Material Safety Data Sheet

ProShield PC55 RO Biocide (RXSOL-33-8936-009)

1. Product and Company Identifaction

Product Name	: ProShield PC55 RO Biocide
Part Number	: RXSOL-33-8936-009

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

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2. Composition / informationon ingredients

Name of Substance	Cas Number	Wt.%
Isothiazolinones	26172-55-4	14-16 %
Proprietroy Blend	---	84-86 %

3. Hazards Identification

Signal Word	Danger
Hazard Statements	H301: Toxic if swallowed. H311: Toxic in contact with skin. H314: Causes severe skin burns and eye damage. H317: May cause an allergic skin reaction. H318: Causes serious eye damage. H335: May cause respiratory irritation.
Precautionary statements - prevention	Do not breathe dust/fume/gas/mist/ vapors / spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statements - response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with plenty of water /shower. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see below).Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Specific treatment (see below). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Collect spillage. Storage: Store locked up. Store in corrosive resistant stainless steel container with a resistant inner liner. Disposal: Dispose of contents/ container to an approved waste disposal plant.

4. First Aid Measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation:	If inhaled, If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion:	If swallowed, do not induce vomiting. Allow victim to rinse his mouth and then to drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Call a physician.
Notes to Physicians	Treat symptomatically.

5. Fire-fighting Measures

Flammability	Non Flammable.
Flash Point	Not Applicable
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Protective Equipment	Use personal protective equipment.
Hazardous combustion products	Decomposition products may include the following materials: Nitrogen oxides (NOx) ,Sulfur oxides.
Advice for firefighters	Wear self-contained breathing apparatus. Wear full protective equipment.
Specific extinguishing methods	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.Cool containers / tanks with water spray. Minimize exposure.Contain run-off.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Wear a NIOSH approved (or equivalent) respirator (with organic vapor/ acid gas cartridge and a dust/mist filter)during spill clean-ups and deactivation of this material. MATERIAL IS CORROSIVE. Protective clothing, including chemical splash goggles, nitrile or butyl rubber full length gloves, rubber apron, or clothing made of nitrile or butyl rubber, and rubber overshoes must be worn during spill clean-ups and deactivation of this material. If material comes in contact with the skin during cleanup operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for further information.
Enviromental Precaution	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	Absorb the spill with spill pillows or inert solids such as clay or vermiculite, and transfer contaminated materials to suitable containers for disposal. Deactivate spill area with freshly prepared solution of 5% sodium bicarbonate and 5% sodium hypochlorite in water. Apply solution to the spill area at a ratio of 10 volumes deactivation solution per estimated volume of residual spill to deactivate any residual active ingredient. Let stand for 30 minutes. Flush the spill area with copious amounts of water to chemical sewer (if in accordance with local procedures, permits and regulations). DO NOT add deactivation solution to the waste pail to deactivate the adsorbed material. See SECTION 13, "Disposal Considerations", for information regarding the disposal of contained materials.

7. Handling and Storage

Advice on safe handling	Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling. This material is corrosive. See section 8, Exposure Controls/Personal Protection, prior to handling.
Storage	The maximum recommended storage temperature for this material is 550C/131F. The minimum recommended storage temperature for this material is 10C/32F. Store in a well ventilated area. Do not store this material in containers made of the following: steel.
Advice on general occupational hygiene	Wash hands after use. Do not to eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas.

8. Exposure controls and personal protection

Engineering Control	Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust
Personal Protection	Eye protection : Wear eye protection/ face protection. Hand protection : Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Skin protection :Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Other Protection:	Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.



Gloves



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9. Physical and chemical properties

Form	Liquid
Colour	Pale yellow to Amber.
Odour	Slight
Boiling point / range	100°C
Flash Point	Not applicable, Does not sustain combustion.
Freezing Point	-33°C
pH	1.0 - 3.0
Upper explosion limit	Not Applicable
Lower explosion limit	Not Applicable
Explosive properties	No data available
Vapor pressure	0.0027 mmHg
Relative vapor density	0.6
Relative density	1.08 - 1.15
Water solubility	Soluble
Solubility in other solvents	No data available
Viscosity, dynamic	16.000 mPa.s at 25°C (77°F)
Percent volatility	60 - 64 % Water
NOTE:	The physical data presented above are typical values and should not be construed as a specification.

