Material Safety Data Sheet

Copper Sulfate Liquid (RXSOL-94-6604-025)

1. Product and Company Identifaction

Product Name	Copper sulfates liquid
Part Number	RXSOL-94-6604-025

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

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2. Composition / informationon ingredients

Mixtures

Component		Classification	Concentration
Copper(II) sulphate			
CAS-No. EC-No. Index-No. Registration number	7758-98-7 231-847-6 029-004-00-0 01-2119520566-40-XXXX	Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H400, H410 M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1 Acute oral toxicity: 481 mg/kg	>= 1 - 25 %

3. Hazards Identification

Classification of the substance or mixture

Long-term (chronic) aquatic hazard, (Category 3)	H412: Harmful to aquatic life with long lasting effects.

Label elements

Signal Word	None
Hazard Statements	H412 Harmful to aquatic life with long lasting effects.
Precautionary Statements	P273 Avoid release to the environment. P501 Dispose of contents/ container to an approved waste disposal plant.
Supplemental Hazard Statements	None
Reduced Labeling (= 125 ml)	
Signal Word	None
Hazard statement	H412 Harmful to aquatic life with long lasting effects
Precautionary statement	None

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. Ecological 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. Toxicological 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. Lachrymator., Stench.

4. First Aid Measures

If inhaled	After inhalation: fresh air
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact	After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed	After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.
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
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

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	Sulfur oxides Copper oxides Not combustible. Ambient fire may liberate hazardous vapours.
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus.
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.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Environmental precautions	Do not let product enter drains.
Methods and material for containment and cleaning up	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H ?, Merck Art. No. 101595). Dispose of properly. Clean up affected area.
Reference to other sections	For disposal see section 13.

7. Handling and Storage

Precautions for safe handling	For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	
Storage conditions	Tightly closed. Recommended storage temperature see product label.
Storage class	Storage class (TRGS 510): 12: Non Combustible Liquids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls and personal protection

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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 30 min Material tested: Butoject® (KCL 898)
Respiratory protection	Not required; except in case of aerosol formation.
Control of environmental exposure	Do not let product enter drains.

9. Physical and chemical properties

Physical state	Liquid
Color	Blue
Odor	Odorless
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Flash point	Not applicable
Autoignition temperature	Not applicable
Decomposition temperature	No data available
pH	ca.4,2 at 20 °C
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Water solubility	at 20 °C soluble
Partition coefficient: n-octanol/water	No data available
Vapor pressure	No data available
Density	ca.1,02 g/m3 at 20 °C
Relative density	No data available
Relative vapor density	No data available
Particle characteristics	No data available
Explosive properties	Not classified as explosive.
Oxidizing properties	None
Other safety information	No data available

10. Stability and reactivity

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: hydroxylamine The generally known reaction partners of water. Violent reactions possible with: The generally known reaction partners of water.
Conditions to avoid	No information available
Incompatible materials	No data available

Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

Mixture

Acute toxicity	Acute toxicity estimate Oral - > 2.000 mg/kg (Calculation method) Inhalation: No data available Dermal: No data available
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
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	
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. Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Components
Copper(II) sulphate

Acute toxicity	LD50 Oral - Rat - male and female - 481 mg/kg (OECD Test Guideline 401) Acute toxicity estimate Oral - 481 mg/kg (Acute toxicity estimate according to Regulation (EC) No. 1272/2008) Inhalation: No data available LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)
Skin corrosion/irritation	Remarks: Causes skin irritation.
Serious eye damage/eye irritation	Remarks: Causes serious eye irritation.
Respiratory or skin sensitization	Freund's complete adjuvant test - Guinea pig Result: negative (OECD Test Guideline 406) The value is given in analogy to the following substances: Copper sulphate pentahydrate
Germ cell mutagenicity	Test Type: Ames test Test system: Salmonella typhimurium Result: negative Method: OECD Test Guideline 486 Species: Rat - male - Liver cells Result: negative Method: Mutagenicity (micronucleus test) Species: Mouse - male and female - Red blood cells (erythrocytes) Result: negative
Carcinogenicity	No data available
Reproductive toxicity	Possible risk of congenital malformation in the fetus. Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available

12. Ecological information

Toxicity

Mixture	No data available
Persistence and degradability	No data available
Bioaccumulative potential	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 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.
Other adverse effects	Biological effects: Fungicide Discharge into the environment must be avoided.

Components
Copper(II) sulphate

Toxicity to fish	Static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,032 mg/l - 96 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Daphnia magna (Water flea) - 0,092 mg/l - 48 h (OECD Test Guideline 202) Remarks: (anhydrous substance)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	Semi-static test NOEC - Daphnia magna (Water flea) - 0,028 mg/l - 21 d (OECD Test Guideline 211)

13. Disposal considerations

Waste Treatment Methods	No data available

14. Transport information

UN number	ADR/RID: IMDG: IATA:
UN proper shipping name	ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods
Transport hazard class(es)	ADR/RID: IMDG: IATA:
Packaging group	ADR/RID: IMDG: IATA:
Environmental hazards	ADR/RID: no IMDG Marine pollutant: no IATA: no
Special precautions for user	No data available
Further information	Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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.
Other regulations	Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

16. 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 weassume 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 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.

Other Information

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