

Material Safety Data Sheet

Version:01 Revision Date 28/4/2025

Section 1. Product Information and Company Identification			
Product name	Copper Chloride Dihydrate		
Mol. formula	Cl2Cu · 2H2O	CAS No.	10125-13-0
Mol.wt	170,48 g/mol		
Manufacturer name	Pioneers for laboratory chemicals		
Brand name	Piochem		
Address	Area 540, Industrial Zone 6 th October city Giza, Egypt.		
Website	www.piochem.com		
E-mail	info@piochem.com		
Phone number	+201225728304 , +201023932115		

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Corrosive to metals (Category 1), H290

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Dermal (Category 4), H312

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 2), H411

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

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn, N Harmful, Dangerous for the environment

R21/22, R38, R41, R50

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram





Signal word Danger

Hazard statement(s)

H290 May be corrosive to metals.

H302 + H312 Harmful if swallowed or in contact with skin

H315 Causes skin irritation.

H318 Causes serious eye damage. H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard

Statements

none

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Cupric chloridedihydrate

Formula : Cl₂Cu · 2H₂O Molecular Weight : 170,48 g/mol CAS-No. : 10125-13-0 EC-No. : 231-210-2

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component Classification Concentration

Copper(II) chloride dihydrate

CAS-No. 10125-13-0 Met. Corr. 1; Acute Tox. 4; <= 100 %

EC-No. 231-210-2 Skin Irrit. 2; Eye Dam. 1;

Aquatic Acute 1; Aquatic Chronic 2; H290, H302 + H312, H315, H318, H400,

H411

Hazardous ingredients according to Directive 1999/45/EC

Component Classification Concentration

Copper(II) chloride dihydrate

CAS-No. 10125-13-0 Xn, N, R21/22 - R38 - R41 - <= 100 %

EC-No. 231-210-2 R50

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 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.

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.

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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

SECTION 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

Hydrogen chloride gas, Copper oxides

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

SECTION 6: Accidental release measures

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.

SECTION 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

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

hygroscopic

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

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8.2 **Exposure controls**

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face 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.

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 N100 (US) or type P3 (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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance Form: crystalline Colour: dark blue b) Odour no data available Odour Threshold no data available

3.0 - 3.8d) pН

e) Melting point/freezing

point

Melting point/range: 100 °C - dec.

Initial boiling point and f)

boiling range

no data available

Flash point no data available g) h) **Evapouration rate** no data available i) Flammability (solid, gas) no data available Upper/lower no data available i)

flammability or explosive limits

k) Vapour pressure no data available Vapour density no data available I)

m) Relative density 2,51 g/cm3 soluble Water solubility

Partition coefficient:

no data available

octanol/water

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p) Auto-ignition no data available temperature

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

SECTION 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

Heat. Exposure to moisture.

10.5 Incompatible materials

Alkali metals

10.6 Hazardous decomposition products

Other decomposition products - no data available In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 336 mg/kg

Inhalation: no data available

LD50 Dermal - rat - male - > 2.000 mg/kg

LD50 Dermal - rat - female - 1.224 mg/kg

Skin corrosion/irritation

Skin - rabbit

Result: Irritating to skin.

Serious eye damage/eye irritation

Eves - rabbit

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

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.



Reproductive toxicity

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: GL7030000

Depending on the intensity and duration of exposure, effects may vary from mild irritation to severe destruction of tissue., Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has lead to hemolytic anemia and accelerates arteriosclerosis., Symptoms observed shortly before death were:, Shock., renal failure

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish LC50 - Cyprinus carpio (Carp) - 0,12 - 0,23 mg/l - 96,0 h

LC50 - Lepomis macrochirus - 0,9 mg/l - 96,0 h NOEC - Ictalurus punctatus - 0,013 mg/l - 60 d

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

Very toxic to aquatic life.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

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

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SECTION 14: Transport information

14.1 UN number

ADR/RID: 2802 IMDG: 2802 IATA: 2802

14.2 UN proper shipping name

ADR/RID: COPPER CHLORIDE IMDG: COPPER CHLORIDE COPPER CHLORIDE COPPER CHLORIDE IATA: Copper chloride

14.3 Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user

no data available

SECTION 15: Regulatory information

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

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

no data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 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 Dam. Serious eye damage

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H302 + H312 Harmful if swallowed or in contact with skin

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage. H400 Very toxic to aquatic life.

Full text of R-phrases referred to under sections 2 and 3

N Dangerous for the environment

Xn Harmful

R21/22 Harmful in contact with skin and if swallowed.

R38 Irritating to skin.

R41 Risk of serious damage to eyes. R50 Very toxic to aquatic organisms.

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