Material Safety Data Sheet

RO Membrane Clean LOW pH (RXSOL-33-3304-100)

1. Product and Company Identifaction

Product Name	RO Membrane Clean LOW pH
Part Number	RXSOL-33-3304-100

Company Details:

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

Branch :: Kandla , Mumbai, Vizag, Chennai, Kolkata, UAE, OMAN and CANADA, Nairobi Kenya

Phone	+91 22 2087 1200 / 1300 / 1400
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2. Composition / informationon ingredients

Chemical Name	Cas No #	Weight %	safety Phrases	OSHA / WHMIS
Inorganic Phosphorous Compound	Proprietary	25-35	R 22-36-38; S 2-13-24-25	Corrosive
Chelate	Proprietary	25-35	Eye Irritant, Category 2A H319 P305 + P351 + P338	Irritant
Organic acid	Proprietary	10-20	Eye Irritant, Category 2 H319 P305 + P351 + P338	Corrosive

3. Hazards Identification

Signal Word	WARNING!
General Warnings	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use P403 Store in a well-ventilated place. P233 Keep container tightly closed
Hazard Statements	H319 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. H312 Harmful in contact with skin H332 Causes severe skin burns and eye damage H314 Hazard statements
Precautionary statements	P280 Wear protective gloves/protective clothing/eye protection/face protection. P305 IF IN EYES: rinse extensively with large amounts of water P351 Rinse cautiously with water for several minutes. P338 Remove contact lenses, if present and easy to do. Continue rinsing. P310 IF INGESTED or INHALED Immediately call a POISON CENTER or doctor/physician.
Unclassified Hazards	None
Ingredients with unknown acute toxicity	None

4. First Aid Measures

Skin exposure	If this product contaminates the skin, immediately begin decontamination with running water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim should seek immediate medical attention if any adverse exposure symptoms develop.
Eye exposure	If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek medical attention.
Inhalation	If mist of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.
Ingestion	If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT INDUCE VOMITING. Have victim rinse mouth with water, if conscious. Never induce vomiting or give a diluent (e.g., water) to someone who is unconscious, having convulsions, or unable to swallow. If contaminated individual is convulsing, maintain an open airway and obtain immediate medical attention.
Most Important Symptoms/Effects	Immediate: Inhalation exposure may cause coughing or sneezing. Symptoms of skin and eye contact may include redness and irritation. Ingestion may cause stomach pains, cramps, and gastritis. Delayed: Prolonged or repeated skin overexposure to this product may cause dermatitis (dry, red skin). Symptoms may include tingling, redness, and visible injury.
Indication Of Immediate Medical. Attention And Special Treatment Needed, If Necessary:	TARGET ORGANS: Acute: Skin, eyes, respiratory system. Chronic: Skin, eyes, respiratory system.
NOTE	Victims of chemical exposure must be taken for medical attention if any adverse effects occur. Rescuers should be taken for medical attention if necessary. Take a copy of label and MSDS to physician or health professional with victim.

5. Fire-fighting Measures

Flammable properties	Non-flammable aqueous solution
Autoignition Temperature oC	Not applicable.
Flammable Limits (in air by volume, %):	Upper: Not applicable. Lower: Not applicable.
Suitable And Unsuitable Extinguishing Media	This material will not contribute to the intensity of a fire. Use extinguishing material suitable to the surrounding fire. Water spray YES Carbon dioxide YES Foam YES Dry chemical YES Halon YES Other YES Explosion Sensitivity to Mechanical Impact: Not applicable. Explosion Sensitivity to Static Discharge: Not applicable.
Specific Hazards Arising From Chemical	When involved in a fire, this material may decompose and produce irritating fumes and toxic gases (e.g., carbon monoxide, carbon dioxide, phosphorous oxides, and nitrogen oxides).
Special Protective Equipment And Precautions For Fire-Fighters	Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. Accidental Release Measures

Personal Precautions	Uncontrolled releases should be responded to by trained personnel using preplanned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area and protect people.
Protective equipment	For small releases (20 L), clean up spilled liquid wearing gloves, goggles, faceshield, and suitable body protection. The minimum Personal Protective Equipment recommended for response to non incidental releases (more than 20 L) should be Level C: triple-gloves (neoprene gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and full-face respirator with acid mist and HEPA filter.
Emergency procedures	Monitoring must indicate that exposure levels are below those provided in Section 8 (Exposure Controls-Personal Protection) and that oxygen levels are above 19.5% before anyone is permitted in the area without Self-Contained Breathing Apparatus.
Methods and Materials for Containment and Cleaning Up	Vacuum or soak- up solids liquid for recovery/disposal. Neutralize residue with sodium bicarbonate or other neutralizing agent for dilute acids. Decontaminate the area thoroughly. Test area with litmus paper to ensure neutralization. Place all spill residues in a suitable plastic container. Dispose of in accordance with applicable Federal, State, or local procedures, or appropriate local standards (see Section 13, Disposal Considerations).

