

1. Product and Company Identification

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Product Name Chloro Benzene
Part Number RXSOL-19-1268-025

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.rxmraine.com

2. Composition / Information on ingredients

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| Chemical Name | CAS | EC number | Weight | Formula |
|----------------|----------|-----------|------------|----------------------------------|
| Chloro Benzene | 108-90-7 | 203-628-5 | 90 - 100 % | C ₆ H ₅ Cl |

3. Hazards Identification

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| Signal Word | Warning. |
| Hazard Statements | H226 Flammable liquid and vapour. H315 Causes skin irritation. H332 Harmful if inhaled. H411 Toxic to aquatic life with long lasting effects. |
| P280 Wear protective gloves.P305 + P351 + P338 | Wear eye protection/ face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| Precautionary statements | P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. P332 + P313 If skin irritation occurs: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. P391 Collect spillage. P403 + P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container to an approved waste disposal plant. |
| Classification of the substance or mixture | Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008. |
| Supplemental Hazard Statements | None |
| 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 | Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. |
| If inhaled | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| Eye Contact | Flush eyes with water as a precaution. |
| Swallowed | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. |
| Skin Contact | Wash off with soap and plenty of water. Consult a physician. |
| Inhalation | Remove patient to fresh air, keep warm and at rest and get medical assistance in necessary. |
| Ingestion | Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately. |
| 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 | May be combustible at high temperature. |
| Flash Point | Higher than 93.3°C (200°F). |
| Suitable extinguishing media | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| 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 | Use water spray to cool unopened containers. |
| Hazardous combustion products | Fire may cause the evolution of Sulphur oxides, nitrogen oxides. |
| Advice for firefighters | Wear self-contained breathing apparatus for firefighting if necessary. |
| Protective Equipment | Use personal protective equipment. |
| Specific Hazards Arising from the Chemical | Has a fire-promoting effect due to the release of oxygen. Ambient fire may liberate hazardous vapours. |

6. Accidental Release Measures

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| Personal precautions, protective equipment and emergency procedures | Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8 |
| Spillage | Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition sources. Call for assistance on disposal. |
| Personal Protection | Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8. |
| Environmental Precaution | Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided |

Methods and materials for containment and cleaning

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. Handling and Storage

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Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials

Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage conditions

Tightly closed. Dry.

Storage class

Storage class (TRGS 510): 13: Non Combustible Solids

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Handling

Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, metals

Advice on general occupational hygiene

Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.

Requirements for storage

Keep in cool and store under shade.

8. Exposure controls and personal protection

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Components with workplace control parameters.

| Compartment | CAS-No. | Value | Control parameters | Basis |
|---------------------|----------|---|--|---|
| Chlorobenzene | 108-90-7 | TWA | 10.000000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | Remarks | Liver damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans | | |
| Exposure controls | | | No specific additional engineering controls are required. Provide good natural or artificial ventilation. | |
| Engineering Control | | | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. | |
| Eye/face protection | | | Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). | |
| Body Protection | | | Complete suit protecting against chemicals, Flame retardant antistatic | |

Skin protection

protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M) Splash contact Material: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other Protection Measure

Handle in accordance with good industrial hygiene and safety practice.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Thermal hazards

No data available

9. Physical and chemical properties

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| Physical state | Liquid, clear |
| Colour | Colourless |
| Odour | No data available |
| Odor Threshold | Not Applicable |
| pH | No data available |
| Melting Point | 45 °C (-49 °F) |
| Boiling Point | 132 °C (270 °F) |
| Flash Point | 27.0 °C (80.6 °F) |
| Evaporation Rate | Not Applicable |
| Flammability (solid, gas) | No data available |
| Explosive limits | No Data Available |
| Upper/lower flammability or explosive limits | 7.1 %(V)/1.3 %(V) |
| Autoignition temperature | 637.0 °C (1,178.6 °F) |
| Decomposition temperature | No data available |
| Vapour pressure | 15.7 hPa (11.8 mmHg) at 25.0 °C (77.0 °F) |
| Relative Density | 1.106 g/cm ³ at 25 °C (77 °F) |
| Vapour Density | No Data Available |
| Freezing point | No data available |
| Specific Gravity | No data available |
| Partition coefficient | log Pow: 2.89 |
| Explosive properties | No data available |
| Solubility | 0.207 g/l at 20 °C (68 °F) |
| Ignition temperature | No information available. |

10. Stability and reactivity

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| Reactivity | No data available |
| Stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | Vapours may form explosive mixture with air. |
| Conditions to avoid | Heat, flames and sparks. |
| Incompatible materials | Strong oxidizing agents |
| Hazardous decomposition products | Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas Other decomposition products - No data available In the event of fire: see section 5 |

