

1. Product and Company Identification

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Product Name Degreaser Biodegradable

Part Number RXSOL-19-1211-215

Company Details:

RX MARINE INTERNATIONAL

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2. Composition / Information on ingredients

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Name of Substance	Cas Number	EC Number	Weight %
Natural Alcohol	64-17-5	200-578-6	70 - 80%
Surfactant	Proprietary		20 -30%

3. Hazards Identification

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Signal word

Water Soluble Danger

Hazard statement(s)

H319 Causes serious eye irritation.

Precautionary statements

P210: Keep away from heat / sparks / open flames / hot surfaces ? No smoking.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical / ventilating / lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P280: Wear protective gloves / protective clothing /eye protection.

P264: Wash skin thoroughly after handling.

P303+ P361+P353: If on skin or hair remove/ take off immediately all contaminated clothing. Rinse skin with water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice/attention.

P370 + P378: In case of fire: Use powder, alcohol-resistant foam, lots of water, carbon dioxide for extinction.

P403 + P235: Store in a well-ventilated place. Keep cool.

P501: Disposal: Dispose of contents / container to a specialised waste disposal plant in accordance with local / regional regulations

Main Hazard

Harmful if swallowed or inhaled. Possible aspiration hazard if swallowed (can enter lungs and cause damage). May be irritating to the skin, eyes and respiratory tract. Over exposure may cause CNS depression. Possible reproductive hazard.

Health effects ☞ eyes

Moderately irritating. Exposure to liquid, vapours, fumes or mist may cause irritation. Direct contact may cause irritation, redness, pain, corneal inflammation and possible corneal damage.

Health effects ☞ skin

Repeated or prolonged contact may result in defatting, redness, pain, itching, inflammation, cracking and possible secondary infection. Repeated skin contact may result in allergic skin reaction in a very small proportion of individuals.

Health effects ☞ ingestion

Large doses lead to poisoning while repeated ingestion can lead to alcoholism. Alcohol abuse and dependence can have a profound effect on work performance and tendency to accidents at work.¹¹⁻¹³ The presence of denaturants and surfactant

Health effects ☞ inhalation

Intoxicating if continuously inhaled for a long period of time. Occupational Exposure Limits (8-hour reference period) 1000ppm (1900mg/m³).³⁰ May cause respiratory tract irritation.

Carcinogenicity

Long-term consumption of alcoholic beverages demonstrates an increase in the occurrence of breast cancer and colorectal cancer. Malignant tumours of the oral cavity, Pharynx, Larynx, Oesophagus and Liver is also causally related to the consumption of alcoholic beverages.³¹ Some studies^{20, 21} have shown an excess incidence of laryngeal cancer over the expected from exposure to synthetic alcohol, with Diethyl Sulphate probably being the causative agent

Mutagenicity

Ethanol has been found to be non- mutagenic in the Salmonella microsome test, ²² but some transient mutagenic changes have been observed in male, but not female, mice treated with rather large doses.²³⁻²⁵ Ethanol is mutagenic in man via its first metabolite, Acetaldehyde. Acetaldehyde induces chromosomal aberrations, sister-chromatid exchanges and cross-links between DNA strands.³²

Neurotoxicity

Over exposure may cause Central Nervous System (CNS) depression

4. First Aid Measures

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Product in eye

Flush immediately with water or neutral saline solution for at least 15 minutes. Seek medical attention.

Product on skin

Remove contaminated clothing and rinse contaminated area with soap and water. If skin irritation persists, seek medical attention.

Product ingested

If victim is conscious, give 1-3 glasses of water or milk to dilute stomach contents. If spontaneous vomiting occurs, or when vomiting is induced, monitor for breathing difficulty. Do not make an unconscious or semi ☞ conscious person vomit. Keep affected person warm at rest. Get medical attention for substantial ingestions and/or gastrointestinal symptoms.

Product inhaled

Remove the victim to fresh air. If not breathing, ensure open airway and institute cardiopulmonary resuscitation (CPR). If breathing is weak, irregular or has stopped apply artificial respiration. Oxygen may be beneficial. Keep affected person warm and at rest. Get immediate medical attention.

