

1. Product and Company Identification

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Product Name Ortho Phenyl Di Amine
Part Number RXSOL-44-7702-025

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
o-Phenylenediamine	95-54-5	202-430-6	108,14 g/mol	C ₆ H ₈ N ₂

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H301 Toxic if swallowed. H312 + H332 Harmful in contact with skin or if inhaled. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. 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	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen
Eye Contact	After eye contact rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

Swallowed	If swallowed give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.
Skin Contact	In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.
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	Water Foam Carbon dioxide (CO2) 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 (NOx) 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: 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 material (e.g. Chemisorb®). 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	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For

Advice on safe handling	precautions see section 2.2
Conditions for safe storage, including any incompatibilities	Work under hood. Do not inhale substance/mixture.
Storage conditions	No data available
Storage class	Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Moisture sensitive. Air sensitive. Store under inert gas. May darken on storage
Specific end use(s)	Storage class (TRGS 510) 6.1C Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects
Advice on general occupational hygiene	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
	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). Splash contact Material: Viton® Minimum layer thickness 0,7 mm Break through time: 60 min Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)
Respiratory protection	Recommended Filter type Filter A-(P3) 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	Powder
Colour	White, brown
Odour	Ether-like
Odor Threshold	No data available
pH	8,7
Melting Point	100 - 102 °C
Boiling Point	256 - 258 °C
Flash Point	136 °C - closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	The product is not flammable.
Explosive limits	No data available
Upper/lower flammability or explosive limits	Lower explosion limit: 1,5 %(V)
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	0,001 hPa at 20 °C - OECD Test Guideline 104
Viscosity	No data available
Density	0,72 g/cm ³ at 24 °C
Relative Density	No data available
Specific Gravity	No data available

Partition coefficient	Log Pow 0,12 at 25 °C - OECD Test Guideline 107 - Bioaccumulation is not expected.
Explosive properties	No data available
Solubility	39,3 g/l at 20 °C - OECD Test Guideline 105
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. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature)
Possibility of hazardous reactions	Violent reactions possible with: Strong oxidizing agents Strong acids Acid anhydrides acid halides
Condition to avoid	Strong heating.
Incompatible materials	Strong oxidizing agents
Hazardous product decomposition	No data available

11. Toxicological information

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Acute toxicity	Acute toxicity estimate Oral - 100,1 mg/kg (Expert judgment) Remarks: (Regulation (EC) No 1272/2008, Annex VI) LC50 Inhalation - Rat - male - 4 h - 3,6 mg/l - dust/mist Remarks: (Regulation (EC) No 1272/2008, Annex VI) Acute toxicity estimate Dermal - 1.100,1 mg/kg (Expert judgment) (Regulation (EC) No 1272/2008, Annex VI) LDLo Dermal - Rabbit - 1.500 mg/kg (RTECS)
Skin corrosion/irritation	Skin - Rabbit No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/irritation	Eyes - Rabbit Eye irritation - 72 h (OECD Test Guideline 405)
Respiratory or skin sensitization	Maximization Test - Guinea pig May cause sensitization by skin contact
Carcinogenicity	Limited evidence of carcinogenicity in animal studies
Germ cell mutagenicity	In vitro tests showed mutagenic effects Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation Metabolic activation Method: OECD Test Guideline 471 Result: positive Micronucleus test Species: Guinea pig Application Route: Intraperitoneal Result: positive (ECHA)
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 - Oral - NOAEL (No observed adverse effect level) - 400 mg/kg Exposure can cause numbness, tingling, and weakness in extremities., Nausea, Dizziness, Headache, Central nervous system depression, 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 Result: 0 % - Not biodegradable (OECD Test Guideline 301C)
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Toxicity to fish	Flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 42,9 mg/l - 96 h (ECHA)
Toxicity to daphnia and other aquatic invertebrates	Semi-static test EC50 - Daphnia magna (Water flea) - 1,4 mg/l - 48 h Remarks: (ECHA)
Toxicity	No data available
Toxicity to bacteria	EC50 - Bacteria - 580 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to algae	Static test EC50 - Pseudokirchneriella subcapitata - 0,16 mg/l - 96 h (ECHA)
Bioaccumulation potential	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	Discharge into the environment must be avoided. Further information on ecology Forms toxic mixtures in water, dilution measures notwithstanding

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:1673	IMDG:1673	IATA:1673
UN proper shipping name	ADR/RID:PHENYLENEDIAMINE S	IMDG:PHENYLENEDIAMINES	IATA:PHENYLENEDIAMINES
Transport hazard classess	ADR/RID:6.1	IMDG:6.1	IATA:6.1
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	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 was not 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
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