1. Product and Company Identifaction

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Product Name RXSOL-81-8197-220

Product Type CO2 absorber

Company Details:

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

Stock Point: Kolkata, Mumbai, Chennai, Visakhapatnam, Gandhidham, Fujairah, Muscat, Nairobi

Phone +91 22 65113333 / 5555 / 9999 / 27611360 Fax +91 22 2781 1318 :::AOH :0091 9821214367

Email <u>mail@rxmarine.com</u>

2. Composition / Information on ingredients

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Chemica NameCAS Number%2-(2-Aminoethoxy)ethanol929-06-640-50Proprietary Blend of CO2 Absorbents-50-60

3. Hazards Identification

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Physical state Liquid.
Odor Amine-like.

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview DANGER!

CAUSES EYE AND SKIN BURNS. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSES

Corrosive to eyes and skin. Causes burns. Do not breathe vapor or mist. Do not get in eyes or on skin or clothing. Use o ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Aspiration has

Can enter lungs and cause damage.

GENERAL INFORMATION Read the entire MSDS for a more thorough evaluation of the hazards.

4. First Aid Measures

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Eye contact Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occa

upper and lower eyelids. Check for and

remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physical Skin contact

Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Ren

clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly be

Inhalation Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at

comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiratrained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious,

position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, be case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be k

surveillance for 48 hours.

Inhalation Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Aspiration hazard

enter lungs and cause damage. Do not induce vomiting. Chemical burns must be treated promptly by a physician. Neve

mouth to an unconscious person.

Notes to physician Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for a

5. Fire-fighting Measures

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Flash point Closed cup: 127°C (260.6°F)

Flammable limits Lower: 2.6%

Upper: 11.7%

Products of combustion Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides

Extinguishing media

Suitable Use an extinguishing agent suitable for the surrounding fire.

Not suitable None known.

Special exposure hazards

In a fire or if heated, a pressure increase will occur and the container may burst. Promptly isolate the scene by removin

the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable traini

Special protective equipment for fire-Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full fa

fighters in positive pressure mode.

6. Accidental Release Measures

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Personal precautions No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep

unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipmen Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevan

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewer the spillages into an offluent treatment plant or preceded as follows. Contain and collections.

basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material material as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and Storage

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Handling Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in

material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respirator with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be

reuse container.

Storage Storage Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and we

away from incompatible materials (see section 10) and food and drink. Separate from acids. Keep container tightly close ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not

containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls and personal protection

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Preventive Measures Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for spec

devices at your workplace.

Engineering controls

Use local exhaust ventilation to maintain airborne concentrations below the TLV. Suitable respiratory equipment should

of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures retained to the ACCHI process of the last individual to the ACCHI process of the A

such as the ACGIH current edition of 'Industrial Ventilation, a manual of Recommended Practice.'

Personal protection

Eyes Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary

to liquid splashes, mists or dusts.

Skin Personal protective equipment for the body should be selected based on the task being performed and the risks involved

approved by a specialist before handling this product.

Respiratory Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicate

necessary. Respirator selection must be based on nown or anticipated exposure levels, the hazards of the product and the

limits of the selected respirator.

Hands Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling

if a risk assessment indicates this is necessary.

9. Physical and chemical properties

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General information

Appearance

Physical state Liquid.
Color Clear.
Odor Amine-like.
Odor threshold Not available.

Important health, safety and environmental information

pH 11.8

Boiling point 222.5 to 223.8°C (432.5 to 434.8°F)

Melting point $-12.5^{\circ}\text{C} (9.5^{\circ}\text{F})$

Flash point Closed cup: 127°C (260.6°F)

Oxidizing properties None Vapor pressure 8.7 mg/m3

Sensitizer

Product/ingredient name Route of

exposure

2-(2-Aminoethoxy)ethanol

skin

Chronic toxicity

Product/ingredient name Test

Sub-acute

NOAEL Dermal

Mutagenicity Test

2-(2-Aminoethoxy)ethanol

OECD 471 Bacterial Reverse Mutation Test

OECD 471 Bacterial Reverse Mutation Test

OECD 476 In vitro Mammalian Cell Gene Mutation Test

EPA OPPTS

OECD 474 Mammalian Erythrocyte Micronucleus Test

Potential acute health effects

Ingestion Aspiration hazard if swallowed. Can enter lungs and cause damage. May cause burns to

mouth, throat and stomach.

Inhalation May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system

Eyes Corrosive to eyes. Causes burns.
Skin Corrosive to the skin. Causes burns.

Potential chronic health effects

Chronic effects No known significant effects or critical hazards.

Target organs None known.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Teratogenicity No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity				
Product/ingredient name	Test	Result	Species	Exposure
2-(2-Aminoethoxy)ethanol		Acute EC50 190 mg/L	Daphnia	48 hours
		Acute IC50 160 mg/L	Algae	72 hours
		Acute LC50 460 mg/L	Fish	96 hours
Biodegradability				
Product/ingredient name	Test	Result	Dose	Inoculum
2-(2-Aminoethoxy)ethanol	OECD	1 % - Not readily - 28 days	3 mg/L	Marine water
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
2-(2-Aminoethoxy)ethanol			Not readily	
Product/ingredient name	LogPow	BCF	Potential	
2-(2-Aminoethoxy)ethanol	1.2		low	

Environmental effects

Not readily biodegradable. This product shows a low bioaccumulation potential.

13. Disposal considerations

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Waste disposal

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

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Cargo Aircraft Quantity limita

Regulatory	UN number	Proper shipping	Class	PG*	Label	Additional info
information		name				
DOT Classification	UN3055	2-(2-	8	III		
		Aminoethoxy)ethanol				
TDG Classification	UN3055	2-(2-	8	III		
		Aminoethoxy)ethanol				
IMDG Class	UN3055	2-(2-	8	III		Emergency sch
		Aminoethoxy)ethanol				(EmS)
						F-A, S-B
IATA-DGR Class	UN3055	2-(2-	8	III		Passenger and
		Aminoethoxy)ethanol				AircraftQuanti
						limitation: 5 L
						Packaging inst
						Q1Q

The transport regulations may change in the different countries. Check for the appropriate regulations in the countryof transport or usage of this product.

15. Regulatory information

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United States

HCS Classification Corrosive material

U.S. Federal regulations United States inventory (TSCA 8b): This material is listed or exempted.

CERCLA: Hazardous substances No ingredients listed. **SARA 313**

No ingredients listed.

This product does not contain nor is it manufactured with ozone depleting substances. California Prop 65 This product contains no listed substances known to the State of California to cause

cancer, birth defects or other reproductive harm, at levels which would require a warning

under the statute.

Canada

WHMIS (Canada) Class E: Corrosive material CEPA (DSL) This material is listed or exempted.

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

16. Other information

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CAUSES EYE AND SKIN BURNS. ASPIRATION HAZARD IF SWALLOWED - CAN Label requirements

ENTER LUNGS AND CAUSE DAMAGE.

Hazardous Material Health 3

Information System (U.S.A.)

Fire hazard 1 Reactivity 0 Health 3

National Fire Protection

Association (U.S.A.)

Flammability 1

Instability 0

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