5. Fire-fighting Measures

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Extinguishing media

Use dry chemical, alcohol foam or carbon dioxide to extinguish fire. Water may be ineffective but should be used to cool fire- exposed containers, structures and to protect personnel. If leak or spill has not

Special Hazards	ignited, ventilate area and use water spray to disperse gas or vapour and to protect personnel attempting to stop a leak. Use water to dilute spills and to flush them away from sources of ignition. Do not flush down public sewers or other drainage systems. Vapours form flammable or explosive mixtures with air at room temperature. Vapour or gas may spread to distant ignition sources and flash back. Run $\varnothing$ off to sewer may cause fire or explosion hazard. Containers may explode in heat of fire. Vapours may concentrate in confined areas. Irritating or toxic substances may be emitted upon thermal decomposition. Hazardous composition products such as carbon oxides may form.
Protective clothing	Exposed fire fighters should wear approved self-contained breathing apparatus with full face mask and full protective equipment.

6. Accidental Release Measures

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Personal precautions	Exposed fire fighters should wear approved self-contained breathing apparatus with full face mask and full protective equipment.
Enviromental Precautions	Prevent liquid entering sewers. Do not allow to enter surface waters, storm drains, etc.
Small spills	Take immediate steps to stop and contain the spill. Caution should be excised regarding personnel safety and exposure to be spilled material. Eliminate all sources of ignition and wear protective clothing. Absorb small spills onto paper towels and evaporate in a safe place e.g. in a fume hood. Flush the contaminated area with plenty of water.
Large spills	Stop leak if you can do it without risk. Contact your local fire department. Eliminate all sources of ignition and static; restrict access to area until completion of clean-up procedure. Wear adequate protective equipment, use self-contained breathing apparatus in confined poorly-ventilated areas. Large quantities should be absorbed on to sand, vermiculite or an equivalent absorbent material and removed to a safe area for disposal. Flush the contaminated area with plenty of water. Incineration is the recommended method of disposal

7. Handling and Storage

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Suitable material	It is not corrosive to metals and may be stored in stainless steel, mild steel or aluminium containers. It may also be stored in HDPE containers.
Handling/ storage precautions	Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Store in approved flammable liquid storage containers. Keep containers tightly closed as this material readily absorbs moisture. Store away from incompatible materials. Store in a cool, dry well ventilated area away from sparks, flames and other sources of ignition. Eliminate all sources of static electricity. Use non sparking electrical and ventilation systems.

8. Exposure controls and personal protection

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Engineering Control	Engineering control methods to reduce hazardous exposures are preferred. General methods include mechanical ventilation dilution and local exhaust, process or personnel enclosure, control of process conditions and process modification e.g. substitution of a less hazardous material. Administrative controls and personal protective equipment may also be required. Use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside. Supply sufficient replacement air to make up for air removed by exhaust system.
Personal Protection Respiratory	If exposure limits are exceeded or if irritation is experienced, an approved respirator for organic vapours is generally acceptable. For high

Exposure Limits:

Personal protection ☑ hand

Personal protection ☑ eye

Personal protection ☑ skin

Other protection

concentrations and for oxygen-deficient atmospheres, use approved air-supplied respirator. Full respiratory protection should be readily available in case of spillage.

Country	8 Hour ☑ TWA Hygiene Limit	STEL
US (OSHA)	1900 mg/m ³ (1000ppm)	None
US (ACGIH)	1900 mg/m ³ (1000ppm)	None
Germany (MAK)*	960 mg/m ³ (500ppm)	Peak limit cat. II, I
UK (OES)	1920 mg/m ³ (1000ppm)	None
Slovak Republic	960 mg/m ³ (500ppm)	1920 mg/m ³ (1000ppm) (30 min, 4x per shift)
Czech Republic	1000 mg/m ³	3000 mg/m ³

Rubber (Butyl) or neoprene gloves are recommended.

Prevent eye contact with this material. Wear chemical tight safety goggles where eye exposure is reasonably probable. Provide an eyewash station immediately accessible to the work area. Contact lenses should not be worn when working with this chemical.

Avoid skin contact. When working with this substance, wear appropriate chemical protective gloves. Wear protective suit/ overalls. Depending upon conditions of use, additional protection may be necessary such as face shield, apron, etc.

Provide a safety shower immediately accessible to the work area.

