Sigma-Aldrich.

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

Version 8.1 Revision Date 06.06.2023 Print Date 31.08.2024 GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1	Product identifiers Product name	:	Copper(II) acetate monohydrate
	Product Number Brand REACH No.	-	217557 SIGALD A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
	CAS-No.	:	6046-93-1
	Relevant identified uses of the substance or mixture and uses advised against		
1.2	Relevant identified use	es	of the substance or mixture and uses advised against
1.2	Relevant identified use Identified uses		of the substance or mixture and uses advised against Laboratory chemicals, Manufacture of substances
1.2 1.3		:	Laboratory chemicals, Manufacture of substances
	Identified uses	:	Laboratory chemicals, Manufacture of substances

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 Acute toxicity, Oral (Category 4), H302 Skin corrosion (Sub-category 1B), H314 Serious eye damage (Category 1), H318 Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 2), H411

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

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Pictogram	
Signal Word	Danger
Hazard statement(s) H302 H314 H410	Harmful if swallowed. Causes severe skin burns and eye damage. Very toxic to aquatic life with long lasting effects.
Precautionary statement(s) P260 P273 P280	Do not breathe dust. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.
Supplemental Hazard Statements	none

Reduced Labeling (<= 1 2 Pictogram	25 ml)		
Signal Word	Danger		
Hazard statement(s) H314	Causes severe skin burns and eye damage.		
Precautionary statement(s) P260 P280 P303 + P361 + P353 P305 + P351 + P338	Do not breathe dust. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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		
Other hazards This substance/mixture contains no components considered to be either persistent,			

bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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SECTION 3: Composition/information on ingredients

3.1	Substances Synonyms	: Cupric acetatemonohydrate		
	Formula Molecular weight CAS-No. EC-No.	 C₄H₆CuO₄ · H₂O 199.65 g/mol 6046-93-1 205-553-3 		
	Component Classification		Classification	Concentration
	Copper di(acetate)	Copper di(acetate)		
	CAS-No. EC-No.	6046-93-1 205-553-3	Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 2; H302, H314, H318, H400, H411 M-Factor - Aquatic Acute: 1	<= 100 %

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

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides Copper oxides Not combustible. Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions Tightly closed. Dry.

Storage class

Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

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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

Ingredients with workplace control parameters

8.2 Exposure controls

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). Tightly fitting safety goggles

Skin protection

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). Full contact

Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L

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).

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L

Body Protection

protective clothing

Respiratory protection

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P2

The entrepeneur 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.

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Do not let product enter drains.

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

	ormation on basic p	hysical and chemical properties
a)	Physical state	Crystalline powder
b)	Color	dark green, transparent
c)	Odor	odorless
d)	Melting point/freezing point	Melting point: 273 °C - Regulation (EC) No. 440/2008, Annex, A.1 - Decomposes before melting.
e)	Initial boiling point and boiling range	(decomposition)
f)	Flammability (solid, gas)	The product is not flammable Flammability (solids)
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	does not flash
i)	Autoignition temperature	239 °C - Relative self-ignition temperature for solids
j)	Decomposition temperature	No data available
k)	рН	5.2 - 5.5 at 20 g/l at 20 °C
I)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m)	Water solubility	76.3 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6- completely soluble
n)	Partition coefficient: n-octanol/water	Not applicable for inorganic substances
o)	Vapor pressure	No data available
p)	Density	1.88 g/cm3 at 20 °C
	Relative density	1.92 at 21.9 °C - Regulation (EC) No. 440/2008, Annex, A.3
q)	Relative vapor density	
r)	Particle characteristics	No data available

s) Explosive properties No data available

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t) Oxidizing properties none

9.2 Other safety information

Surface tension

72 mN/m at 1.08g/l at 21.2 °C - Surface tension

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

- **10.2 Chemical stability** The product is chemically stable under standard ambient conditions (room temperature) .
- **10.3 Possibility of hazardous reactions** Violent reactions possible with: Strong acids
- **10.4 Conditions to avoid** no information available
- **10.5 Incompatible materials** No data available
- **10.6 Hazardous decomposition products** In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - > 300 - 2,000 mg/kg (OECD Test Guideline 420) Symptoms: Nausea, Vomiting Symptoms: Possible damages:, mucosal irritations LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation

Skin - In vitro study Result: Causes burns. - 4 h (OECD Test Guideline 431)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Causes serious eye damage. - 21 d (OECD Test Guideline 405) Remarks: conjunctivitis Risk of corneal clouding.

Respiratory or skin sensitization

Maximization Test - Guinea pig

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Does not cause skin sensitization. (OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative

Test Type: unscheduled DNA synthesis assay Species: Rat Cell type: Liver cells Application Route: Oral Method: OECD Test Guideline 486 Result: negative

Carcinogenicity

No data available

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

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male and female - Inhalation - 28 Days Remarks: (in analogy to similar products) The value is given in analogy to the following substances: copper(I) oxide

RTECS: AG3500000

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., Cough, Shortness

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of breath, Headache, Nausea, Vomiting, Gastrointestinal disturbance, Blood disorders, Liver injury may occur., Damage to the lungs.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects:

Tiredness

After a latency period:

Metal-fume fever after inhalation of large quantities.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 0.39 mg/l - 96 h (US-EPA)
	Remarks: (in analogy to similar products) The value is given in analogy to the following substances: Copper(II) sulfate hydrate

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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties Product:

Assessment

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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12.7 Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations				
13.1	Waste tro No data av	eatment methods vailable		
SECT	ION 14: T	ransport informat	ion	
14.1	UN numb ADR/RID:		IMDG: 1759	IATA: 1759
14.2		CORROSIVE SOLID	9, N.O.S. (Copper di(acetate)) 9, N.O.S. (Copper di(acetate)) 9.s. (Copper di(acetate))	
14.3	Transpor ADR/RID:	t hazard class(es) 8	IMDG: 8	IATA: 8
14.4	Packagin ADR/RID:		IMDG: II	IATA: II
14.5	Environm ADR/RID:	iental hazards yes	IMDG Marine pollutant: yes	IATA: no
14.6	Special p	recautions for use	r	
	Further in	formation :	No data available	

SECTION 15: Regulatory information

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

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

National legislation

Seveso III: Directive 2012/18/EU of the E1 ENVIRONMENTAL HAZARDS European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

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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.

- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H400 Very toxic to aquatic life.
- H410 Harmful if swallowed.
- H411 Causes severe skin burns and eye damage.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM -American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. -Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the

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