Material Safety Data Sheet

RO Antiscalant ALKA 191T (RXSOL-33-3321-250)

1. Product and Company Identifaction

Product Name	RXSOL-33-3321-030
Product Type	ORG - 191 t (Membrane Antiscalant)

Company Details:

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

Stock Point : Muscat. Fujairah, Mumbai, Kandla, Kolkata, Vizag, Chennai, Canada

Phone	+91 22 27815540 / 41 / 42
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2. Composition / informationon ingredients

5064-31-3 NITRILOTRIACETIC ACID,TRISODIUM SALT (NTA.3NA) 0.1-1.0
50-00-0 FORMALDEHYDE 0.1-1.0
102-71-6 TRIETHANOLAMINE 15-40
64-02-8 ETHYLENE DIAMINE TETRAACETIC ACID, TETRASODIUM SALT 15-40
141-43-5 MONOETHANOLAMINE 7-13
111-42-2 DIETHANOLAMINE 3-7
2002-24-6 MONOETHANOLAMINE HYDROCHLORIDE 1-5
119345-04-9 BENZENE, 1,1'-OXYBIS-,TETRAPROPYLENE DERIVATIVES, 1-5

3. Hazards Identification

EMERGENCY OVERVIEW

CAUTION ::: May cause irritation with prolonged contact.

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation.In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.

Wear suitable protective clothing.

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT : May cause irritation with prolonged contact.

SKIN CONTACT : May cause irritation with prolonged contact.

INGESTION : May cause gastrointestinal irritation.

INHALATION : May cause irritation of mucous membrances.

SYMPTOMS OF EXPOSURE :

Acute: A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS : A review of available data does not identify any worsening of existing conditons.

HUMAN HEALTH HAZARDS - CHRONIC : No adverse effects expected other than those mentioned above.

4. First Aid Measures

EYE CONTACT	Immediately flush eye with water for at least 15 minutes while holding eyelids open. If symptoms persist, call a physician.
SKIN CONTACT	Immediately flush with plenty of water for at least 15 minutes. If symptoms persist, call a physician.
INGESTION	Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.
INHALATION	Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.
NOTE TO PHYSICIAN	Based on the individual reactions of the patient, the physician's judgement should be used to control symproms and clinical condition.

5. Fire-fighting Measures

FLASH POINT	None
EXTINGUISHING MEDIA	Use extinguishing media appropriate for surrounding fire. This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable.
FIRE AND EXPLOSION HAZARD	May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING	In case of fire, wear a full face positive- pressure self contained breathig apparatus and protective suit.

6. Accidental Release Measures

PERSONAL PRECAUTIONs:
Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Do not touch spilled material. Ventilate spill area if possible.

METHODS FOR CLEANING UP:
SMALL SPILLS: Soak up spill with absorbent material.Place residues in a suitable,covered, properly labeled container. Wash affected area.

LARGE SPILLS: Contain liquid using absorbent material,by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in section 13 Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS:
Do not contaminate surface water.,Do not allow material to contaminate ground water system.,Prevent material from entering sewers or waterways.

7. Handling and Storage

HANDLING :

Do not take internally. Ensure all containers are labelled. Keep the containers closed when not in use. Avoid eye and skin contact. Keep away from acids and oxidizing agents.

STORAGE CONDITIONS :

Store the containers tightly closed.

SUITABLE CONSTRUCTION MATERIAL:

HDPE (high density polyethylene), Stainless steel 304, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

8. Exposure controls and personal protection

OCCUPATIONAL EXPOSURE LIMITS	This product does not contain any substance that has an established exposure limit.
ENGINEERING MEASURES	General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.
RESPIRATORY PROTECTION	If significant mists, vapors or aerosols are generated an approved respirator is recommended.
HAND PROTECTION	Nitrile gloves, Butyl gloves, PVC gloves, Neoprene gloves
SKIN PROTECTION	Wear standard protective clothing
EYE PROTECTION	Wear chemical splash goggles.
HYGIENE RECOMMENDATIONS	Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Keep an eye wash fountain available.
HUMAN EXPOSURE CHARACTERIZATION	Based on our recommended product application and personal protective equipmen, the potential human exposure is : LOW

9. Physical and chemical properties

PHYSICAL STATE	Liquid
APPEARANCE	Yellow
ODOR	Ammoniacal
SPECIFIC GRAVITY	1.36
DENSITY	11.33 lb/gal
SOLUBILITY IN WATER	Complete
pH (100%)	10.5
OCTANOL/WATER COEFFICIENT (log Kow)	3.5
VOC CONTENT	0 % Calculated

Note : These physical properties are typical values for this product and are subject to change.

10. Stability and reactivity

STABILITY	Stable under normal conditions.
HAZARDOUS POLYMERIZATION	Hazardous polymerization will not occur.
CONDITIONS TO AVOID	Freezing temperatures.
MATERIALS TO AVOID	Strong oxidizing agents Strong acids
HAZARDOUS DECOMPOSITION PRODUCTS :	Under fire conditions : oxides of carbon, Oxides of nitrogen

11. Toxicological information

The following results are for the product.

ACUTE ORAL TOXICITY :
Species LD50 Test Descriptor
Rat > 17,800 mg/kg Active Substance
Rating : Non-Hazardous

ACUTE DERMAL TOXICITY:
Species LD50 Test Descriptor
Rabbit >15,800 mg/kg Product
Rating : Non-Hazardous

PRIMARY SKIN IRRITATION :
DraiZe Score Test Descrip:or
2.5 / 8.0 Product
Rating : Slightly irritating

PRIMARY EYE IRRITATION :
Draize Score Test Descrip:or
0/110.0 Product
Rating : Practically non-irritating

SENSITIZATION:
This product is not expected to be a sensitizer.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the national Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION:
Based on our hazard characterization,the potential human hazard is: low

12. Ecological information

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	>959 mg/l	Product
Sheepshead Minnow	96 hrs	>1000 mg/l	Product
Bluegill Sunfish	96 hrs	>300 mg/l	
Channel Catfish	96 hrs	1212 mg/l	

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs		863 mg/l	Product
Grass Shrimp	96 hrs	>1.000 mg/l		Product

Rating : Essentially non-toxic

AQUATIC PLANT RESULTS :

Species	Exposure	EC 50/LC50	Test Descriptor
Green Algae (Selenastrum Capricornutum)	96 hrs	20 mg/l	

Rating:

AVIAN RESULTS :

Species	Exposure	LC500	Test Descriptor
Bobwhite Quail	14 Days	>2510 mg/kg	

13. Disposal considerations

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery. As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. Transport information

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT:

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. Regulatory information

NA

16. Other information

Due to our commitment to product stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterzied the product's genral risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

The human risk is : Low

The environmental risk is : Low

Any use inconsistent with ourrecommendations may affect the risk characterization. our sales representative will assist you to determine risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in application consiste with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations.

DISCLAIMER OF LIABILITY :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.