

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

### 1.1. Product identifier

**Product name:** COPPER (II) NITRATE DIHYDRATE

**CAS number:** 10031-43-3

**EINECS number:** 221-838-5

**Product code:** A67234

### 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 CHIP:** O: R8; Xn: R22

**Classification under CLP:** Aquatic Acute 1: H400; Acute Tox. 4: H302; Eye Dam. 1: H318; Ox. Sol. 2: H272; Skin Irrit. 2: H315

**Most important adverse effects:** Contact with combustible material may cause fire. Harmful if swallowed.

### 2.2. Label elements

**Label elements:**

**Hazard statements:** H272: May intensify fire; oxidiser.

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H400: Very toxic to aquatic life.

**Signal words:** Danger

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**Hazard pictograms:** GHS03: Flame over circle  
GHS05: Corrosion  
GHS07: Exclamation mark  
GHS09: Environmental



**Precautionary statements:** P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P301+312: IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell.  
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.  
P310: Immediately call a POISON CENTER/doctor/.  
P220: Keep/Store away from clothing/combustible materials.  
P273: Avoid release to the environment.

**Label elements under CHIP:**

**Hazard symbols:** Harmful.  
Oxidising.



**Risk phrases:** R8: Contact with combustible material may cause fire.  
R22: Harmful if swallowed.

**2.3. Other hazards**

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

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

**3.1. Substances**

**Chemical identity:** COPPER (II) NITRATE DIHYDRATE  
**CAS number:** 10031-43-3  
**EINECS number:** 221-838-5

**Section 4: First aid measures**

**4.1. Description of first aid measures**

**Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.  
**Eye contact:** Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

[cont...]

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**Ingestion:** Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Transfer to hospital as soon as possible.

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. 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:** There may be irritation and redness at the site of contact.

**Eye contact:** There may be pain and redness. The eyes may water profusely. There may be severe pain. The vision may become blurred. May cause permanent damage.

**Ingestion:** There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be difficulty swallowing. There may be vomiting.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest. Absorption through the lungs can occur causing symptoms similar to those of ingestion.

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

**Immediate / special treatment:** Show this safety data sheet to the doctor in attendance. 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:** Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers. CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

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

**Exposure hazards:** In combustion emits toxic fumes. In combustion emits toxic fumes of nitrogen 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:** Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Do not create dust. Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

[cont...]

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**6.2. Environmental precautions**

**Environmental precautions:** Do not discharge into drains or rivers. Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided.

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

**Clean-up procedures:** Transfer to a closable, labelled salvage container for disposal by an appropriate method. Pick up and arrange disposal without creating dust. Contain spillage, and then collect with an electronically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

**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 direct contact with the substance. Wear personal protective equipment. Avoid contact with skin and eyes. Ensure there is sufficient ventilation of the area. Avoid the formation or spread of dust in the air. 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**

**Storage conditions:** Store in a cool, well ventilated area. Keep container tightly closed.

**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:** Ensure there is sufficient ventilation of the area. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Respiratory protection:** Self-contained breathing apparatus must be available in case of emergency. Respiratory protective device with particle filter. Where risk assessment shows air-purifying respirators are appropriate use a full face particle respirator type N100 (US) or type P3 (EN143) respirator cartridges as a back up to engineering controls.

**Hand protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the gloves outer surface) to avoid skin contact with this

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product. Dispose of contaminated gloves after use.

Wash and dry hands. Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

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

**Eye protection:** Face shield and safety glasses. Use equipment for eye protection test and approved under appropriate government statements such as NIOSH (US) or EN 166(EU) Ensure eye bath is to hand.

**Skin protection:** Protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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

## Section 9: Physical and chemical properties

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

**State:** Crystals

**Colour:** Dark blue

**Evaporation rate:** No data available.

**Oxidising:** Oxidising (by EC criteria)

**Solubility in water:** No data available.

**Viscosity:** 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:** 1.950

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

**Melting point/range°C:** 98

**upper:** No data available.

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

**Vapour pressure:** No data available.

**pH:** 4

### 9.2. Other information

**Other information:** No data available.

## Section 10: Stability and reactivity

### 10.1. Reactivity

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**10.2. Chemical stability**

**Chemical stability:** Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

**10.4. Conditions to avoid**

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

**10.5. Incompatible materials**

**Materials to avoid:** Strong oxidising agents. Strong acids. Reducing agents. Organic materials. Finely powdered metals.

**10.6. Hazardous decomposition products**

**Haz. decomp. products:** In the event of fire see section 5. In combustion emits toxic fumes.

**Section 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicity values:**

Route	Species	Test	Value	Units
ORAL	RAT	LD50	940	mg/kg

**Hazardous ingredients:**

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ORAL	RAT	LD50	940	mg/kg
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**Relevant hazards for substance:**

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	ING	Hazardous: calculated
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated

**Symptoms / routes of exposure**

**Skin contact:** There may be irritation and redness at the site of contact.

**Eye contact:** There may be pain and redness. The eyes may water profusely. There may be severe pain. The vision may become blurred. May cause permanent damage.

**Ingestion:** There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be difficulty swallowing. There may be vomiting.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest. Absorption through the lungs can occur causing symptoms similar to those of ingestion.

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**Section 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity values:** No data available.

**12.2. Persistence and degradability**

**Persistence and degradability:** Biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential:** No bioaccumulation potential.

**12.4. Mobility in soil**

**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. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed 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:** UN1477

**14.2. UN proper shipping name**

**Shipping name:** NITRATES, INORGANIC, N.O.S.

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

**Transport class:** 5.1

**14.4. Packing group**

**Packing group:** II

**14.5. Environmental hazards**

**Environmentally hazardous:** No

**Marine pollutant:** No

[cont...]

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**14.6. Special precautions for user**

**Tunnel code:** E

**Transport category:** 2

**Section 15: Regulatory information**

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

**Specific regulations:** Not applicable.

**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:** H272: May intensify fire; oxidiser.

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H400: Very toxic to aquatic life.

R8: Contact with combustible material may cause fire.

R22: Harmful if swallowed.

**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.