

1. Product and Company Identification

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Product Name 1-Dodecanethiol
Part Number RXSOL-60-6670-130

Company Details:

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

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2. Composition / Information on ingredients

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Product name	Cas No	EC No	Weight	Formula
1-Dodecanethiol for synthesis	112-55-0	203-984-1	202,39 g/mol	C ₁₂ H ₂₆ S

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	P261 Avoid breathing mist or vapors. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): 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
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.

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	After inhalation fresh air. Call in physician.
Eye Contact	After eye contact rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
Swallowed	After swallowing make victim drink water (two glasses at most), avoid

Skin Contact	vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.
Inhalation	In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
Ingestion	No data available
Most important symptoms and effects, both acute and delaye	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
	No data available

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 hazards arising from the substance or mixture	Carbon oxides Sulfur oxides Combustible. Fire may cause evolution of: Sulfur oxides Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire
Further information	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. 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	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	No data available
Incompatible materials	No data available
Hygiene measures	No data available
Advice on safe handling	For precautions see section 2.2.
Conditions for safe storage including any incompatibilities	No data available

Storage conditions	Tightly closed. Recommended storage temperature see product label.
Storage class	Storage class (TRGS 510) 8A Combustible, corrosive hazardous materials
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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested:Butoject® (KCL 898) 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 EN374 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: 0,4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)
Respiratory protection	Required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type ABEK 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	Characteristic
Odor Threshold	No data available
pH	No data available
Melting Point	-9 - -7 °C at 1.013 hPa
Boiling Point	266 - 283 °C at 1.013 hPa
Flash Point	128 °C - closed cup - Regulation (EC) No. 440/2008, Annex, A.9
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data Available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	350 °C
Vapour pressure	< 1 hPa at 25 °C

Viscosity	Dynamic 3,24 mPa.s at 20 °C
Density	0,845 g/cm ³ at 20 °C
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	Log Pow > 6,5 at 25 °C - Potential bioaccumulation
Explosive properties	No data available
Solubility	0,00001 g/l at 20 °C - OECD Test Guideline 105- partly soluble
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 heatingA 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)
Possibilityof hazardous reactions	Violent reactions possible with Strong oxidizing agents strong reducing agents Alkali metals Strong bases
Conditions to avoid	Strong heating.
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - $\geq$ 5.000 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - 4,5 h - $>$ 3,1 mg/l - vapor (OECD Test Guideline 403) LD50 Dermal - Rat - male - $\geq$ 2.000 mg/kg (OECD Test Guideline 402)
Skin corrosion/irritation	Skin - Rabbit Corrosive (OECD Test Guideline 404)
Serious eye damage/irritation	No data available
Respiratory or skin sensitization	Local lymph node assay (LLNA) - Mouse Result: positive (OECD Test Guideline 429)
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479Result: negative Test Type: Mutagenicity (mammal cell test): Test system: Mouse lymphoma 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: Oral Method: OECD Test Guideline 474
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. Nausea, Headache, Vomiting To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. After uptake: Headache The following applies to mercaptans in general: offensive odour. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

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Persistence and degradability	Biodegradability aerobic - Exposure time 28 d Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301D) Remarks: The value is given in analogy to the following substances: tert-Dodecanethiol
Toxicity to fish	Semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Daphnia magna (Water flea) - 1 - 10 mg/l - 48 h (OECD Test Guideline 202)
Toxicity	No data available
Toxicity to bacteria	No data available
Toxicity to algae	Static test EbC50 - Raphidocelis subcapitata (freshwater green alga) - < 0,0145 mg/l - 72 h (OECD Test Guideline 201)
Products Biodegradation	No data available
Mobility in soil	No data available
Results of PBT and vPvB 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	Discharge into the environment must be avoided.

13. Disposal considerations

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Product	See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.
Contaminated packaging	No data available
Waste treatment Method	No data available

14. Transport information

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UN number	ADR/RID:1760	IMDG:1760	IATA:1760
UN proper shipping name	ADR/RID:CORROSIVE LIQUID, N.O.S. (Dodecane-1-thiol)	IMDG:CORROSIVE LIQUID, N.O.S. (Dodecane-1-thiol)	IATA:CORROSIVE LIQUID, N.O.S. (Dodecane-1-thiol)
Transport hazard class(es)	ADR/RID:8	IMDG: 8	IATA:8
Packaging group	ADR/RID:III	IMDG:III	IATA:III
Environmental hazards	ADR/RID:Yes	IMDG:Yes	IATA:No
Special precautions for user	Tunnel restriction code (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	Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	A Chemical Safety Assessment was not carried out for this substance.

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,
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