

## 1. Product and Company Identification

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Product Name Copper Sulfate LR For Passivation Test  
Part Number RXSOL-60-6116-500

### Company Details:

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

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## 2. Composition / Information on ingredients

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Chemical Name CAS Number  
MiCopper Sulfate Solution 7758-99-8

\*See Section 16

## 3. Hazards Identification

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Odour	Odourless
Appearance	Liq
Contact with eyes	Hazardous, Irritant
Contact with skin	Irritating to skin.
Inhalation	Repeated inhalation of dust can produce the varying de
Potential Health Effect	The substance may be toxic to kidneys, liver. Repeated produce target organs damage.

## 4. First Aid Measures

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Contact with skin	In case of contact, immediately flush skin with plenty of emollient. Remove contaminated clothing and shoes. C reuse. Thoroughly clean shoes before reuse. Get medic
Contact with eyes	Check for and remove any contact lenses. In case of co water for at least 15 minutes. Cold water may be used.
Ingestion	Do NOT induce vomiting unless directed to do so by m to an unconscious person. If large quantities of this mat immediately. Loosen tight clothing such as a collar, tie,
Inhalation	If inhaled, remove to fresh air. If not breathing, give ar oxygen. Get medical attention immediately.
General	In case of accident or if you feel unwell, seek medical a possible) .

## 5. Fire-fighting Measures

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Flammability of the Product: Non-flammable.  
Auto-Ignition Temperature: Not applicable.  
Flash Points: Not applicable.  
Flammable Limits: Not applicable.  
Products of Combustion: Not available.  
Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.  
Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat.  
Fire Fighting Media and Instructions: Not applicable.  
Special Remarks on Fire Hazards: Not available.  
Special Remarks on Explosion Hazards: When heated to decomposition it emits toxic fumes. Solutions are acidic and can react with magnesium to evolve flammable hydrogen gas

## 6. Accidental Release Measures

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Personal Precautions

Environmental Precautions

Small Spillage

Wear protective clothing as per section 8.

No special precautions are required for this product.

Use appropriate tools to put the spilled solid in a container.  
Finish cleaning by spreading water on the contaminated area.  
Follow regional authority requirements.

Large Spillage

Stop leak if without risk. Do not get water inside container.  
Use water spray to reduce vapors. Prevent entry into sewers, basements or confined spaces.  
Seek professional help for assistance on disposal. Be careful that the product is not released into the environment.  
Check TLV. Check TLV on the MSDS and with local authorities.

## 7. Handling and Storage

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Precaution

Keep container dry. Do not ingest. Do not breathe dust.  
Wear protective clothing. In case of insufficient ventilation, wear respiratory protection.  
If exposed, seek medical advice immediately and show the container label to the doctor.  
Keep away from incompatibles such as metals, alkalis, acids, and oxidizing agents.

Storage

Keep only in the original container in a cool, well ventilated area.

## 8. Exposure controls and personal protection

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Engineering Control

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Occupational exposure controls

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product.  
Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



Gloves Suit

Goggle

## 9. Physical and chemical properties

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Molecular Weight	249.69 g/mole
Odour	Odourless
Appearance	Light Blue
pH	Acidic
Boiling point	150°C (302°F)
Melting Point Of Solid Mass	110°C (230°F)
Specific Gravity of Solid Mass	2.28 @ 15.6 deg. C (Water = 1)
Vapour pressure	NA
Freezing point	NA
Solubility in Water	Easily Soluble

Solubility in water: 31.6 g/100 ml @ 0 deg. C.; 203.3 g/100 ml @ 100 deg. C Solubility in methanol: 15.6 g/100 ml @ 18 deg. C. Insoluble in ethanol. It readily forms alkaline complexes at sufficiently high concentrations of amines or alkali cyanides. Practically insoluble in most organic solvents.

## 10. Stability and reactivity

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Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat (high temperatures), incompatible materials, exposure to air

Incompatibility with various substances: Reactive with metals, alkalis.

Corrosivity: Highly corrosive in presence of steel.

Special Remarks on Reactivity: Air Sensitive. Slowly efflorescent in air. Solutions of hypobromite are decomposed by powerful catalytic action of cupric ions, even as impurities. Incompatible with finely powdered metals.

Polymerization: Will not occur.

## 11. Toxicological information

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Routes of Entry

Acute oral toxicity (LD50)

Acute dermal toxicity (LD50):

Special Remarks on other Toxic Effects on Humans

Inhalation. Ingestion

350 mg/kg [Rat]

>2000 mg/kg [Rat]

Acute Potential Health Effects: Skin: Causes skin irritation, itching allergic eczema. Eyes: Causes eye irritation. May cause corneal discoloration, ulceration and turbidity of the cornea (nose, throat, lung) irritation with coughing and wheezing. Burning of nasal septum if inhaled in excessive quantities. Burning of mucous membranes by poisonous gases which may irritate the respiratory tract.

Other Toxic Effects on Humans:  
Carcinogenicity

which is characterized by flu-like symptoms such as fever, chills, and malaise. May cause gastrointestinal tract irritation with burning sensation in the stomach or epigastrium, abdominal pain, and bleeding. May affect metabolism (metabolic acidosis), hemoglobin (Methemoglobin, hemolytic anemia), urinary system (kidney damage, albuminuria), behavior/nervous systems (somnolence, tremor), cardiovascular system (lowering of blood pressure, dysrhythmias), saliva may be stained blue or green following ingestion. May cause emesis and CNS depression. Chronic Potential Health Effects: Skin contact may cause thickening of the skin.

Hazardous in case of skin contact (irritant), of ingestion. **MUTAGENIC EFFECTS:** Mutagenic for mammalian cells. Affects the following organs: kidneys, liver.

## 12. Ecological information

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Ecotoxicity

Ecotoxicity in water (LC50): 0.1 ppm 48 hours [Goldfish], 0.1 mg/l 96 hours [Rainbow Trout].

Mobility

Completely soluble in water

BOD & COD

NA

Product of Biodegradation

Possibly hazardous short term degradation products is not known. products may arise.

Special Remarks on biodegradation

If released to soil, copper sulfate may leach to groundwater. In soil, materials, clay, or hydrous oxides of iron and manganese. In water, materials, clay and hydrous oxides of iron and manganese. It is not biomagnified by animals, but it does not appear to biomagnify from plants. It appears common with heavy metals. In air, copper aerosolized for 10 days in an unpolluted atmosphere and 0.1 to >4 in polluted air.

## 13. Disposal considerations

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Copper dust or mist or copper compounds may be disposed of in Group III sealed containers in a secure sanitary landfill.

Copper-containing soluble wastes can be concentrated through the use of ion exchange, reverse osmosis, or evaporators to the point where copper can be electrolytically removed and sent to a reclaiming firm. If recovery is not feasible, the copper can be precipitated through the use of caustics and the sludge deposited in a chemical waste landfill. Be sure to consult with authorities (waste regulators). Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## 14. Transport information

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- Not classified as hazardous for any mode of transport

## 15. Regulatory information

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Federal and State Regulations:

SARA 313 toxic chemical notification and release reporting: Copper compounds CERCLA: Hazardous substances.: Copper sulfate pentahydrate: 10 lbs. (4.536 kg)

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R22- Harmful if swallowed. R36/38- Irritating to eyes and skin. R50/53- Very toxic to aquatic organisms, may cause long-term

adverse effects in the aquatic environment. S22- Do not breathe dust. S60- This material and its container must be disposed of as hazardous waste. S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

HMIS :

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

## 16. Other information

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