

ALADDIN SCIENTIFIC CORPORATION
14078 Meridian Parkway, Riverside, CA. 92518

SAFETY DATA SHEET

Version: v1
Revision Date: 2024-03-07
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Copper(II) chloride
Product Number : C433487
Brand : aladdin
CAS-No. : 7447-39-4

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

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Dermal (Category 4), H312


Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 2), H411

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Danger
Hazard statement(s)	
H301	Toxic if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child
H410	Very toxic to aquatic life with long lasting effects
Precautionary statement(s)	
P330	Rinse mouth.
P391	Collect spillage.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P337+P313	IF eye irritation persists: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.
P302+P352+P312	IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Cupric chloride
Formula	: Cl ₂ Cu
Molecular weight	: 134.45
CAS No.	: 7447-39-4
EC-NO.	: 231-210-2

Component	Classification	Concentration
Copper(II) chloride	no data available	99.999% trace metals basis

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SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

In case of skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

In case of eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

If swallowed

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

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 dry chemical, carbon dioxide or alcohol-resistant foam.

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Oxides of copper, the hydrogen chloride gas, are nonflammable. An ambient fire may trigger the release of hazardous vapors.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

no data available

SECTION 6: Accidental release measures

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6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool and ventilated warehouse.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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 EN166(EU).

Skin protection

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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 Regulation (EU)2016/425 and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., 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 fullface 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

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	no data available
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	498°C
f) Initial boiling point and boiling range	993°C
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	3.386
n) Water solubility	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	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

9.2 Other safety information

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14078 Meridian Parkway, Riverside, CA. 92518

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

Possible violent reaction with it: Alkali metals Strong oxidizing agent There is an explosion risk associated with it:
Acetylene Possible formation: Isoacetylene

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Multiple metals

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 oral rat -584 mg/kg

Remarks: (RTECS)

Symptoms: After swallowing, it stimulates the oral mucosa, throat, trachea, and digestive tract

Inhalation: No data available

LD50 transdermal - rat - female -1224 mg/kg

(OECD Testing Guidelines 402)

Note: Corresponding values have been specified for the following substances: cuprous chloride (i)

Skin corrosion/irritation

Skin - Rabbit Result: Stimulation Remarks: (ECHA) Corresponding values have been specified for the following substances: cuprous chloride (i)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Causing severe eye damage. Remarks: (ECHA) Corresponding values have been specified for the following substances: cuprous chloride (i)

Respiratory or skin sensitisation

Maximum Response Test - Guinea Pig Result: Non skin allergens (OECD Testing Guidelines 406) Note:

Corresponding values have been specified for the following substances: cuprous chloride (i)

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Germ cell mutagenicity

Test type: Ames test Testing system: Salmonella typhimurium Metabolic activation: with or without metabolic activation effect Method: OECD Testing Guidelines 471 Result: Negative Note: Corresponding values have been specified for the following substances: copper sulfate (ii) pentahydrate Test type: Micronucleus test Species: Mouse Cell type: Bone marrow Infection route: oral route Method: Regulation (EC) No. 440/2008, Annex B.12 Result: Negative Note: Corresponding values have been specified for the following substances: copper sulfate (ii) pentahydrate Test type: Extraordinary DNA synthesis test Species: Rat Cell type: Hepatocytes Infection route: oral route Method: OECD Testing Guidelines 486 Result: Negative Note: Corresponding values have been specified for the following substances: copper sulfate (ii) pentahydrate

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

Additional Information

Registration of toxic effects of chemical substances: GL7000000

Symptoms of systemic copper poisoning include: capillary damage, headache, cold sweat, weak pulse, liver and kidney damage, central nervous system excitation followed by inhibition, jaundice, convulsions, paralysis, and coma. Shock and kidney failure can lead to death. Chronic copper poisoning includes liver cirrhosis, brain injury, demyelination, and kidney damage; Copper deposition on the cornea causes Wilson's disease in humans. There are also reports that copper toxicity leads to hemoglobin anemia and exacerbates arteriosclerosis., Gastrointestinal dysfunction and decreased blood pressure depend on the duration and intensity of contact. The degree ranges from mild irritation to severe tissue damage., To our knowledge, this chemical, physical, and toxic property has not been fully studied.

System impact:

After absorption:

headache

diarrhea

Decreased blood pressure

fever

After taking a large amount:

Central nervous system disorders

Hemolysis

Destruction:

liver

kidney

Other dangers cannot be ruled out.

Operate according to good industrial hygiene and safety regulations.

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SECTION 12: Ecological information**12.1 Toxicity**

Toxicity test for fish LC50 *Oncorhynchus mykiss* (rainbow trout) -0.0028 mg/l -96 hours in a flow cytometry

Note: (ECOTOX database)

Toxicity static test for water fleas and other aquatic invertebrates EC50- *Ceriodaphnia dubia* -0.00557 mg/l -48 hours

Note: (ECOTOX database)

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

SECTION 13:**13.1 Disposal considerations**

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur.

Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 2802

Packing group: III

Class: 8

Proper shipping name: Copper chloride

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

Environmental Hazards: yes

IMDG

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UN number: 2802	Packing group: III	EMS-No: no data available
Proper shipping name: Copper chloride		
IATA		
UN number: 2802	Packing group: III	Class: 8
Proper shipping name: Copper chloride		

SECTION 15: Regulatory information

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

SECTION 16: Other information

Prepared By	Regulatory Affairs ALADDIN SCIENTIFIC CORPORATION Email: QualityAssurance@aladdinsci.com
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