10. Stability and reactivity

Recativity	None
Stability	Stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Incompatible materials	Avoid contact with the following: - oxidizing agents - reducing agents - amines - mercaptans
Hazardous Decomposition	Decomposition products may include the following materials: Nitrogen oxides (NOx) Sulfur oxides
Condition to Avoid	None Known

Polymerization	Will not occur.

11. Toxicological information

Acute Data	Acute Oral LD50, rat: 457mg/kg Acute Dermal LD50, rabbit: 660mg/kg Skin Irritation - rabbit: Corrosive (product) Eye Irritation - rabbit: Corrosive (product) Acute 4 Hr Inhalation - rat: 0.33 mg/L Active ingredient
Carcinogenicity Data	Non-carcinogenic
Mutagenicity Data	collective data indicate non-mutagenic..
Reproductive/Teratology Data	Teratogenicity: not teratogenic.
Sensitization Data	Sensitization:skin sensitizer
Respiratory	No data available
Reproductive effects	No data available
Germ cell mutagenicity	No data available

12. Ecological information

Elimination information	Biodegradability Biodegradation (aquatic metabolism): CAS # 26172-55-4 t 1/2 anaerobic = 4.8 hr, CAS # 26172-55-4 t 1/2 aerobic = 17.3 hr, CAS # 2682-20-4 t 1/2 aerobic = 9.1hr
Physico-chemical removability	Activated Sludge Respiration Inhibition EC50: 4.5 mg/L
Ecotoxicity effects Toxicity to fish	LC50 Oncorhynchus mykiss (rainbow trout) 96 h 0.19 mg/l Active ingredient Toxicity to fish LC50 Lepomis macrochirus (Bluegill sunfish) 96 h 0.28 mg/l Active ingredient Toxicity to algae EC50 Marine algae (Skeletonema costatum) 0.003 mg/l Active ingredient Toxicity to algae EC50 Algae (Selenastrum capricornutum) 0.018 mg/l Active ingredient Toxicity to aquatic invertebrates EC50 Daphnia magna 48 h 0.16 mg/l
Bioaccumulative potential	No data available
Mobility in soil	No data available

13. Disposal considerations

Remarks	Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
Waste Disposal	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility

14. Transport information

UN Number	2922
Proper shipping name	Corrosive liquids, toxic, n.o.s. (5-Chloro-2-methyl-4isothiazolin-3-one)
Class	8
Packing Group	II
Environmentally hazardous	No

International Maritime Dangerous Goods Code (IMDG) : Not Regulated

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15. Regulatory information

Label Classification	Label Classificationand labeling have been performed according to EU directives 67/548/EEC and99/45/EC including amendments (2001/60/EC and 2006/8/EC). Hazard symbol and Indication of danger
Contain	Mixture of:5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol3-one (3:1)
R-phrase(s)	R-phrase(s) R20/21/22 Harmfulby inhalation, in contact with skin and if swallowed. R34 Causesburns. R43 Maycause sensitization by skin contact. R51/53 Toxicto aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	S26 Incase of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 Wearsuitable protective clothing, gloves and eye/face protection. S45 Incase of accident or if you feel unwell, seek medical advice immediately (showthe label where possible). S57 Useappropriate container to avoid environmental contamination. S60 Thismaterial and its container must be disposed of as hazardous waste. Forprofessional users only.
EU. EINECS(EINECS)	This product satisfies allthe requirements of the European Inventory of Existing Chemical Substances(EINECS). US. Toxic Substances Control Act (TSCA):This product is subject to regulation under theUS Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is thereforeexempt from U.S. Toxic Substances Control Act (TSCA) Inventory listingrequirements

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 we assume 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.