7. Handling and Storage

Handling	All employees who handle this material should be trained to handle it safely. Open containers carefully on a stable surface. Empty containers may contain residual liquid; therefore, empty containers should be handled with care. As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat or drink while handling this material. Avoid generating dust of this product. Remove contaminated clothing immediately. During equipment maintenance follow practices indicated in Section 6 (Accidental Release Measures) to decontaminate equipment or clean-up small spills. Make certain that application equipment is locked and tagged-out safely if necessary. Collect all rinsates and dispose of according to applicable U.S. Federal, State, or local procedures or appropriate local standards.
Storage	Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible materials. Material should be stored in secondary containers, or in a diked area, as appropriate. Storage and use areas should be covered with impervious materials. Keep container tightly closed when not in use. If appropriate, post warning signs in storage and use areas. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.
Incompatibilities	Strong bases, oxidizers, and water reactive materials.

8. Exposure controls and personal protection

Engineering Control	Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in this Section or as low as reasonably achievable. Ensure eyewash/safety shower stations are available near areas where this product is used.

Control Parameters

CHEMICAL NAME	CAS #	% w/w	EXPOSURE LIMITS IN AIR					OTHER
			ACGIH-TLV		OSHA-PEL			
			TWA mg/m3	STEL mg/m3	TWA mg/m3	STEL mg/m3	IDLH mg/m3	mg/m3
Inorganic phosphorous compound	Proprietary	25-35	1	3	1	3	1000	NIOSH REL: TWA = 1 STEL= 3
Chelate	Proprietary	25-35	NE	NE	NE	NE	NE	NE
Organic acid	Proprietary	10-20	NE	NE	NE	NE	NE	NE
Water and other components which are present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers and mutagens).		Balance	None of the other components contribute significant additional hazards at the concentration present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards and Canadian Workplace Hazardous Materials Identification System Standards (CPR 4).					

Personal Protective Equipment

Respiratory protection:
None needed under normal conditions of use. Use NIOSH approved respirators if ventilation is inadequate to control mists or vapor. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the applicable local standards. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-face piece pressure/demand SCBA or a full-face piece, supplied air respirator with auxiliary self-contained air supply is required under OSHAs Respiratory Protection Standard (1910.134-1998).

Eye protection:
Use approved safety goggles or safety glasses, as described in OSHA 29 CFR 1910.133. Splash goggles with a faceshield may be needed if splash hazards exist.

Hand protection:
Wear chemical impervious gloves

Body protection:
If needed, use body protection appropriate for task (e.g., suit, rubber apron) to protect from splashes and sprays.

9. Physical and chemical properties

Appearance	This product is a clear, colorless to amber-colored liquid.
Odor	Light disinfectant odor
Odor Threshold	NE
pH (2% solution)	2.5-3.5
Freezing Point oC	0
Initial Boiling Point oC	> 100
Boiling Point Range oC	N/A
Flammability	Non-flammable
Evaporation Rate (water = 1)	Similar to water
Vapor Density (air = 1)	1
Vapor Pressure mm Hg @ 20°C	18 - 20
Solubility (in water)	Soluble
Relative density (water = 1)	1.3-1.4
Viscosity	Similar to water

Oil-Water Partition Coefficient	N/A
Decomposition Temperature	NE
How To Detect This Substance	Litmus paper will turn red in contact with product.

10. Stability and reactivity

Reactivity	Not considered reactive.
Chemical Stability	Stable
Possibility of hazardous reactions	Hazardous polymerization will not occur.
Conditions to avoid	Avoid mixing with incompatible materials.
Incompatible Materials	Strong bases, oxidizers, and water reactive materials
Hazardous Decomposition Products	Products Thermal decomposition of this product may generate nitrogen oxides, carbon monoxide, phosphorous oxides, and carbon dioxide.

11. Toxicological information

Toxicity data for hazardous ingredients	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LD50 mg/kg
Inorganic Phosphorous Compound	LD50 (oral, rat) = 1759 mg/kg	LD50 (dermal, rabbit) = 3149mg/kg	NA
	Standard Draize Test (Skin-Rabbit, adult) 595 mg/24 hours: Severe irritation effects Standard Draize Test (Eye effects-Rabbit, adult) 119 mg: Severe irritation effects TDLo (Oral-Man) 1286 mL/kg LDLo (Unreported-Man) 220 mg/k		
Chelae	LD50 (Intraperitoneal-Rat) 1548 mg/kg: Behavioral: convulsions or effect on seizure threshold; Lungs,Thorax, or Respiration: cyanosis; Gastrointestinal: changes in structure or function of salivary glands	NA	NA
	Standard Draize Test (Skin-Rabbit, adult) 500 mg/24 hours: Moderate irritation effects Standard Draize Test (Eye -Rabbit, adult) 1900 mg Standard Draize Test (Eye-Rabbit, adult) 100 mg/24 hours: Moderate irritation effects		
Organic Acid	LD50 (Oral-Rat) 3 g/kg LD50 (Oral-Mouse) 5040 mg/kg LD50 (Intraperitoneal-Rat) 883 mg/kg LD50 (Intraperitoneal-Mouse) 903 mg/kg LD50 (Subcutaneous-Rat) 5500 mg/kg LD50 (Subcutaneous-Mouse) 2700 mg/kg LD50 (Intraperitoneal-Mouse LD50: 903 mg/kg LD50 (Intravenous-Rabbit, adult) 330 mg/kg LD50 (Intravenous-Mouse) 42 mg/kg LDLo (Oral-Rabbit, adult) 7000 mg/kg	LD50 (dermal, rabbit) > 2000 mg/kg	NA
	Standard Draize Test (Skin-Rabbit, adult) 500 mg/24 hours: Moderate irritation effects Standard Draize Test (Eye-Rabbit, adult) 750 mg/24 hours: Severe irritation effects		

