

1. Product and Company Identification

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Product Name Ortho Nitro Toulene
Part Number RXSOL-19-3797-025

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

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2. Composition / Information on ingredients

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| Product name | Cas No | EC No | Weight | Formula |
|----------------|---------|-----------|--------------|---|
| 2-Nitrotoluene | 88-72-2 | 201-853-3 | 137,14 g/mol | C ₇ H ₇ NO ₂ |

3. Hazards Identification

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| Signal Word | Danger |
| Hazard Statements | H302 Harmful if swallowed. H340 May cause genetic defects. H350 May cause cancer. H361f Suspected of damaging fertility. H411 Toxic to aquatic life with long lasting effects |
| Precautionary statements | P202 Do not handle until all safety precautions have been read and understood. P264 Wash skin thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P308 + P313 IF exposed or concerned: Get medical advice/ attention. |
| 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 | fresh air. Immediately call in physician. |
| 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. |
| Skin Contact | In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| Inhalation | No data available |

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| Ingestion | No data available |
| Most important symptoms and effects, both acute and delay | 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 (CO ₂) 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 Nitrogen oxides (NO _x) 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 | 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: Avoid inhalation of dusts. 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 dry. Dispose of properly. Clean up affected area. Avoid generation of dusts. |
| 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 | 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 | Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols |
| Conditions for safe storage including any incompatibilities | No data available |
| Storage conditions | Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. |
| Storage class | Storage class (TRGS 510) 6.1A Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials |
| Specific end use(s) | Apart from the uses mentioned in section 1.2 no other specific uses are |

Advice on general occupational hygiene

stipulated
No data available

8. Exposure controls and personal protection

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Exposure controls
Engineering Control
Eye/face protection

Personal protective equipment
No data available
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Body Protection
Skin protection

Protective clothing
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: Viton® Minimum layer thickness 0,7 mm Break through time: 120 min Material tested Vitoject® (KCL 890 / Aldrich Z677698, Size M)

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
Colour
Odour
Odor Threshold
pH
Melting Point
Boiling Point
Flash Point
Evaporation Rate
Flammability (solid, gas)
Explosive limits
Upper/lower flammability or explosive limits
Autoignition temperature
Decomposition temperature
Vapour pressure
Viscosity
Density
Relative Density
Specific Gravity
Partition coefficient
Explosive properties

Liquid
Yellow
Aromatic
No data available
6 - 8
-4 - -3 °C - lit.
225 °C
95 °C - closed cup
No data available
No data available
No data Available
Upper explosion limit 8,8 %(V) Lower explosion limit 1,47 %(V)
No data available
No data available
0,1 hPa at 20 °C
Dynamic 2,37 mPa.s
1,163 g/cm³ at 25 °C - lit
No data available
No data available
Log Pow 2,30 - Bioaccumulation is not expected., (Lit.)
No data available

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| Solubility | 0,65 g/l at 20 °C - (experimental) |
| 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 | Exothermic reaction with: Strong oxidizing agents Risk of explosion with: Sulfur trioxide sulfuric acid Reducing agents increased reactivity with: strong alkalis Amines |
| 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 - 891 mg/kg Symptoms: Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis. Remarks: (RTECS) Oral: absorption Symptoms: Dizziness, Nausea, Vomiting Inhalation: absorption Dermal: absorption |
| Skin corrosion/irritation | Skin - Rabbit No skin irritation - 24 h (OECD Test Guideline 404) |
| Serious eye damage/irritation | Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405) |
| Respiratory or skin sensitization | No data available |
| Carcinogenicity | Carcinogenicity - (ECHA) Presumed to have carcinogenic potential for humans |
| Germ cell mutagenicity | May cause genetic defects. Test Type: Ames test Test system: Salmonella 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 479 Result: positive 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: Mutagenicity (mammal cell test): micronucleus. Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 487 Result: positive Test Type: Unscheduled DNA synthesis test (UDS) in testicular cells Species: Rat Cell type: Liver cells Application Route: Oral Method: OECD Test Guideline 486 Result: positive |
| Reproductive toxicity | Suspected of damaging fertility. |
| 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. RTECS: XT3150000 Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Systemic effects: Methaemoglobinaemia with headache, cardiac arrhythmia, drop in blood pressure, dyspnoea, and spasms, key symptom: cyanosis (blue colouration of the blood). Effect potentiated by: ethanol flush of face, neck and arms muscular weakness cardiovascular disorders confusion Absorption may result in damage of the |

following: Liver Kidney spleen The following applies to aromatic nitro compounds in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmias, drop in blood pressure, dyspnoea, and spasms; principal sign: cyanosis (blue discoloration of the blood). This substance should be handled with particular care

12. Ecological information

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| Persistence and degradability | Biodegradability Result 99 % - Readily biodegradable. (OECD Test Guideline 301D) Biochemical Oxygen Demand (BOD) 600 - 1.120 mg/g (IUCLID) Chemical Oxygen Demand (COD) 1.420 mg/g Remarks: (IUCLID) Theoretical oxygen demand 1.500 mg/g (Lit.) Ratio BOD/ThBOD 76 % Closed Bottle test(IUCLID) |
| Toxicity to fish | LC50 - <i>Poecilia reticulata</i> (guppy) - 30,1 mg/l - 96 h Remarks: (ECOTOX Database) |
| Toxicity to daphnia and other aquatic invertebrates | EC50 - <i>Daphnia magna</i> (Water flea) - 5,4 mg/l - 48 h Remarks: (ECOTOX Database) |
| Toxicity | No data available |
| Toxicity to bacteria | No data available |
| Toxicity to algae | Growth inhibition ErC50 - <i>Chlorella pyrenoidosa</i> - 22 mg/l - 72 h (OECD Test Guideline 201) Growth inhibition NOEC - <i>Chlorella pyrenoidosa</i> - 4,4 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 | 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:1664 | IMDG:1664 | IATA:1664 |
| UN proper shipping name | ADR/RID:NITROTOLUENES, LIQUID | IMDG:NITROTOLUENES, LIQUID | IATA:NITROTOLUENES, LIQUID |
| Transport hazard class(es) | ADR/RID:6.1 | IMDG:6.1 | IATA:6.1 |
| Packaging group | ADR/RID:II | IMDG:II | IATA:II |
| Environmental hazards | ADR/RID:Yes | IMDG:Yes | 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 This material safety data sheet complies with the requirements of

substance or mixture

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 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 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.

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