

1. Product and Company Identification

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Product Name Copper Chloride
Part Number RXSOL-60-6025-050

Company Details:

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Product name	Cas No	EC No	Weight	Formula
Copper(II) chloride for synthesis	7447-39-4	231-210-2	134,45 g/mol	CuCl ₂

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H302 + H312 Harmful if swallowed or in contact with skin. H315 Causes skin irritation. H318 Causes serious eye damage. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	P264 Wash skin thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P302 + P352 + P332 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Classification of the substance or mixture	No data available
Supplemental Hazard Statements	No data available
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.

4. First Aid Measures

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General advice	Show this material safety data sheet to the doctor in attendance
If inhaled	fresh air.
Eye Contact	After eye contact: rinse out with plenty of water. Remove contact lenses.
Swallowed	After swallowing immediately make victim drink water (two glasses at most). Consult a physician.
Skin Contact	In case of skin contact Take off immediately all contaminated clothing.

Inhalation	Rinse skin with water/ shower.
Ingestion	No data available
Most important symptoms and effects, both acute and delaye	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

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Flammability	No data available
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
Special hazards arising from the substance or mixture	Hydrogen chloride gas Copper oxides Not combustible. Fire may cause evolution of: Hydrogen chloride gas Ambient fire may liberate hazardous vapours.
Further information	Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	No data available
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
Protective Equipment	No data available
Specific Hazards Arising from the Chemical	No data available

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	No data available
Personal Protection	No data available
Environmental Precaution	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning	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.
Reference to other sections	For disposal see section 13.

7. Handling and Storage

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Advice on protection against fire and explosion	No data available
Incompatible materials	No data available
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2
Advice on safe handling	Work under hood. Do not inhale substance/mixture.
Conditions for safe storage including any incompatibilities	No data available
Storage conditions	No metal containers. Tightly closed. Dry. Recommended storage temperature see product label.
Storage class	Storage class (TRGS 510) 8B Non-combustible, corrosive hazardous materials

Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	No data available

8. Exposure controls and personal protection

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Exposure controls	Personal protective equipment
Engineering Control	No data available
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	Protective Clothing
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
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 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
Other Protection Measure	No data available

9. Physical and chemical properties

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Physical state	Solid
Colour	Tan
Odour	Odorless
Odor Threshold	No data available
pH	No data available
Melting Point	620 °C
Boiling Point	993 °C at 1013,250 hPa
Flash Point	102 °C - closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	The product is not flammable.
Explosive limits	No data Available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	< 400 °C - Relative self-ignition temperature for solidsdoes not ignite
Decomposition temperature	No data available
Vapour pressure	No data available
Viscosity	No data available
Density	3,4 at 25 °C
Relative Density	No data available
Specific Gravity	No data available

Partition coefficient	Log Pow 1,3 at 20 °C - Bioaccumulation is not expected.
Explosive properties	No data available
Solubility	620 g/l at 20 °C - soluble
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

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Reactivity	No data available
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature)
Possibility of hazardous reactions	Violent reactions possible with: Alkali metals Strong oxidizing agents Risk of explosion with Acetylene Possible formation of: acetylidene
Conditions to avoid	No data available
Incompatible materials	various metals
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - 584 mg/kg Remarks: (RTECS) Symptoms: After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Inhalation: No data available LD50 Dermal - Rat - female - 1.224 mg/kg (OECD Test Guideline 402) Remarks: The value is given in analogy to the following substances: Copper (I)-chloride
Skin corrosion/irritation	Skin - Rabbit Result Irritations Remarks: (ECHA) The value is given in analogy to the following substances Copper (I)-chloride
Serious eye damage/irritation	Eyes - Rabbit Result Causes serious eye damage. Remarks: (ECHA) The value is given in analogy to the following substances Copper (I)-chloride
Respiratory or skin sensitization	Maximization Test - Guinea pig Result: Not a skin sensitizer. (OECD Test Guideline 406) Remarks: The value is given in analogy to the following substances: Copper (I)-chloride
Carcinogenicity	No data available
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 Remarks: The value is given in analogy to the following substances: Copper sulphate pentahydrate Test Type: Micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Oral Method: Regulation (EC) No. 440/2008, Annex, B.12 Result: negative Remarks: The value is given in analogy to the following substances: Copper sulphate pentahydrate Test Type: unscheduled DNA synthesis assay Species: Rat Cell type: Liver cells Application Route: Oral Method: OECD Test Guideline 486 Result: negative Remarks: The value is given in analogy to the following substances: Copper sulphate pentahydrate
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Additional Information	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. 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 copperpoisoning has lead to hemolytic anemia and accelerates arteriosclerosis., Gastrointestinal disturbance, Lowered blood pressure, Depending on the intensity and duration of exposure, effects may vary from mild irritation to severe destruction of tissue., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Systemic effects: After absorption: Headache Diarrhea drop in blood pressure Fever After uptake of large quantities: CNS disorders haemolysis Damage to: Liver Kidney Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice

12. Ecological information

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Persistence and degradability	The methods for determining biodegradability are not applicable to inorganic substances.
Toxicity to fish	Fow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,0028 mg/l - 96 h (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Ceriodaphnia dubia (water flea) - 0,00557 mg/l - 48 h (ECOTOX Database)
Toxicity	No data available
Toxicity to bacteria	No data available
Toxicity to algae	No data available
Products Biodegradation	No data available
Mobility in soil	No data available
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.
Endocrine disrupting properties	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
Other adverse effects	Discharge into the environment must be avoided.

13. Disposal considerations

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Product	See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions
Contaminated packaging	No data available
Waste treatment Method	No data available

14. Transport information

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UN number	ADR/RID:2802	IMDG:2802	IATA:2802
UN proper shipping name	ADR/RID:COPPER CHLORIDE	IMDG:COPPER CHLORIDE	IATA:COPPER CHLORIDE
Transport hazard class(es)	ADR/RID:8	IMDG:8	IATA:8
Packaging group	ADR/RID:III	IMDG:III	IATA:III
Environmental hazards	ADR/RID:Yes	IMDG:Yes	IATA:No
Special precautions for user	Tunnel restriction code (E)		
Further information	No data available		

15. Regulatory information

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Safety, health and environmental regulations/legislation specific for the This material safety data sheet complies with the requirements of

substance or mixture	Regulation (EC) No. 1907/2006.
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
Chemical Safety Assessment	A Chemical Safety Assessment was not carried out for this substance.

16. Other information

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Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.

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