12. Ecological information

Ecotoxicity	LC50, mg/L	EC50, mg/L
RO Membrane Clean LOW pH		
Aquatic	Daphnia magna > 1000 Fat Head Minnow > 1000	NE
Terrestrial	NE	NE
Persistence and Degradability	The components of this product decompose in soil and water.	
Bioaccumulative Potential	This product is not expected to bioaccumulate	
Mobolity in Soil	When spilled onto soil, this product will infiltrate downward, the rate being greater with lower concentration because of reduced viscosity.	
Other Adverse Ecological Effects	This product may be harmful to aquatic life if large volumes of it are released into an aquatic environment.	

13. Disposal considerations

Preparing Wastes of this Product for Disposal	Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or with local regulations. This product, if unaltered by the handling, may be disposed of by treatment at a permitted facility or as advised by your local waste regulatory authority.
Disposal of Contaminated Packaging	Cleaned containers can be recycled or disposed of as non-contaminated waste, if authorized by your local authorities. Dispose of containers as required by local regulations.
U.S. EPA Waste Number	Not applicable as supplied.

14. Transport information

THIS MATERIAL IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
Transport Hazard Class(es)	Not regulated
Transport label(s) required	Not regulated
Packing Group	Not regulated
Marine Pollutant	Not regulated
NA Emergency Response Guide Number (2012)	Not regulated
Transport in Bulk (Annex II of MARPOL 73/78 and IBC Code)	Not regulated
Special Transport Precautions National Motor Freight Classification	Not regulated
International Air Transport Association	
UN Number	Not regulated
UN Proper Shipping Name	Not regulated
Transport Hazard Class(es)	Not regulated
Transport label(s) required	Not regulated
Packing Group	Not regulated
Packaging Instructions	Not regulated
International Maritime Organization	

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15. Regulatory information

PROGRAM	Inorganic Phosphorous Compound	Chelate	Organic Acid
US EPA PROGRAMS			
Clean Air Act Hazardous Air Pollutants	NO	NO	NO
RCRA F, K, P, U or D-lists	NO	NO	NO
D-lists NO NO NO	NO	NO	NO
Epa Priority Pollutant	NO	NO	NO
SARA 302 RQ	NO	NO	NO
SARA 302 TPQ	NO	NO	NO
SARA 313 LISTED	YES	NO	NO
SARA CHEMICAL CATEGORIES			
SARA 311/312 ACUTE	NO	NO	NO
CHRONIC	NO	NO	NO
SARA 311/312 FIRE	NO	NO	NO
SARA 311/312 PRESSURE	NO	NO	NO
SARA 311/312 REACTIVITY	NO	NO	NO
EPA EXTREMELY HAZARDOUS SUBSTANCE	NO	NO	NO
CALIFORNIA SAFE DRINKING WATER ACT (Proposition 65)			
This product does not contain any chemical listed on the California Safe Drinking Water Act list (Proposition 65)			
US OSHA PROGRAMS			
PEL	NO	NO	NO
PSM	NO	NO	NO
CHEMICAL SECURITY PROGRAMS			
DHS CAFTS	NO	NO	NO
CHEMICAL WEAPONS CONVENTION			
	NO	NO	NO
US DRUG ENFORCEMENT ADMINISTRATION			
WHMIS	NO	NO	NO
DSL	YES	YES	YES
NDSL	NA	NA	NA
REACH Pre-registered List	YES	YES	YES
TSCA	YES	YES	YES
European Inventory of Existing Commercial Chemical Substances (EINECS)	YES	YES	YES
EU No-Longer Polymers List (NLP)	NA	NA	NA
EEC Classification Packaging, and Labeling of Dangerous Substances(Annex 1)	Corrosive	NO	NO
Philippines	YES	YES	YES

Japan	YES	YES	
Australia	YES	YES	YES
Korea	YES	YES	YES
China	YES	YES	YES
New Zealand Inventory of Chemicals	YES	YES	YES

16. Other information

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. 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.