Cupric sulphate, Blue Vitriol, Bluestone

CAS-No. : 7758-99-8

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

Identified uses : For use in animal feed, fertilizer and other specialty applications.

Uses not recommended : Not intended for human consumption.

**1.3 Emergency telephone number**

Emergency Phone # : +1 613 996-6666 CANUTEC (Canada)

### 2. HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture**

**GHS Classification in accordance with Hazardous Products Regulations**

**(HPR) (SOR/2015-17)** Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 GHS Label elements, including precautionary statements**

**Pictograms**



Signal word

Warning

Hazard statement(s)

H302

H315

H319

H410

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

Very toxic to aquatic life with long lasting effects.

**MSDS**

**Copper Sulfate**

**Page 1 of 9**



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## Precautionary statement(s)

P264

P270

P273

P280

P301 + P312 + P330

P302 + P352

P305 + P351 + P338

P332 + P313

P337 + P313

P362 + P364

P391

P501

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid release to the environment.

Wear protective gloves/ eye protection/ face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Take off contaminated clothing and wash it before reuse.

Collect spillage.

Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms : Cupric sulfatepentahydrate

Formula :  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$

Molecular weight : 249.69 g/mol

CAS-No. : 7758-99-8

EC-No. : 231-847-6

Index-No. : 029-004-00-0

### Hazardous components

| Component                           | Classification                                                                                         | Concentration* |
|-------------------------------------|--------------------------------------------------------------------------------------------------------|----------------|
| <b>Copper sulphate pentahydrate</b> |                                                                                                        |                |
|                                     | Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H410 | 90 - 100 %     |
| * Weight percent                    |                                                                                                        |                |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.



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## **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

## **In case of skin contact**

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

## **In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

## **If swallowed**

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

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### **4.3 Indication of any immediate medical attention and special treatment needed** No data available

## **5. FIREFIGHTING MEASURES**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **5.2 Special hazards arising from the substance or mixture** No data available **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

No data available

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### **6.2 Environmental precautions**

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

### **6.3 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.

### **6.4 Reference to other sections** For disposal see section 13.

MSDS

Copper Sulfate

Page 3 of 9



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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Air sensitive. hygroscopic Handle and store under inert gas.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

##### `Eyeface protection

Face shield and safety glasses 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 glove's 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: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

MSDS

Copper Sulfate

Page 4 of 9



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Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail [sales@kcl.de](mailto: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

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|                                 |                                             |
|---------------------------------|---------------------------------------------|
| a) Appearance                   | Form: crystalline<br>Colour: blue           |
| b) Odour                        | No data available                           |
| c) Odour Threshold              | No data available                           |
| d) pH                           | 3.7 - 4.5 at 50 g/l at 25 °C (77 °F)        |
| e) Melting point/freezing point | Melting point/range: 110 °C (230 °F) - dec. |
| f) Initial boiling point and    | No data available boiling range             |
| g) Flash point                  | No data available                           |
| h) Evaporation rate             | No data available                           |
| i) Flammability (solid, gas)    | No data available                           |
| j) Upper/lower                  | No data available                           |



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flammability  
or explosive  
limits

|                                           |                                     |
|-------------------------------------------|-------------------------------------|
| k) Vapour pressure                        | 9.7 hPa (7.3 mmHg) at 25 °C (77 °F) |
| l) Vapour density                         | No data available                   |
| m) Relative density                       | 2.284 g/cm <sup>3</sup>             |
| n) Water solubility                       | No data available                   |
| o) Partition coefficient: n-octanol/water | No data available                   |
| p) Auto-ignition temperature              | No data available                   |
| q) Decomposition                          | No data available temperature       |
| r) Viscosity                              | No data available                   |
| s) Explosive properties                   | No data available                   |
| t) Oxidizing properties                   | No data available                   |

## 9.2 Other safety information

No data available

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Exposure to moisture

### 10.5 Incompatible materials

Powdered metals, Anhydrous copper(II) sulfate, reacts violently with: hydroxylamine, Magnesium

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Copper oxides

Other decomposition products - No data available

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects



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## Acute toxicity

LD50 Oral - Rat - 482 mg/kg

(OECD Test Guideline 401)

Remarks: anhydrous

Inhalation: No data available

LD50 Dermal - Rat - > 2,000 mg/kg

Remarks: anhydrous

No data available

## Skin corrosion/irritation

Irritating to skin.

## Serious eye damage/eye irritation

Irritating to eyes.

## Respiratory or skin sensitisation

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

## Germ cell mutagenicity

No data available

## Carcinogenicity

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.

## Reproductive toxicity

No data available

No data available

## 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: GL8900000

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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## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to daphnia and aquatic invertebrates EC50 - Daphnia magna (Water flea) - 0.024 mg/l - 48 h other

### 12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION TDG (Canada)

UN number: 3077 Class: 9

Packing group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Marine pollutant: Yes

Poison Inhalation Hazard: No

### DOT (US)

UN number: 3077 Class: 9

Packing group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Marine pollutant: Yes

Poison Inhalation Hazard: No

Reportable Quantity (RQ) = 4.54 kg (10 lbs)



MSDS  
Upper Sulfate  
Page 8 of 9







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## IMDG

UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
SOLID, N.O.S. (Copper sulphate pentahydrate) Marine pollutant:yes

## IATA

UN number: 3077 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Copper sulphate pentahydrate)

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## 15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

|                             |                         |
|-----------------------------|-------------------------|
| Acute Tox.                  | Acute toxicity          |
| Aquatic Acute               | Acute aquatic toxicity  |
| Aquatic Chronic             |                         |
| Chronic aquatic             |                         |
| toxicity Eye Irrit.         |                         |
| Eye irritation              |                         |
| H302                        | Harmful if swallowed.   |
| H315                        | Causes skin irritation. |
| H319                        | Causes serious          |
| eye irritation. H400        |                         |
| Very toxic to aquatic life. |                         |

Preparation Date: 07/28/04

Revision Date: 08/12/21

Issued By: Dominion Vet Labs. Ltd.

Carol Lamirande/Office Manager

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