9. Physical and chemical properties

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Appearance

Colourless, liquid

Odour

Characteristic pleasant odour

pH

Neutral

Boiling point

78°C - 80°C

Melting point

- 130°C to - 112°C

Flash point

72°C

Auto-flammability

363°C

Explosive properties

Vapours can form explosive mixtures with air. All sources of ignition or static must be.

excluded. Oxidizing properties

None

Vapour pressure

59 mm Hg at 20°C

Density

0.80 kg/m³ ☑ 0.809 kg/m³ at 25°C

Solubility ☑ water

Miscible with water in all proportions

Solubility ☑ solvent

Miscible with ether, methanol, chloroform and acetone

Solubility ☑ coefficient

1100 @ 37°C33

10. Stability and reactivity

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Recativity

Stable at normal ambient temperature and pressure.

Chemical Stability

No decomposition if stored and applied as directed.

Incompatible materials

See section 3 (chemical hazards).

Hazardous decomposition products

Incomplete combustion can generate carbon monoxide and carbon dioxide

Condition to Avoid

Overheating, flames, sources of ignition or static electricity. Oxidizing agents. Vapour/ air mixtures are explosive. Keep away from heat and sources of ignition.

11. Toxicological information

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Acute toxicity

Short-term hazards

Acute oral toxicity Ethanol : LD50 rat: 7,060 mg/kg; literature value

Acute inhalation toxicity Ethanol : LC50 rat: 66,000 mg/l; literature value; 4 h

Acute dermal toxicity Ethanol : LDLo rabbit: 20,000 mg/kg; literature value

NOAEL - 2400 mg/kg (2%) - for rats

LOAEL 3600 mg/kg (3%) - for rats

Redness, pain (refer to Section 3 for further information)

Refer to Section 3.

Refer to Section 3

Refer to Section 3

Refer to Section 3

Refer to Section 3

Skin and eye contact

Chronic toxicity

Carcinogenicity

Mutagenicity

Neurotoxicity

Reproductive hazards

12. Ecological information

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Aquatic toxicity fish

In high concentration it harms fish and plankton; LC50 (fish, 96 hours) 15.3 mg/L (Pimephales promelas)

Aquatic toxicity daphnia

Threshold for deleterious effects in small crustaceans upwards of 7.800 mg/l; EC50 (Daphnia, 48 hours) 5012 mg/L (Ceriodaphnia dubia)

Aquatic toxicity algae

Toxic threshold concentration: Pseudomonas putida upwards of 6.500mg/l, Scenedesmus quadricauda upwards of 5.000mg/l, Microsystis aeruginosa upwards of 1.450ml/L

Biodegradability

IC50 (algae, 72 hours) 275 mg/L

This product is readily biodegradable. Ethanol is widely recognized as being readily biodegradable in the environment as it is both a metabolite of and nutrient for microbes. There are no persistent.

Bio accumulation

This product is not expected to bio accumulate through the food chains in the environment. The very low log KOW of 0.31 is indicative of a low bioaccumulation potential.

Mobility

This product is likely to volatilize rapidly into the air because of its high vapour pressure. The product is poorly absorbed onto soils or sediments. Adsorption coefficient (KOC) solid phase/liquid phase = 1 (highly mobile)

German wgk

1 (low hazard to water)

13. Disposal considerations

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Disposal methods

Only under conditions approved by local authorization. See also Section 6.

Disposal of packaging

Empty containers may contain flammable and hazardous residues. Always obey hazard warnings.

14. Transport information

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ADR/RID class	3
ADR/RID item No	3(b)
ADR/RID hazard identity No	3
IMDG ☐ shipping name	Non Corrosive, Degreaser Biodegradable
IMDG ☐ class	3
IMDG ☐ packaging group	II
IMDG ☐ marine pollutant	Not a marine pollutant
IMDG ☐ EMS No	F-E, S-D
IMDG ☐ MFAG table No	3074
IATA ☐ shipping name	Non Corrosive, Degreaser Biodegradable
IATA ☐ class	3
IATA ☐ subsidiary risk(s)	Flammable liquid
ADNR ☐ class	Class 3, Packaging Group II
UK ☐ description	Not available
UK- emergency action class	Not available
UK ☐ classification	Not available
Tremcard No	1170

15. Regulatory information

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EEC hazard classification	200 ☐ 578 - 6
Risk phases	R11
Safety phases	S2, S7, S9, S16, S33
National legislation	Hazardous Substances Act 15 of 1973 and Regulations
	Occupational Health and Safety Act 85 of 1993 (Hazardous Chemical Substances Regulations)
International Legislation	IATA Dangerous Goods Regulation (DGR) 59th Edition 2018
	IMDG Code, International Maritime Dangerous Goods Code, 2008 Edition, Volume 1 and 2

16. Other information

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Other Information

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