

**Section 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Product name:** COPPER (II) SULFATE 0.5M SOLUTION**Product code:** B8A67349**Synonyms:** COPPER (II) SULPHATE 0.5M**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of substance / mixture:** Laboratory Chemicals, Manufacture of Substances.**1.3. Details of the supplier of the safety data sheet****Company name:** PHILIP HARRIS

2 Gregory Street

Hyde

Cheshire

SK14 4HR

United Kingdom

**Tel:** +44 (0)845 1200 506**Fax:** +44 (0)161 367 2140**Email:** [enquiries@philipharris.co.uk](mailto:enquiries@philipharris.co.uk)**1.4. Emergency telephone number****Emergency tel:** +44 (0) 845 1200 506**Section 2: Hazards identification****2.1. Classification of the substance or mixture****Classification under CLP:** Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Irrit. 2: H319; Skin Irrit. 2: H315**Most important adverse effects:** Causes skin irritation. Causes serious eye irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.**2.2. Label elements****Label elements:****Hazard statements:** H315: Causes skin irritation.

H319: Causes serious eye irritation.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

**Signal words:** Warning**Hazard pictograms:** GHS07: Exclamation mark

GHS09: Environmental



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**Precautionary statements:** P264: Wash hands thoroughly after handling.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P302+352: IF ON SKIN: Wash with plenty of water/.  
P305+351+338: 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 instructions on this label).

**2.3. Other hazards**

**PBT:** This product is not identified as a PBT/vPvB substance.

**Section 3: Composition/information on ingredients**

**3.2. Mixtures**

**Hazardous ingredients:**

COPPER (II) SULFATE PETAHYDRATE

EINECS	CAS	PBT / WEL	CLP Classification	Percent
-	7758-99-8	-	Acute Tox. 4: H302; Skin Irrit. 2: H315; Eye Irrit. 2: H319; Aquatic Chronic 1: H410; Aquatic Chronic 4: H413	10-30%

**Non-classified ingredients:**

WATER DISTILLED

EINECS	CAS	CHIP Classification	CLP Classification	Percent
-	7732-18-5	-	-	70-90%

**Section 4: First aid measures**

**4.1. Description of first aid measures**

**Skin contact:** After contact with skin, wash immediately with plenty of water and soap. Take victim immediately to hospital.

**Eye contact:** Bathe the eye with running water for 15 minutes. Protect uninjured eye. Remove contact lenses, if present and easy to do. Consult a doctor.

**Ingestion:** Rinse mouth thoroughly with water. Immediately call the POISON CENTRE or a doctor.

**Inhalation:** If breathing is irregular or stopped, administer artificial respiration. Consult a doctor.

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

**Skin contact:** No data available.

**Eye contact:** No data available.

**Ingestion:** No data available.

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

[cont...]

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**Delayed / immediate effects:** No data available.

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

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

**Section 5: Fire-fighting measures**

**5.1. Extinguishing media**

**Extinguishing media:** The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**5.2. Special hazards arising from the substance or mixture**

**Exposure hazards:** In case of fire may be liberated: Sulphur Oxides Copper Oxides

**5.3. Advice for fire-fighters**

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

**Section 6: Accidental release measures**

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

**Personal precautions:** Avoid breathing vapors, mist or gas. Avoid contact with skin, eyes & clothes. Avoid inhalation of dust. Wear protective equipment. Keep Unprotected persons away. Ensure adequate ventilation. Refer to section 8 of SDS for personal protection details.

**6.2. Environmental precautions**

**Environmental precautions:** Do not discharge into drains or rivers. Do not allow to enter into soil/subsoil.

**6.3. Methods and material for containment and cleaning up**

**Clean-up procedures:** Soak up inert absorbent and dispose as waste requiring special attention. Keep in suitable, closed containers for disposal.

**6.4. Reference to other sections**

**Reference to other sections:** Refer to section 13 of SDS.

**Section 7: Handling and storage**

**7.1. Precautions for safe handling**

**Handling requirements:** Avoid contact with skin and eyes. Provide appropriate exhaust ventilation at places where dust is formed.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage conditions:** Keep container tightly closed in a dry and well ventilated place. Store in a cool, dry place. Air sensitive. Hygroscopic Handle and store under inert gas.

