

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1 Product identifier

Trade name/designation Copper (II) chloride dihydrate
Product No. 52-7617
Substance name Copper (II) chloride dihydrate
CAS No. 10125-13-0
INDEX no.
REACH registration No. Not yet communicated down the supply chain.
other means of identification Copper dichloride dihydrate Cupric chloride dihydrate

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses for laboratory use and chemical production.

1.3 Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

Address Rapid Electronics,
Severalls Lane,
Colchester,
Essex,
CO4 5JS, United Kingdom

Telephone : +44 (0) 1206 751166
Fax : +44 (0) 1206 751188
E-mail address : sales@rapidelec.co.uk

1.4 Emergency telephone

Telephone +44 (0) 1206 751166

2. Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP]

| hazard classes and hazard categories | Hazard Statements | classification procedure | remark |
|--------------------------------------|-------------------|--------------------------|--------|
| Acute toxicity, category 4, oral | H302 | | |

| | | | |
|---|------|--|--|
| Eye irritation, category 2 | H319 | | |
| Skin irritation, category 2 | H315 | | |
| Hazardous to the aquatic environment, chronic, category 1 | H410 | | |

2.1.2 Classification according to Directive 67/548/EEC or 1999/45/EC

| Hazard symbols: | R-phrases |
|-----------------|-----------|
| Xn | R22 |
| Xi | R36/38 |
| N | R50/53 |

2.2 Label elements

2.2.1 Labelling according to Regulation (EC) No. 1272/2008 [CLP]



Signal word

Warning

Hazard Statements

| | |
|------|---|
| H302 | Harmful if swallowed. |
| H319 | Causes serious eye irritation. |
| H315 | Causes skin irritation. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Precautionary statements

| | |
|----------------|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P273 | Avoid release to the environment. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P309+P311 | IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. |

2.2.2 Labelling (67/548/EEC or 1999/45/EC)

Hazard symbols:

Xn, N

R-phrases

| | |
|--------|--|
| R22 | Harmful if swallowed. |
| R36/38 | Irritating to eyes and skin. |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

S-phrases

| | |
|-----|---|
| S22 | Do not breathe dust. |
| S26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |

S61

Avoid release to the environment. Refer to special instructions/safety data sheets.

2.3 Other hazards

SVHC

No

3. Composition/ Information on ingredients

| | |
|--------------------------|--------------------------------------|
| Molecular formula | Cl ₂ Cu.2H ₂ O |
| Molecular weight (g/mol) | 170.48 g/mol |
| CAS No. | 10125-13-0 |
| EC No | 231-210-2 |
| INDEX no. | |

4. First-aid measures

4.1 General information

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

4.2 After inhalation

Call a POISON CENTER or doctor/physician. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

4.3 In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

4.4 After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

4.5 After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do not induce vomiting. Give nothing to eat or drink.

4.6 Self-protection of the first aider

First aider: Pay attention to self-protection!

4.7 Information to physician:

| | |
|-----------|-------------------|
| Symptoms | No data available |
| Hazards | No data available |
| Treatment | No data available |

5. Firefighting measures

5.1 Suitable extinguishing media

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

5.2 Extinguishing media which must not be used for safety reasons:

no restriction

5.3 Special hazards arising from the substance or mixture

In case of fire may be liberated: Hydrogen chloride (HCl)

5.4 Advice for firefighters

DO NOT fight fire when fire reaches explosives. In case of fire: Wear self-contained breathing apparatus.

5.5 Additional information

Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Use water spray jet to protect personnel and to cool endangered containers.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust. Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Take up carefully when dry. Clean contaminated objects and areas thoroughly observing environmental regulations. Collect in closed and suitable containers for disposal.

6.4 Additional information

Clear spills immediately.

7. Handling and storage

7.1 Precautions for safe handling

All work processes must always be designed so that the following is as low as possible: Inhalation. skin contact eye contact.

7.2 Conditions for safe storage, including any incompatibilities

storage temperature 15-25°C

Keep container tightly closed in a cool, well-ventilated place.

7.3 Specific end use(s)

No data available

8. Exposure controls / Personal protection

8.1 Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limit.

8.2 Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

8.3 Personal protective equipment

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn.

8.3.1 Eye / face protection

Eye glasses with side protection DIN-/EN-Norms: DIN EN 166

8.3.2 Skin protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Recommended glove articles DIN-/EN-Norms: DIN EN 374 In the case of wanting to use the gloves again, clean them before taking off and air them well.

