

1. Product and Company Identification

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Product Name Dimethyl Amino Ethanol
Part Number RXSOL-19-3302-210

Company Details:

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Chemical Name	Cas No	EC No	Weight	Formula
2-Dimethylaminoethanol	108-01-0	203-542-8	89,14 g/mol	C ₄ H ₁₁ NO

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H226 Flammable liquid and vapor. H302 + H312 Harmful if swallowed or in contact with skin. H314 Causes severe skin burns and eye damage. H331 Toxic if inhaled. H335 May cause respiratory irritation
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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	First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.
If inhaled	fresh air. Immediately call in physician. If breathing stops: immediately

Eye Contact	apply artificial respiration, if necessary also oxygen.
Swallowed	Rinse out with plenty of water. Remove contact lenses
Skin Contact	Make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Inhalation	In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Ingestion	No data available
Most important symptoms and effects, both acute and delay	No data available
Indication of any immediate medical attention and special treatment needed	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

5. Fire-fighting Measures

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Flammability	No data available
Suitable extinguishing media	Carbon dioxide (CO2) Foam Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given
Special hazard arising from this substance or mixture	Carbon oxides Nitrogen oxides (NOx) Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.
Further information	Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	No data available
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Protective Equipment	No data available
Specific Hazards Arising from the Chemical	No data available

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	Avoid dust formation. Avoid breathing vapors, mist or gas. For personal protection see section 8
Environmental Precaution	Do not let product enter drains. Risk of explosion.
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	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
Advice on safe handling	No data available
Conditions for safe storage, including any incompatibilities	No data available
Storage conditions	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons. Handle and store under inert gas.
Storage class	Storage class (TRGS 510) 3 Flammable 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	Flame retardant antistatic 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: Viton® Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M) 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: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 30 min Material tested: Butoject® (KCL 898)
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	Liquid
Colour	Colorless
Odour	Amine-like
Odor Threshold	No data available
pH	10,5 - 11 at 100 g/l at 20 °C
Melting Point	-70 °C - lit.
Boiling Point	134 - 136 °C - lit.
Flash Point	40 °C - Seta closed cup - DIN 51755 Part 1
Evaporation Rate	No data available
Flammability (solid, gas)	No data available

Explosive limits	No data available
Upper/lower flammability or explosive limits	Upper explosion limit 12,2 %(V) Lower explosion limit 1,4 %(V)
Autoignition temperature	230 °C at 1.013 hPa - DIN 51794
Decomposition temperature	No data available
Vapour pressure	6,12 hPa at 20 °C
Viscosity	Kinematic ca.3,58 mm ² /s at ca.21,6 °C Viscosity, dynamic 3,85 mPa.s at 20 °C
Density	0,886 g/cm ³ at 20 °C - lit
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	Log Pow -0,55 at 23 °C - Bioaccumulation is not expected., (External MSDS)
Explosive properties	No data available
Solubility	at 20 °C soluble
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

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Reactivity	Vapor/air-mixtures are explosive at intense warming.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature)
Possibility of hazardous reactions	Violent reactions possible with Strong oxidizing agents Isocyanates acid halides acids Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines!
Conditions to avoid	Heating.
Incompatible materials	No data available
Hazardous product decomposition	No data available

11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - male and female - 1.182 mg/kg (OECD Test Guideline 401) Acute toxicity estimate Oral - 1.182 mg/kg (Calculation method) LC50 Inhalation - Rat - male and female - 4 h - 6 mg/l - vapor (OECD Test Guideline 403) Acute toxicity estimate Inhalation - 6 mg/l - vapor (Calculation method) LD50 Dermal - Rabbit - 1.220 mg/kg Remarks (External MSDS) Acute toxicity estimate Dermal - 1.220 mg/kg
Skin corrosion/irritation	Skin - Rabbit Result Causes burns. (OECD Test Guideline 404)
Serious eye damage/irritation	Eyes - Rabbit Result Causes serious eye damage. (OECD Test Guideline 405)
Respiratory or skin sensitization	Buehler Test - Guinea pig Result negative (ECHA)
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type Ames test Test system 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 Metabolic activation with and without metabolic activation Method OECD Test Guideline 476 Result negative Test Type Micronucleus test Species Mouse Cell type Bone marrow Application Route Intraperitoneal injection Method OECD Test Guideline 474 Result negative
Reproductive toxicity	No data available
Specific target organ toxicity-single exposure	No data available
Additional Information	Assessment 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. RTECS: KK6125000 Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea 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 28 d > 60 % - Readily biodegradable. Aldrich- 471453 Page 11 of 14 The life science business of Merck operates as MilliporeSigma in the US and Canada (OECD Test Guideline 301C)
Toxicity to fish	LC50 - Leuciscus idus (Golden orfe) - > 100 - 220 mg/l - 96 h static test LC50 - Leuciscus idus (Golden orfe) - 146,6 mg/l - 96 h (DIN 38412 T15)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Daphnia magna (Water flea) - 98,37 mg/l - 48 h (OECD Test Guideline 202)
Toxicity	No data available
Toxicity to bacteria	static test EC20 - activated sludge - > 1.000 mg/l - 0,5 h (OECD Test Guideline 209)
Toxicity to algae	Static test ErC50 - Desmodesmus subspicatus (green algae) - 35 mg/l - 72 h (External MSDS) static test EC50 - Desmodesmus subspicatus (green algae) - 66,08 mg/l - 72 h
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:2051 IMDG: 2051 IATA:2051
UN proper shipping name	ADR/RID:2-DIMETHYLAMINOETHANOL IMDG:2-DIMETHYLAMINOETHANOL IATA:2-DIMETHYLAMINOETHANOL
Transport hazard classess	ADR/RID:-8 (3) IMDG:-8 (3) IATA:- 8 (3)
Packaging group	ADR/RID:II IMDG:II IATA:II
Environmental hazards	ADR/RID:No IMDG Marine pollutant:No IATA: No
Special precautions for user	Tunnel restriction code (D/E)
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	A Chemical Safety Assessment has been carried out for this substance

16. Other information

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Other Information	<p>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 we 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.</p> <p>DISCLAIMER OF LIABILITY :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.</p>
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