11. Toxicological information

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| Acute toxicity | Inhalation: No data available Dermal: No data available No data available |
| Skin corrosion/irritation | Skin - Rabbit Result: Irritating to skin. - 4 h (OECD Test Guideline 404) Remarks: No data available |
| Serious eye damage/eye irritation | Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405) |
| Respiratory or skin sensitization | No data available |
| Toxic Effects on Human | May cause damage to the following organs: upper respiratory tract. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, sensitizer), of ingestion, of inhalation (lung irritant, lung sensitizer). |
| Carcinogenicity | Carcinogenicity - No carcinogenic properties suspected. (IUCRID) |
| Germ cell mutagenicity | No data available |
| Reproductive toxicity | Presumed human reproductive toxicant |
| Specific target organ toxicity - single exposure | No data available |
| Special Remarks on other Toxic Effects on Humans | Acute Potential Health Effects: Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Eyes: Causes eye irritation. Ingestion: Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May be harmful if swallowed. Inhalation: Causes respiratory tract irritation. May cause chemical pneumonitis and pulmonary edema, inflammation, edema of bronchi and larynx. Chronic Potential Health Effects: Repeated or prolonged skin exposure may cause allergic reactions in sensitive individuals. Repeated or prolonged exposure by inhalation may affect respiration and metabolism. |
| Additional Information | RTECS: AF3675000 Gastrointestinal disturbance To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. After uptake of large quantities: muscular symptoms agitation Convulsions Headache Tremors Nausea psychoses |
| 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. Repeated dose toxicity - Rat - male - Oral - 2 yr - NOAEL (No observed adverse effect level) - 600 mg/kg RTECS: LS9625000 Gastrointestinal disturbance 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 | Bioaccumulation <i>Leuciscus idus</i> (Golden orfe) - 3 d - 0.05 mg/l Bioconcentration factor (BCF): 75 |
| Toxicity to fish | LC100 - <i>Leuciscus idus</i> (Golden orfe) - 0.03 - 28 mg/l - 48.0 h LC50 - <i>Cyprinodon variegatus</i> (sheepshead minnow) - 10 mg/l - 96.0 h LC50 - |

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| Toxicity to daphnia and other aquatic invertebrates | Lepomis macrochirus (Bluegill) - 4.5 - 7.4 mg/l - 76.0 h NOEC - Cyprinodon variegatus (sheepshead minnow) - 6.2 mg/l - 96.0 h EC50 - Daphnia magna (Water flea) - 4.30 - 16.00 mg/l - 24 h EC50 - No information available. - 7.60 mg/l - 24 h NOEC - Daphnia magna (Water flea) - < 1.4 mg/l - 11 d LC50 - Daphnia magna (Water flea) - 10.7 mg/l - 48 h |
| Toxicity to algae | EC50 - No information available. - 235.00 mg/l - 48 h EC50 - Pseudokirchneriella subcapitata (green algae) - 12.50 mg/l - 96 h |
| Products Biodegradation | The methods for determining the biological degradability are not applicable to inorganic substances. |
| Mobility in soil | No Information available |
| Results of PBT and vPvB assessment | PBT/vPvB assessment not available as chemical safety assessment not required/not conducted |
| 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 | An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects. No data available. |

13. Disposal considerations

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| Disposal methods | Dispose of as unused product. |
| Contaminated packaging | Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials. |
| Waste treatment Method | Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. |

14. Transport information

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| UN number | ADR/RID: 1134 IMDG: 1134 IATA: 1134 |
| UN proper shipping name | ADR/RID: CHLOROBENZENE IMDG: CHLOROBENZENE IATA: CHLOROBENZENE |
| Transport hazard class(es) | ADR/RID: 3 IMDG: 3 IATA: 3 |
| Packaging group | ADR/RID: III IMDG: III IATA: III |
| Environmental hazards | ADR/RID: No IMDG: No IATA: No |
| Special precautions for user | Tunnel restriction code : (C/E) |
| Further information | Not classified as dangerous in the meaning of transport regulations. |
| Transport in bulk according to IMO instruments | No data available |

15. Regulatory information

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| Inventory status | Components are on the following inventories: Polymaleic acid: - US TSCA, Canadian DSL, EU EINECS, Australian AICS, Korean, Philippine PICCS and Chinese Xi irritant R 36/38 Irritant to eyes & skin R 41 Risk of serious damage to eyes S24/25 Avoid contact with skin and eyes |
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S26/28 In case of contact eyes & skin, rinse with plenty water and seek medical advice Section 312/313: Not listed. Not listed under California proposition 65.

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

Safety, health and environmental regulations specific for the product in question European Inventory of Existing Commercial Chemical Substances (EINECS) -Listed. EC Inventory Listed. United States Toxic Substances Control Act (TSCA) Inventory- Listed. China Catalog of Hazardous chemicals 2015 Not- Listed. New Zealand Inventory of Chemicals (NZIoC) Listed. PICCS -Listed. Vietnam National Chemical Inventory -Listed. IECSC Listed. Korea Existing Chemicals List (KECL) -Listed.

Other regulations

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 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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