



RXSOL

CHEMO PHARMA INTERNATIONAL

RXSOL-81-8196-210

Biocide 6111

Material Safety Data Sheet (MSDS)

1. Product and Company Identification

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Product Name	Biocide 6111
Part Number	RXSOL-81-8196-210

Company Details:

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

Phone	+91 22 65113333 / 5555 / 9999
Fax	+91 22 2781 1318 ::AOH :0091 9821214367
Email	123@rxmarine.com
Website	www.rxmarine.com

2. Composition / Information on ingredients

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Component	CAS-No	Weight %	R Phrases
Glutaraldehyde	111-30-8	10- 30	R 23 , R 25
Quaternary as non Hazardous	-	10-30	
Brominated compounds	-	10-20	
Proprietary Blend of Biocides	-	> 60	

3. Hazards Identification

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Signal Word	:	Danger
Classification	:	severe skin burns and eye damage. Harmful if swallowed.
Label Elements	:	An allergic skin reaction.
Environmental hazards	:	Environmental effects Dangerous for the environment Very toxic to aquatic

4. First Aid Measures

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4.1 Description of necessary first-aid measures:

Inhalation	:	Remove to fresh air, treat symptomatically. Get immediate medical attention.
Skin Contact	:	PROMPT ACTION IS ESSENTIAL IN CASE OF CONTACT. Immediately flush eye with water for at least 15 minutes while holding eyelids open. Get immediate medical attention.
Eye Contact	:	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Ingestion	:	Seek medical advice immediately, showing the label and/or SDS. If conscious, washout mouth and give water to drink. If unconscious, do not give anything by mouth, place in the recovery position, check breathing and pulse. If necessary give artificial respiration. Do not induce vomiting without medical advice.
If Swallowed	:	Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.
Important symptoms	:	Probable mucosal damage may contraindicate the use of gastric lavage. Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition..

5. Fire-fighting Measures

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Suitable Extinguishing Media	:	This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire.
Fire Hazard	:	Special hazards arising from the substance or mixture: May evolve oxides of carbon (COx) under fire conditions. Not flammable or combustible. In the event of a spill, prevent material and fire water from entering sewers or waterways.
Special Fire Fighting Procedure	:	In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. Accidental Release Measures

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Personal Precautions	:	This material may be hazardous by contact, do not attempt to clean up the spill. Call trained emergency responders immediately. Clean up only to be done by Emergency responders/personnel. Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).
Environmental Precautions	:	In the event of a spill, prevent material from entering sewers or waterways. Do not allow material to contaminate ground water system. Prevent product from entering drains. If drains, streams, soil or sewers become contaminated, notify local authority. This product may pose a risk to the aquatic ecosystem if released.

Methods for Containment and Clean 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. Wash site of spillage thoroughly with water. Dilute the glutaraldehyde to 5% or less with water. Add sodium bisulfite (2-3 parts by weight per part glutaraldehyde). This will typically reduce the glutaraldehyde concentration to 2 ppm or less in 5 minutes at room temperature. The remaining solution can be disposed of via appropriate means. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).
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7. Handling and Storage

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Handling	Prevent contact with skin, eyes and clothing. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Ensure all containers are labeled. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Use only in a closed system. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke. Eye wash station and safety shower are necessary. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.
Storage	Keep container closed when not in use. Keep container in a well-ventilated area.
Suitable Construction Material	PVC, Plexiglass, Kalrez, Alfax, Teflon, HDPE (high density polyethylene), Ethylene propylene, Polypropylene, Polyethylene, Stainless Steel 304, Stainless Steel 316L, Hastelloy C-276, Aluminum, MDPE (medium density polyethylene), Surface-modified HDPE (high density polyethylene)
Unsuitable Construction Material	Copper, Mild steel, EPDM, Brass, Nylon, Buna-N, Natural rubber, Polyurethane, Hypalon, Viton, Neoprene, Nitrile

8. Exposure controls and personal protection

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Occupational Exposure Limits	:	Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.
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Source:	Substance(s)	Basis	ppm	mg/m3
Great Britain	Glutaraldehyde	TWA	0.05	0.2
		STEL	0.05	0.2

*A skin notation refers to the potential significant contribution to overall exposure by the cutaneous route, including mucous membranes and the eyes.

MONITORING MEASURES

A small volume of air is drawn through an absorbant or barrier to trap the substance(s) which can then be desorbed or removed and analyzed as referenced below:

Substance(s)	Method	Analysis	Absorbant
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Glutaraldehyde	UK MDHS: 93	High pressure liquid chromatography	Glass fibre filter treated with Dinitrophenyl hydrazine
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DNEL

Components:

End Use:	Exposure routes:	Potential health effects:	Value:
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Glutaraldehyde

Workers	Inhalation	short-term - local	0.5 mg/m ³
Workers	Inhalation	long-term - local	0.25 mg/m ³

PNEC

Components:

Fresh water	0.0025 mg/l
Marine water	0.00025 mg/l
Intermittent release	0.006 mg/l
STP	0.8 mg/l
Fresh water sediment	0.527 mg/kg
Soil	0.03 mg/kg

Engineering Measures	:	General ventilation is recommended. The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces.
Personal Protection	:	Eye/Face Protection: Wear a face shield with chemical splash goggles. Skin Protection : When handling this product, the use of chemical gauntlets is recommended. The choice of work glove depends on work conditions and what chemicals are handled, but we have positive experience under light handling conditions using gloves made from Nitrile Gloves should be replaced immediately if signs of degradation are observed. Breakthrough time not determined as preparation, consult PPE manufacturers. When handling this product, the use of a chemical resistant suit and rubber boots is recommended.
Hygiene Measures	:	Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation. Avoid contact with skin, eyes and clothing. Remove contaminated clothing and protective equipment before entering eating areas. Wash hands before breaks and immediately after handling the product.
Respiratory Protection	:	Where concentrations in air may exceed the limits given in this section, the use of a half face filter mask or air supplied breathing apparatus is recommended. A suitable filter material depends on the amount and type of chemicals being handled. Consider the use of filter type: A-P The applicable European standard can be found in EN 140, EN 137, EN 143 and EN 14387. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.



Gloves



Suit

9. Physical and chemical properties

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Physical State	:	Liquid
Appearance	:	Light Yellow
Odor	:	Pungent
Odor Threshold	:	No information available.
PH	:	4-8
Melting / Freezing Point	:	- 4 °C
Boiling Point/Range	:	101 °C
Flash Point	:	Not Applicable
Evaporation Rate	:	No information available.
Lower Explosion Limit	:	No data available.
Vapor Pressure	:	2.13 kPa (20 °C)
Vapor Density	:	No data available.
Relative Density	:	>1.05 g/cm ³ (20.0 °C)
Solubility in Water	:	Complete soluble
Partition coefficient n octanol/water	:	Not available.
Explosive Properties	:	Not applicable
Oxidizing Properties	:	Not applicable

10. Stability and reactivity

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Stability	:	Stable under normal conditions.
Conditions to Avoid	:	None known High temperature.
Materials to avoid	:	Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Strong Bases Strong acids Contact with these may cause a heat-generating reaction which is not expected to be violent.
Hazardous decomposition	:	Under fire conditions: Oxides of carbon
Hazardous Reaction	:	No dangerous reaction known under conditions of normal use.

11. Toxicological information

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Acute toxicity	:	Harmful if swallowed.
Acute inhalation toxicity	:	Toxic if inhaled.

Skin corrosion/irritation		No data is available on the product itself.
Chronic toxicity		

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