

1. Product and Company Identification

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Product Name Linalool
Part Number RXSOL-60-6272-025

Company Details:

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

Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA

Phone +91 22 20871200 - 1400
Fax +91 22 27612100 ::AOH :0091 9821214367
Email mail@rxmarine.com
Website www.rxmarine.com

2. Composition / Information on ingredients

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Product name	Cas No	EC No	Weight	Formula
Linalool	78-70-6	201-134-4	154,25 g/mol	C ₁₀ H ₁₈ O

3. Hazards Identification

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Signal Word	Warning
Hazard Statements	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.
Precautionary statements	P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. P264 Wash skin thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/ eye protection/ face protection. P302 + P352 IF ON SKIN: Wash with plenty of 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. 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	After eye contact: rinse out with plenty of water. Remove contact lenses.
Swallowed	After swallowing immediately make victim drink water (two glasses at most). Consult a physician. 4.2 Most important

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 delaye	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	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 Combustible. 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	Remove container from danger zone and cool with water. 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	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 and neutralising material (e.g. Chemizorb® H?, Merck Art. No. 101595). 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	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	No data available
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: Nitrile rubber Minimum layer thickness: 0,4 mm Break through time: 480 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	Pleasantfloral
Odor Threshold	No data available
pH	4,5 at 1,45 g/l at 25 °C
Melting Point	< -100 °C
Boiling Point	196,3 °C at 992 hPa - OECD Test Guideline 103
Flash Point	ca.77,2 °C - Pensky-Martens closed cup - ISO 2719
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: 5,2 %(V) Lower explosion limit: 0,9 %(V)
Autoignition temperature	260 °C at 994 hPa
Decomposition temperature	ca.> 200 °C - Distillable in an undecomposed state at normal pressure
Vapour pressure	0,27 hPa at 25 °C - OECD Test Guideline 104
Viscosity	dynamic: 4,465 mPa.s at 25,00 °C - OECD Test Guideline 1140,45 mPa.s at 25 °C
Density	0,661 g/cm3 at 20 °C
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	log Pow: 2,84 at 25 °C - OECD Test Guideline 107 - Bioaccumulation is

Explosive properties
Solubility
Ignition temperature
Particle characteristics

not expected
No data available
1,55 g/l at 25 °C - OECD Test Guideline 105- soluble
No data available
No data available

10. Stability and reactivity

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Reactivity
Chemical stability
Possibility of hazardous reactions
Conditions to avoid
Incompatible materials
Hazardous decomposition products

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
The product is chemically stable under standard ambient conditions (room temperature)
Exothermic reaction with: acids Violent reactions possible with: Strong oxidizing agents
Strong heating.
Strong oxidizing agents
In the event of fire: see section 5

11. Toxicological information

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Acute toxicity

Skin corrosion/irritation
Serious eye damage/irritation
Respiratory or skin sensitization

Carcinogenicity
Germ cell mutagenicity

Reproductive toxicity
Specific target organ toxicity - single exposure
Additional Information

LD50 Oral - Mouse - male and female - 2.200 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Mouse - female - 4 h - > 5 mg/l
Remarks: (ECHA) LD50 Dermal - Rabbit - 5.610 mg/kg (OECD Test Guideline 402)
Skin - Rabbit Result: Irritating to skin. - 4 h (OECD Test Guideline 404)
Eyes - Rabbit Result: Irritating to eyes. (OECD Test Guideline 405)
Local lymph node assay (LLNA) - Mouse Result: May cause sensitization by skin contact. (OECD Test Guideline 429)
No data available
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 Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Test Type: Micronucleus test Species: Mouse Application Route: Oral Method: OECD Test Guideline 474 Result: negative Test Type: Micronucleus test Species: Mouse
No data available
No data available
Repeated dose toxicity - Rat - male and female - Oral - 28 Days - NOAEL (No observed adverse effect level) - 117 mg/kg To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. 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
Toxicity to fish

Biodegradability aerobic - Exposure time 28 d Result: 64,2 % - Readily biodegradable. (OECD Test Guideline 301D)
static test LC50 - Oncorhynchus mykiss (rainbow trout) - 27,8 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 59 mg/l - 48 h (OECD Test Guideline 202)
Toxicity	No data available
Toxicity to bacteria	static test EC50 - activated sludge - > 100 mg/l - 30 h (OECD Test Guideline 209)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - 156,7 mg/l - 96 h (DIN 38412) static test EC10 - Desmodesmus subspicatus (green algae) - 54,3 mg/l - 96 h (DIN 38412)
Bioaccumulation potential	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	No data available
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:	IMDG:	IATA:
UN proper shipping name	ADR/RID:Not dangerous goods	IMDG:Not dangerous goods	IATA:Not dangerous goods
Transport hazard class(es)	ADR/RID:	IMDG:	IATA:
Packaging group	ADR/RID:-	IMDG:-	IATA:-
Environmental hazards	ADR/RID:No	IMDG: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	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, 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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