Material Safety Data Sheet

ALGAECIDE LIQUID - rx (RXSOL-31-3024-025)

1. Product and Company Identifaction

Product Name	ALGAECIDE LIQUID - rx
Product Type	RXSOL-31-3024-025

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

Phone	+91 22 65113333/ 5555 / 9999 / 27611360 / 27815540
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2. Composition / informationon ingredients

CAS NO.	COMPONENT	%	OSHA HAZARDOUS
7758-99-8	Copper sulfate pentahydrate (chelated in solution)	12	Yes
Trade Secret	Trade Secret	28	Yes
	All other components are non-hazardous	60	No

Algaecides – Copper Sulfate, Chelated Copper Formulations, Endothall (as the mono (N,N- dimethylalkylamine) salt), and Algaecides containing Sodium Carbonate Peroxyhydrate , copper chelates (ethanolamines, ethylene diamines, triethanolamines, triethanolamine + ethylene diamine, and copper citrate / gluconate), endothall (as the mono (N,N-dimethylalkylamine) salt), and formulations containing the active ingredient sodium carbonate peroxyhydrate.

3. Hazards Identification

EMERGENCY OVERVIEW:	Blue liquid with a slight odor. WARNING: Irritant to eyes and skin. Harmful if ingested (see below). This material is harmful to fish.

POTENTIAL HEALTH EFFECTS:

EYE:	Irritant. May cause watering of the eye and blurred vision. Contamination of the eyes can result in permanent injury.
SKIN:	Contact with skin may result in irritation. Repeated or prolonged skin contact may lead to skin burns and allergic contact dermatitis.
INHALATION:	Not normally an inhalation hazard due to low vapor pressure.
INGESTION:	Swallowing can result in burning and metallic taste in mouth, irritation of the mouth, esophagus and stomach, vomiting, diarrhea, abdominal pain, jaundice and kidney failure, dizziness, faintness, loss of consciousness and death.
CHRONIC EXPOSURE / CARCINOGENICITY:	Not known
SIGNS AND SYMPTOMS OF OVEREXPOSURE:	May cause watering of the eye and blurred vision. Contact with skin may result in irritation. Repeated or prolonged skin contact may lead to skin burns and allergic contact dermatitis. Swallowing can result in burning and metallic taste in mouth, irritation or the mouth, esophagus and stomach, vomiting, diarrhea, abdominal pain, jaundice and kidney failure, dizziness, faintness, loss of consciousness and death.
AGGRAVATION OF PRE-EXISTING CONDITIONS:	Repeated or prolonged skin contact may lead to allergic contact dermatitis.

POTENTIAL ENVIRONMENTAL EFFECTS:
This material is considered a marine pollutant by the US DOT.

4. First Aid Measures

EYE CONTACT:	Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids open. Contact a physician.
SKIN CONTACT:	Immediately wash contaminated skin with plenty of water. Remove contaminated clothing and wash before reuse. If irritation occurs, seek medical advice.
INHALATION:	Remove victim from exposure to fresh air. Seek medical advice if effects persist.
INGESTION:	Immediately rinse mouth. If swallowed, do NOT induce vomiting. Give water or milk. Seek immediate medical assistance.
NOTE TO PHYSICIANS:	Treat symptomatically. Corrosive may cause stricture. If lavage is performed, suggest endotracheal and/or esophagoscopic control

5. Fire-fighting Measures

FLASH POINT:	Not Available
AUTOIGNITION TEMPERATURE:	Not Available
UPPER FLAMMABLE LIMIT	Not Available
LOWER FLAMMABLE LIMIT	Not Available
FLAMMABILITY CLASS (OSHA):	Not Applicable
FLAME PROPAGATION/BURNING RATE:	Not Available

UNIQUE FIRE PROPERTIES:

Not combustible, however, following evaporation of aqueous component residual could burn if ignited.

HAZARDOUS COMBUSTION PRODUCTS:
Decomposes on heating emitting toxic fumes including those of NOX.

EXTINGUISHING MEDIA:
Water fog or fine water spray, dry chemicals, carbon dioxide, sand or foam.

PROTECTION OF FIREFIGHTERS:

Firefighters should wear self-contained breathing apparatus if there exists a risk of exposure to products of decomposition.

6. Accidental Release Measures

PERSONAL PROTECTIVE EQUIPMENT:	See Section 8 (Personal Protective Equipment)
ENVIRONMENTAL PRECAUTIONS:	Do not allow product to get into waterways
METHODS FOR CLEANING UP:	Clear area of all unprotected personnel. Avoid inhalation of vapor or mist. Increase ventilation. Slippery, use caution. Wear protective equipment to prevent skin and eye contamination.

