

1. Product and Company Identification

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Part Number RXSOL-16-2063-210
Product Name Biocide RX

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
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2. Composition / Information on ingredients

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Product	EINECS / ELINCS NO	SYMBOL	R-PHRASES / NOTAS	% (w/w)
Quaternary Ammonium compound	Proprietary	C, N	R22, R34, R50	10 - 30
Pentane-1,5-dial (Glutaraldehyde)	111-30-8	C, N	R22, R34, R50	15-40
Ethylene Glycol	203-473-3	Xn	R22	10 - 30
Isopropanol	200-661-7	F, Xi	R11, R36, R67	10- 5
Quaternary phosphorus compound	Proprietary	T, N	R23, R22, R41,R43, R63, R50	1 - 5
Dipropylene Glycol Monomethyl Ether	252-104-2		OEL	1 - 5

Refer to Section 16 for descriptions of relevant risk phrases and Notas

3. Hazards Identification

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HAZARD CLASSIFICATION :

This product is classified as dangerous in accordance with the Preparations Directive 1999/45/EC. Flammable. Harmful if swallowed. Causes burns. May cause sensitization by skin contact

HUMAN HEALTH HAZARDS - ACUTE :

INHALATION :
SKIN CONTACT :

Irritating, in high concentrations, to the eyes, nose, throat and lungs.
May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals
Corrosive. Will cause eye burns and permanent tissue damage
Not a likely route of exposure. Corrosive; causes chemical burns to the mouth, throat and stomach. Harmful if swallowed. Large quantities may cause kidney damage.

EYE CONTACT
INGESTION :

HUMAN HEALTH HAZARDS - CHRONIC

Contains ethylene glycol (EG). Repeated high dose exposure to EG by ingestion (animal studies) has caused kidney damage, brain damage, degeneration of the liver, changes in blood chemistry and circulating blood

cells. Prolonged and/or repeated exposures may cause similar effects in humans. Ethylene glycol has been shown to cause developmental and reproductive effects at high dose levels in laboratory animals. The relationship of these results to humans has not been fully established. Prolonged exposure to ethylene glycol may cause central nervous system, kidney and liver effects.

Flammable

PHYSICAL AND CHEMICAL HAZARDS

4. First Aid Measures

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INHALATION :
SKIN CONTACT

Get medical attention. Remove to fresh air, treat symptomatically
Get immediate medical attention. Immediately flush with plenty of water for at least 15 minutes. For a large splash, flood body under a shower. Remove contaminated clothing. Wash off affected area immediately with plenty of water. Contaminated clothing, shoes, and leather goods must be discarded or cleaned before re-use

EYE CONTACT

Get immediate medical attention. **PROMPT ACTION IS ESSENTIAL IN CASE OF CONTACT.** Immediately flush eye with water for at least 15 minutes while holding eyelids open

INGESTION

Get immediate medical attention. **DO NOT INDUCE VOMITING.** If conscious, washout mouth and give water to drink.

NOTE TO PHYSICIAN

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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FLASH POINT :
EXTINGUISHING MEDIA

50 °C PMCC

Foam, Carbon dioxide, Dry powder, Other extinguishing agent suitable for Class B fires, For large fires, use water spray or fog, thoroughly drenching the burning material. Water mist may be used to cool closed containers

FIRE AND EXPLOSION HAZARD

Combustible Liquid; may form combustible mixtures at or above the flash point. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve oxides of phosphorus (POx) under fire conditions

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING

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

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. Ventilate spill area if possible. Remove sources of ignition. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities

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. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations)

Do not contaminate surface water

ENVIRONMENTAL PRECAUTIONS

7. Handling and Storage

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HANDLING

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Do not use, store, spill or pour near heat, sparks or open flame

STORAGE CONDITIONS

Store in suitable labelled containers. Store the containers tightly closed. Store away from heat and sources of ignition. Have appropriate fire extinguishers available in and near the storage area. Connections must be grounded to avoid electrical charges

SUITABLE CONSTRUCTION MATERIAL

HDPE (high density polyethylene), PTFE, FEP (encapsulated), Viton, Stainless Steel 304, Stainless Steel 316L, MDPE (medium density polyethylene), Surface-modified HDPE (high density polyethylene), Nitrile, EPDM, Perfluoroelastomer, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use

UNSUITABLE CONSTRUCTION MATERIAL

Carbon Steel C1018

8. Exposure controls and personal protection

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Substance(s)	Method	Analysis	Absorbant
Ethylene Glycol	US NIOSH: 5523	Gas chromatography	XAD-7 / Glass fibre filter OVS tube
Isopropanol	US NIOSH: 1400	Gas chromatography	Charcoal
Dipropylene Glycol Monomethyl Ether	US OSHA: 101	Gas chromatography	Charcoal

BIOLOGICAL EXPOSURE INDICES

Isopropanol

A biological index of exposure to isopropyl alcohol (CAS 67-63-0) is the detection of acetone in the blood or urine post shift (50mg/l)

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

GENERAL ADVICE

The use and choice of personal protection equipment is related to the hazard of the product, the workplace and the way the product is handled. In general, we recommend as a minimum precaution that safety glasses with side-shields and workclothes protecting arms, legs and body be used. In addition any person visiting an area where this product is handled should at least wear safety glasses with side-shields. The applicable European standard can be found in EN 166.

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-B-E-K-P The applicable European standard can be found in EN 141, EN 143 and EN 371. 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

HAND 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 PVC. Gloves should be replaced immediately if signs of degradation are observed. Breakthrough time not determined as preparation, consult PPE manufacturers. The applicable European standard can be found in EN 374

When handling this product, the use of a chemical resistant suit and rubber boots is recommended. The applicable European standard can be found in EN 467 and EN 345

When handling this product, the use of a chemical resistant suit and rubber boots is recommended. The applicable European standard can be found in EN 467 and EN 345

Wear a face shield with chemical splash goggles. The applicable European standard can be found in EN 166

Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke

SKIN PROTECTION

EYE PROTECTION

EYE PROTECTION

HYGIENE RECOMMENDATIONS

9. Physical and chemical properties

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PHYSICAL STATE	Liquid
APPEARANCE	Clear White
ODOR	Slight
FLASH POINT	50 °C PMCC
SPECIFIC GRAVITY	1.016 (15 °C)
SOLUBILITY IN WATER	Complete
pH (100 %)	3.6
VISCOSITY	2.17 cst (40 °C) ASTM D-445
MELTING POINT	ASTM D-97 -13 °C

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

10. Stability and reactivity

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STABILITY	Stable under normal conditions
HAZARDOUS POLYMERIZATION	Hazardous polymerization will not occur
CONDITIONS TO AVOID	Heat and sources of ignition including static discharges
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., Contact with strong alkalies (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors
HAZARDOUS DECOMPOSITION PRODUCTS	
Under fire conditions	Oxides of carbon, Oxides of nitrogen, Oxides of phosphorus

11. Toxicological information

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No toxicity studies have been conducted on this product

Repeated or prolonged contact may cause skin sensitization

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National

SENSITIZATION
CARCINOGENICITY

Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH)

TERATOGENICITY

This material is not a teratogen, at low dose levels of 6 or 18 mg/kg/day for rabbits and 15 or 30 mg/kg/day for rats. At a high dose level of 60 mg/kg/day, both species showed fetal toxicity.

For additional information on the hazard of the preparation, please consult section 3 and 12.

12. Ecological information

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ECOTOXICOLOGICAL EFFECTS

No toxicity studies have been conducted on this product

MOBILITY