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**7.3. Specific end use(s)**

**Specific end use(s):** Apart from uses mentioned in section 1.2 no other specific uses are stipulated.

**Section 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Workplace exposure limits:** No data available.

**DNEL/PNEC Values**

**DNEL / PNEC** No data available.

**8.2. Exposure controls**

**Engineering measures:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Avoid contact with skin, eyes and clothing.

**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 cartiraton as a backup to engineering controls.

**Hand protection:** For long term and short term hand contact wear nitrile rubber gloves, 0.11mm thick with a breakthrough time of 480mins.

**Eye protection:** Safety glasses. Face-shield. Face shield and safety glasses. Use equipment for eye protection test and approved under appropriate government statments such as NIOSH (US) or EN 166(EU)

**Skin protection:** Protective clothing.

**Section 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

**State:** Liquid

**Colour:** Blue

**Odour:** No data available

**Evaporation rate:** No data available

**Oxidising:** No data available

**Solubility in water:** No data available

**Also soluble in:** No data available.

**Viscosity:** No data available

**Viscosity test method:** No data available.

**Boiling point/range°C:** No data available.

**Flammability limits %: lower:** No data available.

**Flash point°C:** No data available.

**Autoflammability°C:** No data available.

**Relative density:** 2.284 g/cm<sup>3</sup>

**VOC g/l:** No data available.

**Melting point/range°C:** 110°C - dec

**upper:** No data available.

**Part.coeff. n-octanol/water:** No data available.

**Vapour pressure:** 9.7hPa at 25°C

**pH:** 3.7 - 4.5

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**9.2. Other information**

**Other information:** No data available.

**Section 10: Stability and reactivity**

**10.1. Reactivity**

**Reactivity:** No data available.

**10.2. Chemical stability**

**Chemical stability:** Stable under recommended storage conditions

**10.3. Possibility of hazardous reactions**

**Hazardous reactions:** No data available.

**10.4. Conditions to avoid**

**Conditions to avoid:** Exposure to moisture.

**10.5. Incompatible materials**

**Materials to avoid:** Powdered metals, Anhydrous copper (II) sulfate, reacts violently with hydroxylamine, Magnesium.

**10.6. Hazardous decomposition products**

**Haz. decomp. products:** In the event of fire see section 5.

**Section 11: Toxicological information**

**11.1. Information on toxicological effects**

**Relevant hazards for substance:**

Hazard	Route	Basis
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated

**Symptoms / routes of exposure**

**Skin contact:** No data available.

**Eye contact:** No data available.

**Ingestion:** No data available.

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

**Delayed / immediate effects:** No data available.

**Section 12: Ecological information**

**12.1. Toxicity**

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**Ecotoxicity values:**

Species	Test	Value	Units
Daphnia magna	48H EC50	0.024	mg/l

**Hazardous ingredients:**

**COPPER (II) SULFATE PETAHYDRATE**

Daphnia magna	48H EC50	0.024	mg/l
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**12.2. Persistence and degradability**

**Persistence and degradability:** No data available.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential:** No data available.

**12.4. Mobility in soil**

**Mobility:** No data available.

**12.5. Results of PBT and vPvB assessment**

**PBT identification:** This product is not identified as a PBT/vPvB substance.

**12.6. Other adverse effects**

**Other adverse effects:** Very toxic to aquatic organisms.

**Section 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal operations:** Transfer to a suitable container and arrange for collection by specialised disposal company.

**Disposal of packaging:** Dispose of as unused product.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

**Section 14: Transport information**

**14.1. UN number**

**UN number:** UN3082

**14.2. UN proper shipping name**

**Shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

**14.3. Transport hazard class(es)**

**Transport class:** 9

**14.4. Packing group**

**Packing group:** III

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**14.5. Environmental hazards**

**Environmentally hazardous:** Yes

**Marine pollutant:** No

**14.6. Special precautions for user**

**Tunnel code:** E

**Transport category:** 3

**Section 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**15.2. Chemical Safety Assessment**

**Chemical safety assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

**Section 16: Other information**

**Other information**

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and s.3:** H302: Harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

H413: May cause long lasting harmful effects to aquatic life.

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.