

1. Product and Company Identification

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Product Name: DI Ethylene Glycol
Part Number: RXSOL-81-1126-250

Company Details:

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

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Chemical Name	Cas No	EC No	Weight	Formula
Diethylene glycol	111-46-6	203-872-2	106,12 g/mol	C ₄ H ₁₀ O ₃

3. Hazards Identification

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Signal Word	Warning
Hazard Statements	H302 Harmful if swallowed
Precautionary statements	P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P501 Dispose of contents/ container to an approved waste disposal plant.
Classification of the substance or mixture	No data available
Supplemental Hazard Statements	No data available
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

4. First Aid Measures

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General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation fresh air.
Eye Contact	Rinse out with plenty of water. Remove contact lenses
Swallowed	Make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Skin Contact	In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Inhalation	No data available
Ingestion	No data available

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed No data available

5. Fire-fighting Measures

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Flammability

No data available

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given Carbon oxides Combustible. Vapors are heavier than air and may spread along floors. Sigma-Aldrich- H26456 Page 4 of 13 The life science business of Merck operates as MilliporeSigma in the US and Canada Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

Special hazards arising from the substance or mixture

Cool containers/tanks with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Further information

No data available

Hazardous combustion products

In the event of fire, wear self-contained breathing apparatus.

Advice for firefighters

No data available

Protective Equipment

No data available

Specific Hazards Arising from the Chemical

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

Spillage

No data available

Personal Protection

No data available

Environmental Precaution

No data available

Methods and materials for containment and cleaning

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area

Reference to other sections

For disposal see section 13

7. Handling and Storage

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Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Incompatible materials

No data available

Hygiene measures

No data available

Advice on safe handling

No data available

Conditions for safe storage, including any incompatibilities

No data available

Storage conditions

Tightly closed. hygroscopic Heat sensitive. Store under inert gas.

Storage class

Storage class (TRGS 510)10 Combustible liquids

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Advice on general occupational hygiene

No data available

8. Exposure controls and personal protection

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Exposure controls	Personal protective equipment
Engineering Control	No data available
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	Protective clothing
Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min
Respiratory protection	Recommended Filter type Filter A (acc. to DIN 3181) for vapours of organic compounds The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Other Protection Measure	No data available

9. Physical and chemical properties

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Physical state	Viscous liquid
Colour	Colorless
Odour	Odorless
Odor Threshold	No data available
pH	6 - 8 at 200 g/l at 20 °C
Melting Point	-10 °C - lit.
Boiling Point	245 °C - lit.
Flash Point	138 °C - closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	Upper explosion limit 37 %(V) Lower explosion limit 1,7 %(V)
Explosive limits	No data available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	372 °C at 1.013,25 hPa
Decomposition temperature	Distillable in an undecomposed state at normal pressure
Vapour pressure	< 0,1 hPa at 25 °C
Viscosity	Dynamic: 30 mPa.s at 25 °C
Density	1,118 g/cm3 at 25 °C - lit
Relative Density	1,118 at 20 °C
Specific Gravity	No data available
Partition coefficient	Log Pow: -1,98 at 25 °C - Bioaccumulation is not expected., (IUCLID)
Explosive properties	No data available
Solubility	1.000 g/l at 20 °C - miscible
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

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Reactivity	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature)
Possibility of hazardous reactions	Violent reactions possible with: Strong oxidizing agents Zinc Exothermic reaction with: Strong acids
Conditions to avoid	Heating in air. Exposure to moisture. Strong heating.
Incompatible materials	No data available
Hazardous product decomposition	No data available

11. Toxicological information

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Acute toxicity	Acute toxicity estimate Oral - 500,1 mg/kg (Expert judgment) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) LD50 Dermal - Rabbit - 11.890 mg/kg (RTECS)
Skin corrosion/irritation	Skin - Rabbit Result No skin irritation (IUCLID)
Serious eye damage/irritation	Eyes - Rabbit Result No eye irritation (IUCLID)
Respiratory or skin sensitization	Maximization Test - Guinea pig Result negative (Regulation (EC) No. 440/2008, Annex, B.6)
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Test Type: In vivo micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Intraperitoneal Method: OECD Test Guideline 474 Result: negative
Reproductive toxicity	No data available
Specific target organ toxicity-single exposure	No data available
Additional Information	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Repeated dose toxicity - Rat - male and female - Oral - 28 Days - NOAEL (No observed adverse effect level) - 936 mg/kg - LOAEL (Lowest observed adverse effect level) - 40.000 mg/kg RTECS: ID5950000 Symptoms and signs of poisoning are: Confusion, Dizziness, Kidney injury may occur, Unconsciousness, Convulsions, Nausea, Headache, Vomiting, Pulmonary edema. Effects may be delayed. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

12. Ecological information

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Persistence and degradability	Biodegradability aerobic - Exposure time 10 d Result 90 - 100 % - Readily biodegradable. (OECD Test Guideline 301A) Theoretical oxygen demand 1.510 mg/g (Lit.) Ratio BOD/ThBOD 1,3 - 10 % (Lit.)
Toxicity to fish	Flow-through test LC50 - Pimephales promelas (fathead minnow) - 75.222 mg/l - 96 h (ECHA)
Toxicity to daphnia and other aquatic invertebrates	Static test LC50 - Daphnia magna (Water flea) - 62.630 mg/l - 48 h

Toxicity	No data available
Toxicity to bacteria	Static test EC20 - activated sludge - > 1.995 mg/l - 30 min (ISO 8192)
Toxicity to algae	Static test NOEC - Pseudokirchneriella subcapitata - > 100 mg/l - 72 h (OECD Test Guideline 201)
Products Biodegradation	No data available
Mobility in soil	No data available
Results of PBT av PvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher
Other adverse effects	No data available

13. Disposal considerations

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Product	No data available
Contaminated packaging	No data available
Waste treatment Method	No data available

14. Transport information

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UN number	ADR/RID:- IMDG:- IATA:-
UN proper shipping name	ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods
Transport hazard classess	ADR/RID:- IMDG:- IATA:-
Packaging group	ADR/RID:- IMDG:- IATA:-
Environmental hazards	ADR/RID:No IMDG Marine pollutant:No IATA: No
Special precautions for user	No data available
Further information	No data available

15. Regulatory information

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Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
Other regulations	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	For this product a chemical safety assessment has been carried out

16. Other information

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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.
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