

## Section 1. Identification

### 1.1 Product Identifier 0189

Product Name COPPER (II) SULPHATE 5H<sub>2</sub>O  
CAS Number 7758-99-8  
REACH Registration No 01-2119520566-40-XXXX  
Molecular Formula  $CuSO_4 \cdot 5H_2O = 249.68$

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

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

### 1.3 Supplier Vickers Laboratories Ltd



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Phone 44 0113 2362811  
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Email [safety@viclabs.co.uk](mailto:safety@viclabs.co.uk)  
Website [www.viclabs.co.uk](http://www.viclabs.co.uk)

### 1.4 Emergency Telephone (08:00-16:30) +44(0) 113 2362811 (24hr) 112 (Have this document to hand)

## Section 2. Hazards Identification

### 2.1 Classification of the substance or mixture

#### Classification according to regulation 1272/2008/EC

Acute toxicity, category 4 (oral)  
Serious eye damage/irritation, category 1  
Hazard to aquatic environment, category 1  
Hazard to aquatic environment, category 1

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.

### 2.2 Label elements

#### Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms



Hazard Statements Harmful if swallowed. Very toxic to aquatic life with long lasting effects. Causes serious eye damage.

Precautionary Statements Wear protective gloves / protective clothing / eye protection. Wash thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.

## Section 3. Composition

### 3.1 Substances

| Component       | CAS No.   | EEC No.   | REACH No.             | Conc w/w | CLP Classification (1272/2008/CE)                             |
|-----------------|-----------|-----------|-----------------------|----------|---|
| Cupric sulphate | 7758-99-8 | 231-847-6 | 01-2119520566-40-XXXX | >99%     | Acute Tox. 4 (O),Eye Dam. 1,Aquatic Acute 1,Aquatic Chronic 1 |

## Section 4. First Aid

### 4.1 Description of first aid measures

|                                      |  |
|--------------------------------------|--|
| Eyes                                 | Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. If discomfort persists OBTAIN MEDICAL ATTENTION. |
| Skin                                 | Thoroughly wash off skin with soap and water. Remove contaminated clothing immediately and wash before re-use.                           |
| Inhalation                           | Remove from exposure.  |
| Ingestion                            | Wash out the patients mouth thoroughly with water. Do not induce vomiting. OBTAIN MEDICAL ATTENTION URGENTLY.                            |
| Personal protection for first aiders | Wear protective gloves / eye protection.   |

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

No further relevant information available.

### 4.3 Indication of any immediate medical attention and special treatment needed.

No further relevant information available.

## Section 5. Fire Fighting

### 5.1 Extinguishing media

|                     |   |
|---------------------|---|
| Extinguishing Media | Consider what other flammable materials are present and act accordingly. Water spray, alcohol resistant foam, dry powder or carbon dioxide. |
| Unsuitable Media    | Nothing specified.  |

### 5.2 Special hazards arising from the substance or mixture

|         |   |
|---------|---|
| Hazards | May evolve toxic fumes if involved in a fire. |
|---------|---|

### 5.3 Advice for firefighters

|                         |  |
|-------------------------|--|
| Advice for firefighters | Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus. |
|-------------------------|--|

## Section 6. Accidental Release Measures

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

|                     |                       |
|---------------------|-----------------------|
| Personal Protection | Avoid breathing dust. |
|---------------------|-----------------------|

### 6.2 Environmental precautions

|               |  |
|---------------|--|
| Environmental | Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs. Do not allow large quantities to enter the environment. |
|---------------|--|

### 6.3 Methods and material for containment and cleaning up

Major Spillage Shovel/sweep up into container for removal Wash area down with copious amounts of water.  
Minor Spillage Wash area down with copious amounts of water.

#### 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

## Section 7. Storage & Handling

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath dust. Do not allow to contaminate clothing.  
Ensure Local Exhaust Ventilation maintains dust concentrations below the recommended limits.

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

Well ventilated, cool, dry storage .

### 7.3 Specific end use(s)

See section 1.2.

## Section 8. Workplace Exposure & Personal Protection

### 8.1 Control parameters

| Component       | CAS No    | Concentration | Workplace Exposure Limits |                         |
|-----------------|-----------|---------------|---------------------------|-------------------------|
|                 |           |               | Long Term (8hr TWA)       | Short Term 15min period |
| Cupric sulphate | 7758-99-8 | >99%          | -                         | -                       |

Exposure data source(s) No occupational exposure data currently available.

### 8.2 Exposure controls

Respiratory Protection If process creates significant amounts of dust use L.E.V. or wear suitable dust mask.  
Hand Protection Wear gloves.  
Eye Protection Use tightly fitting chemical splash proof glasses or goggles.  
Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.  
Special Hazards No special precautions required.