7. Handling and Storage

SAFE HANDLING RECOMMENDATIONS:

VENTILATION:	Normal ventilation should be sufficient under normal conditions
FIRE PREVENTION:	No special requirements
SPECIAL HANDLING REQUIREMENTS:	Exercise normal handling precautions for liquids

SAFE STORAGE RECOMMENDATIONS:

CONTAINMENT:	Store in tightly closed containers. Do not pack in unlined steel drums.
STORAGE ROOM RECOMMENDATIONS:	Store in cool dry area.
INCOMPATIBLE MATERIALS:	Strong acids
STORAGE CONDITIONS:	Protect from freezing. Keep away from metals

8. Exposure controls and personal protection

ENGINEERING CONTROLS: Normal ventilation should be sufficient under normal conditions. Keep containers closed when not in use.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

EYE/FACE PROTECTION:	For operations where eye contact can occur, wear chemical, splash proof goggles or face shield
SKIN PROTECTION:	For operations where skin contact can occur, wear coveralls
HAND PROTECTION:	For operations where hand contact can occur, wear PVC gloves.
RESPIRATORY PROTECTION:	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Respirator use for this product is unnecessary.
GOOD HYGIENE/WORK PRACTICES:	Always follow good hygiene/work practices by avoiding vapors or mists and contact with eyes and skin. Thoroughly wash hands after handling and before eating or drinking. Always wear the appropriate PPE when repairing or performing maintenance on contaminated equipment.

EXPOSURE GUIDELINES

PERMISSIBLE EXPOSURE LIMITS

INGREDIENT CAS NO.	OSHA		WISHA		ACGIH (TLV)	
	TWA	STEL	TWA	STEL	TWA	STEL
102-71-6	Not applicable	Not applicable	Not applicable	Not applicable	5 mg/m3	Not applicable

9. Physical and chemical properties

Information on basic physical and chemical properties:

COLOR:	Blue
SHAPE:	Liquid
PHYSICAL FORM:	Liquid
ODOR:	Slight Odor
pH:	6-8
VAPOR PRESSURE:	Not available
VAPOR DENSITY:	Not available
BOILING POINT:	Not available
MELTING POINT:	Not available
FREEZING POINT:	-5.6oC (21.9oF)
SOLUBILITY IN WATER	Miscible in water
SPECIFIC GRAVITY	1.08 – 1.21

10. Stability and reactivity

CHEMICAL STABILITY:	Stable
CONDITIONS TO AVOID:	Protect from freezing. Keep away from metals
MATERIALS TO AVOID (INCOMPATIBILITY):	Strong acids
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxides of carbon and nitrogen
HAZARDOUS POLYMERIZATION:	Will not occur

11. Toxicological information

ORAL LD50 (rat):	4,500 mg/kg
DERMAL LD50 (rabbit):	Not available
INHALATION:	No effect at 2000 mg/kg
SKIN IRRITATION:	Greater than 2000 mg/kg
EYE IRRITATION:	Irritant
SKIN SENSITIZATION:	Not available
ADDITIONAL INFORMATION:	Not available

12. Ecological information

ECOTOXICITY:	Not available
MOBILITY:	Not available
PERSISTENCE AND DEGRADABILITY:	Not available
BIOACCUMULATIVE POTENTIAL:	Not available
ADDITIONAL INFORMATION:	Not available

13. Disposal considerations

If this product as supplied becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

NOTE:
Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate.

14. Transport information

U.S. DEPARTMENT OF TRANSPORTATION (DOT):
When transported by motor vehicles, rail cars or aircraft in 119 gallon or less containers:

PROPER SHIPPING NAME:	Not regulated
HAZARD CLASS:	Not regulated
IDENTIFICATION NUMBER (UN NUMBER):	Not regulated
PACKING GROUP (PG):	Not regulated

When transported by motor vehicles, rail cars or aircraft in 120 gallon or more containers.:

PROPER SHIPPING NAME:	Environmentally hazardous substances, liquid, n.o.s. (copper sulphate pentahydrate)
HAZARD CLASS:	9
IDENTIFICATION NUMBER (UN NUMBER):	3082
PACKING GROUP (PG):	III
ADDITIONAL INFORMATION:	Marine Pollutant

When transported aboard vessel in any sized container:

PROPER SHIPPING NAME:	Environmentally hazardous substances, liquid, n.o.s. (copper sulphate pentahydrate)
HAZARD CLASS:	9
IDENTIFICATION NUMBER (UN NUMBER):	3082
PACKING GROUP (PG):	III
ADDITIONAL INFORMATION:	Marine Pollutant

15. Regulatory information

TSCA STATUS: Listed

CERCLA REPORTABLE QUANTITY (RQ):

CHEMICAL NAME	RQ
Not applicable	Not applicable

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (EHS):

CHEMICAL NAME	TPQ	RQ
Not applicable	Not applicable	Not applicable

SARA TITLE III SECTION 311/312 HAZARD CATEGORIES:

Does this product/material meet the definition of the following hazard classes according to the EPA ‘Hazard Categories’ promulgated under Sections 311 and 312 of SARA Title III?

ACUTE HEALTH HAZARD	CHRONIC HEALTH HAZARD	FIRE HAZARD	REACTIVE HAZARD	SUDDEN RELEASE OF PRESSURE
Yes	No	No	No	No

SARA TITLE III SECTION 313 TOXIC CHEMICALS INFORMATION:

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

CALIFORNIA PROPOSITION 65:

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

16. Other information

The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer.

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