

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Copper(II) sulfate pentahydrate

Manufacturer/supplier identification

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2. Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Oral (Category 4)

Acute toxicity, Dermal (Category 5)

Skin irritation (Category 2)

Eye irritation (Category 1)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 1)

Label elements

Pictogram



Signal word Danger

Hazard statement(s)

H302 Harmful if swallowed.

H313 May be harmful in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P264 + P265 Wash hands thoroughly after work. Don't touch your eyes.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear eye protection/ face protection.

P301 + P317 If swallowed by mistake: Seek medical attention.

P302 + P317 If skin is contaminated: Seek medical attention.

P302 + P352 If skin is contaminated: wash thoroughly with water.

P305 + P354 + P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specialized treatment (see related measures on this label).

P330 Rinse mouth.

P332 + P317 If skin irritation occurs: Seek medical attention.

P337 + P317	If eye irritation persists: Seek medical attention.
P362 + P364	Remove contaminated clothing and wash it before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements
none

3. Composition/information on ingredients

Synonyms:

Copper(II) sulfate pentahydrate

CAS-No.: 7758-99-8

M: 249.68 g/mol

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

4. First aid measures

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. 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.

5. Fire-fighting measures

Suitable extinguishing media

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

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental release measures

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Do not let product enter drains.

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.

7. Handling and storage

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.

Conditions for safe storage

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

8. Exposure controls and personal protection

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment**Eye/face protection**

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. Physical and chemical properties

Form: crystals

Colour: blue

Odour: not available

pH value: not available

Melting point: not available

Boiling point: not available

Ignition temperature: not available

Flash point: not available

Autoignition temperature: not available

Explosion limits

lower: not available

upper: not available

Density : 2.29g/cm³

Bulk density: not available

Solubility in

water (20 °C) : soluble in water

diluted acids (20 °C) : not available

Thermal decomposition: not available

10. Stability and reactivity**Chemical stability**

no data available

Conditions to avoid

no data available

Materials to avoid

Powdered metals, Anhydrous copper(II) sulfate, hydroxylamine, Magnesium

Hazardous decomposition products

Other decomposition products - no data available

11. Toxicological information**Acute toxicity**

LD50 Oral - Rat - 300 mg/kg

Remarks: (anhydrous substance)

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

Remarks: (anhydrous substance)

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

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.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

12. Ecological information**Toxicity**

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

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

13. Disposal considerations**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport information

ADR/RID

UN-Number: 3077 Class: 9 Packing group: III

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

IMDG

UN-Number: 3077 Class: 9 Packing group: III

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)

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. Other information

General update.

Regional representation:

This information is given on the authorised Safety Data Sheet for your country.