## Section 9. Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance Pale blue crystals.  
Odour No specific odour.  
pH 4 @ 20°C solution.  
Boiling Point Not available  
Melting Point 110°C  
Flash Point Not applicable  
Upper Flammable Limit Not applicable  
Lower Flammable Limit Not applicable  
Auto Ignition Not applicable  
Explosive Properties No.  
Oxidising Properties No.  
Vapour Pressure 7.3 mmHg @ 25°C  
Relative Density 2.2860  
Water Solubility 320 g/L (20°C) Very soluble in water.

### 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

|      |                                    |  |
|------|------------------------------------|--|
| 10.1 | Reactivity                         | None known at present.   |
| 10.2 | Chemical Stability                 | Stable under normal conditions Hygroscopic; protect from moisture.               |
| 10.3 | Possibility of hazardous reactions | None identified.   |
| 10.4 | Conditions to Avoid                | Excessive heating.   |
| 10.5 | Incompatible Materials             | Strong oxidising agents.   |
| 10.6 | Hazardous Decomposition Products   | May produce hazardous fumes if involved in a fire. Sulphur oxides. Copper oxide. |

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

|                      |   |
|----------------------|---|
| Eyes                 | Contact with the solid or dust may be irritating to the eyes.   |
| Skin                 | Contact with the solid or solution may be irritating to the skin.   |
| LD50 Skin            | Not available   |
| Ingestion            | Ingestion of large amounts will produce vomiting, gastric pain, dizziness, convulsions, shock, coma and possibly death. As little as 10g has been reported as causing death although victims have recovered after ingesting much larger amounts Copper salts tend to cause vomiting and for this reason poisoning by ingestion is rare . Chronic poisoning may give rise to kidney damage, enlargement of the liver and jaundice. |
| LD50 Oral            | 690mg/kg Rat  |
| Inhalation           | Inhalation of dust will produce irritation of the eyes, nose, throat and respiratory tract.   |
| LD50 Inhalation      | Not available   |
| TCLo                 | Not available   |
| Carcinogenicity      | Not considered to be a carcinogen.  |
| Mutagenicity         | Not considered to be a mutagen.   |
| Reproductive Effects | None identified.  |

## Section 12. Ecological

|      |                                  |  |
|------|----------------------------------|--|
| 12.1 | Toxicity                         | Copper salts are harmful to the environment. Very Toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment. |
|      | LC50 Algal                       | Not available  |
|      | LC50 Crustacea                   | Not available  |
|      | LC50 Fish                        | Not available  |
| 12.2 | Persistence and degradability    | The complex may persist for some time in the environment.  |
| 12.3 | Bioaccumulative potential        | No data available.   |
| 12.4 | Mobility in soil                 | Keep material out of sewers, storm drains, surface waters and soil.  |
| 12.5 | Results of PBT & vPvB assessment | Assessment not required.   |
| 12.6 | Other adverse effects            | None known at present.   |

## Section 13. Disposal Considerations

### 13.1 Waste treatment methods

|                        |  |
|------------------------|--|
| Disposal Methods       | Do not dispose of as domestic waste.                                 |
| Contaminated Packaging | Wash out containers with water. Do not dispose of as domestic waste. |

## Section 14. Transport Information

|  |  |
|--|--|
| <b>14.1 UN Number</b>                    | 3077   |
| <b>14.2 Proper Shipping Name</b>         | Environmentally hazardous substance, solid, N.O.S. (Cupric Sulphate) |
| <b>14.3 Transport classes</b>            |  |
| UN classification                        | 9  |
| Subsidiary hazard(s)                     | None   |
| Transport category                       | 3  |
| ADR Hazard ID                            | 90   |
| Tunnel Restriction Code                  | E  |
| <b>14.4 Packing Group</b>                | III  |
| <b>14.5 Environment hazards</b>          | Marine pollutant.  |
| <b>14.6 Special precautions for user</b> | No special precautions required.                                     |
| <b>14.7 Transport in bulk</b>            | Not transported in bulk.   |



## Section 15. Regulatory Information

### 15.1 Safety, health and environment regulations specific for substance/mixture.

#### Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Acute toxicity, category 4 (oral); Serious eye damage/irritation, category 1; Hazard to aquatic environment, category 1; Hazard to aquatic environment, category 1

Signal word Danger

Hazard Pictograms



Hazard Statements H302, H410, H318  
Harmful if swallowed. Very toxic to aquatic life with long lasting effects. Causes serious eye damage.

Precautionary Statements P280, P264, P305+P351+P338, P301+P312, P330, P331  
Wear protective gloves / protective clothing / eye protection. Wash thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.

### 15.2 Chemical safety assessment

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

Revision number: 2.2 (Supercedes revision 2.1)

Revision date: 27 October 2022

Reviewed by chemist: 27 October 2022

Printed date: 03 February 2023

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