

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Kupfer(II)-chlorid wasserfrei

Revision: 19.02.2025

Product code: 26548

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Kupfer(II)-chlorid wasserfrei

Substance name: copper dichloride
REACH Registration Number: 01-2119970306-36-XXXX
CAS No: 7447-39-4
EC No: 231-210-2

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Reagents and laboratory chemicals
Only for laboratory and analysis purposes.

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH
ACD
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
Telefax: 0203/5194-290
E-mail: info@analytichem.de
Contact person: Abteilung Produktsicherheit
Telephone: 0203/5194-107/117
E-mail: produktsicherheit@analytichem.de
Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

No data available

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Acute Tox. 4; H312
Acute Tox. 4; H302
Skin Irrit. 2; H315
Eye Dam. 1; H318
Aquatic Acute 1; H400 (M-Factor (self-classification) = 10)
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008**

Signal word: Danger

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Pictograms:



Hazard statements

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 statements

P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313	Get medical advice/attention.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula:	CuCl ₂
Molecular weight:	134,45 g/mol

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7447-39-4	copper dichloride			100 %
	231-210-2		01-2119970306-36-XXXX	
	Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 2; H312 H302 H315 H318 H400 H411			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7447-39-4	231-210-2	copper dichloride	100 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 584 mg/kg Aquatic Acute 1; H400: M=10		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

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After inhalation

Provide fresh air.
Call a physician immediately.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
Call a physician immediately.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.
Remove contact lenses, if present and easy to do. Continue rinsing.
Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.
Call a physician immediately.

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

Risk of serious damage to eyes.
Irritant
Gastrointestinal complaints
Vomiting
Fever
Headache

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**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible solids
Hazardous combustion products
In case of fire may be liberated: Hydrogen chloride (HCl)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.
Avoid contact with skin, eyes and clothes.

Additional information

Suppress gases/vapours/mists with water spray jet.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures

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Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Avoid dust formation.

Do not breathe dust.

Read label before use.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary.

Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Store in a dry place.

Unsuitable container/equipment material: Metal

Hints on joint storage

national regulations

Further information on storage conditions

Keep container tightly closed.

storage temperature < +30°C

7.3. Specific end use(s)

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Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

PNEC values

CAS No	Substance	
Environmental compartment		Value
7447-39-4	copper dichloride	
Freshwater		0,0078 mg/l
Marine water		0,0052 mg/l
Freshwater sediment		87 mg/kg
Marine sediment		676 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,23 mg/l
Soil		65 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation as well as local exhaust at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet <(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

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Skin protection

Wear suitable protective clothing.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Filtering device with filter or ventilator filtering device of type: P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	solid
Colour:	yellow -brown
Odour:	odourless
Odour threshold:	not determined
Melting point/freezing point:	498 °C
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	not determined
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Flash point:	not applicable
Auto-ignition temperature:	not determined
Decomposition temperature:	>300 °C
pH-Value (at 20 °C):	~3,5 (50 g/l)
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	620 g/l
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	No data available
Vapour pressure:	No data available
Vapour pressure:	not determined
Density (at 20 °C):	3,39 g/cm ³
Bulk density:	not determined
Relative vapour density:	not determined

9.2. Other information**Information with regard to physical hazard classes**

Explosive properties

No data available

Sustained combustibility:

No data available

Self-ignition temperature

Solid:

not determined

Gas:

not applicable

Oxidizing properties

No data available

Other safety characteristics

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Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	0
Solid content:	100,00 %
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
not determined:	
Viscosity / dynamic:	not determined
Flow time:	not determined

Further Information

not determined

SECTION 10: Stability and reactivity**10.1. Reactivity**

No data available

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Alkali metals

Oxidising agent, strong

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Metal

10.6. Hazardous decomposition products

In case of fire may be liberated:

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

No data available

Acute toxicity

Harmful in contact with skin.

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7447-39-4	copper dichloride				
	oral	LD50 584 mg/kg	Rat	Publication (1991)	The test material was administered to gr
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2003)	OECD Guideline 402

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Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Causes serious eye damage.

Risk of serious damage to eyes.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards**Other information**

Liver and kidney damage

Further information

Risk of serious damage to eyes.

Irritant

Gastrointestinal complaints

Vomiting

Fever

Headache

SECTION 12: Ecological information**12.1. Toxicity**

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

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CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
7447-39-4	copper dichloride						
	Acute fish toxicity	LC50 mg/l	0,193	96 h	Pimephales promelas	Study report (1996)	measurements were conducted by standard
	Acute algae toxicity	ErC50 mg/l	0,152	72 h	Pseudokirchneriella subcapitata	Publication (2005)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	0,007	48 h	Daphnia magna	Study report (1978)	- Test were conducted on Daphnia magna t
	Fish toxicity	NOEC mg/l	0,123	12 d	Atherinops affinis	Mar. Environ. Res. 31: 17-35 (1991)	Three tests are reported, designed to de
	Algae toxicity	NOEC mg/l	0,0102	19 d	other aquatic plant: giant kelp Macrocystis pyrife	Mar. Ecol. Prog. Ser. 68: 147 - 156 (199	Tests were conducted to determine the ef
	Crustacea toxicity	NOEC mg/l	0,033	14 d	Penaeus mergulensis and Penaeus monodon	Bull. Environ. Contain. Toxicol. (1995)	The effects of dissolved copper on the g

12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential**BCF**

CAS No	Chemical name	BCF	Species	Source
7447-39-4	copper dichloride	0,02 - 20	Crangon crangon	Symp. Biologica. Hun

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations. Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

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SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 2802
14.2. UN proper shipping name:	COPPER CHLORIDE
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C2
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2802
14.2. UN proper shipping name:	COPPER CHLORIDE
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C2
Limited quantity:	5 kg
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 2802
14.2. UN proper shipping name:	COPPER CHLORIDE
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Marine pollutant:	P
Special Provisions:	-
Limited quantity:	500 g
Excepted quantity:	E1
EmS:	F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 2802
14.2. UN proper shipping name:	COPPER CHLORIDE
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	A803
Limited quantity Passenger:	5 kg
Passenger LQ:	Y845
Excepted quantity:	E1
IATA-packing instructions - Passenger:	860
IATA-max. quantity - Passenger:	25 kg
IATA-packing instructions - Cargo:	864
IATA-max. quantity - Cargo:	100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
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Danger releasing substance: copper dichloride

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Information according to Directive 2012/18/EU (SEVESO III): E1 Hazardous to the Aquatic Environment

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 3 - highly hazardous to water

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,3,4,7,9,10,11,12,13,14,15.

Abbreviations and acronyms

Acute Tox. 4: Acute toxicity, hazard category 4

Skin Irrit. 2: Skin irritation, hazard category 2

Eye Dam. 1: Serious eye damage, hazard category 1

Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard category: Chronic 2

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

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.
H411	Toxic to aquatic life with long lasting effects.

Further Information

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. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

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The receiver of our product is singularly responsible for adhering to existing laws and regulations.
Provide appropriate information, instructions and training to users