By short-term hand contact

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material 0,12 mm

Breakthrough time (maximum wearing time) >480 min

Recommended glove articles VWR 112-0998

By long-term hand contact

Suitable material: NBR (Nitrile rubber)

| | |
|--|-------------------------|
| Thickness of the glove material | 0,38 mm |
| Breakthrough time (maximum wearing time) | >480 min |
| Recommended glove articles | VWR 112-3717 / 112-1381 |

8.3.3 Protective clothing

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

8.3.4 Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

| | |
|--|---------------------------------------|
| Suitable respiratory protection apparatus: | Filtering Half-face mask (DIN EN 149) |
| Recommendation | VWR 111-0451 |
| Suitable material: | P3 |
| Recommendation | No data available |

8.4 Additional information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|---------------------|-------------------|
| (a) Appearance | |
| Physical state | solid |
| Colour | greenish blue |
| (b) Odour | No data available |
| (c) Odour threshold | No data available |

Safety relevant basic data

| | |
|--|-------------------------------|
| (d) pH | No data available |
| (e) Melting point/freezing point | 100°C |
| (f) Initial boiling point and boiling range | No data available |
| (g) Flash point | No data available |
| (h) Evaporation rate | No data available |
| (i) Flammability (solid, gas) | not applicable |
| (j) Upper/lower flammability or explosive limits | |
| Lower explosion limit (Vol-%) | No data available |
| Upper explosion limit (Vol-%) | No data available |
| (k) Vapour pressure | No data available |
| (l) Vapour density | No data available |
| (m) Relative density | 2.54 g/cm ³ (20°C) |
| (n) Solubility(ies) | |
| Water solubility (g/l) | 1150 g/l (20°C) |
| at °C: | 20 |
| Soluble (g/l) in | No data available |
| (o) Partition coefficient: n-octanol/water | No data available |
| (p) Auto-ignition temperature | No data available |

| | |
|-------------------------------|-------------------|
| (q) Decomposition temperature | No data available |
| (r) Viscosity | |
| Kinematic viscosity | No data available |
| Dynamic viscosity | No data available |
| (s) Explosive properties | not applicable |
| (t) Oxidising properties | not applicable |

9.2 Other information

| | |
|-----------------------|-------------------|
| Bulk density | No data available |
| refraction index | No data available |
| dissociation constant | No data available |
| Surface tension | No data available |
| Henry constant | No data available |

10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

No data available

10.7 Additional information

No data available

11. Toxicological information

11.1 Information on toxicological effects

Acute effects

Acute oral toxicity
Effective dose LD50: 584 mg/kg
species: rat
Exposure time
remark anhydrous
source Merck KGaA

Acute dermal toxicity
Effective dose No data available
species: No data available
Exposure time
remark
source

Acute inhalation toxicity
Effective dose No data available
species: No data available
Exposure time
remark
source

Irritant and corrosive effects

Primary irritation to the skin
Exposure time
species:
Result

Irritation to eyes
Exposure time
species:
Result

Irritation to respiratory tract
Exposure time
species:
Result

Sensitisation

In case of skin contact not sensitising.
After inhalation not sensitising.

Specific target organ toxicity (single exposure)

not relevant

Specific target organ toxicity (repeated exposure)

not relevant

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No indication of human carcinogenicity.

Germ cell mutagenicity/Genotoxicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

Aspiration hazard

not relevant

11.2 Other adverse effects

No data available

11.3 Additional information

No data available

12. Ecological information

12.1 Ecotoxicity

Acute (short-term) fish toxicity

LC50: No data available

EC50

species:

Exposure time

Chronic (long-term) fish toxicity

LC50: No data available

EC50

species:

Exposure time

Acute (short-term) daphnia toxicity

LC50: No data available

EC50

species:

Exposure time

Chronic (long-term) daphnia toxicity

LC50: No data available

EC50

species:
Exposure time

Acute (short-term) algae toxicity

LC50: No data available
EC50
species:
Exposure time

Chronic (long-term) algae toxicity

LC50: No data available
EC50
species:
Exposure time

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

(o) Partition coefficient: n-octanol/water No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT assessment

No data available

12.6 Other adverse effects

No data available

13. Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product

16 05 06 (laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals)

Appropriate disposal / Package

13.2 Additional information

No data available

14. Transport information

14.1 Land transport (ADR/RID)

| | |
|----------------------|-----------------|
| UN-No. | 2802 |
| Proper Shipping Name | COPPER CHLORIDE |
| Class(es) | 8 |
| Classification code: | C2 |
| Packing group | III |
| Hazard label(s) | 8 |

14.2 Sea transport (IMDG)

| | |
|----------------------|-----------------|
| UN-No. | 2802 |
| Proper Shipping Name | COPPER CHLORIDE |
| Class(es) | 8 |
| Classification code: | C2 |
| Packing group | III |
| Marine pollutant | |
| Segregation group | |

14.3 Air transport (ICAO-TI / IATA-DGR)

| | |
|----------------------|-----------------|
| UN-No. | 2802 |
| Proper Shipping Name | COPPER CHLORIDE |
| Class(es) | 8 |
| Classification code: | C2 |
| Packing group | III |

14.4 Additional information

No data available

15. Regulatory information

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

| | |
|--------------------------|---|
| Water hazard class (WGK) | 2 |
|--------------------------|---|

15.2 Chemical Safety Assessment

No data available

16. Other information

16.1 Relevant R-, H- and EUH-phrases (Number and full text)

| | |
|--------|--|
| R22 | Harmful if swallowed. |
| R36/38 | Irritating to eyes and skin. |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

| | |
|------|---|
| H302 | Harmful if swallowed. |
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| H315 | Causes skin irritation. |
| H410 | Very toxic to aquatic life with long lasting effects. |

16.2 Additional information

Indication of changes

general update

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.