# Material Safety Data Sheet

**Surfactant Non Ionic fracturing RXSOL112** (RXSOL-81-2224-210)

## 1. Product and Company Identifaction

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| Product Name | : Surfactant Non Ionic fracturing RXSOL112 |
| Part Number | : RXSOL-81-2224-210 |

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

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

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|---|---|
| Phone | +91 22 27815540 / 41 / 42 |
| Fax | +91 22 2761 2100 :::AOH :0091 9821214367 |
| Email | 123@rxmarine.com |
| Website | www.rxmarine.com |

## 2. Composition / informationon ingredients

| Name of Substance | Cas Number | EC No | Wt.% | Symbol |
|---|---|---|---|---|
| Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy | 500-077-5 | 31726-34-8 | 10-20 | Xi |
| Dicoco Dimethyl quaternary Ammonium chloride | 263-087-6 | 61789-77-3 | 0.5-1.0 | Xn |
| Propan-2-ol | 200-661-7 | 67-63-0 | 0.1-0.25 | Xn |
| Non Hazardous Compound | Proprietory | ----- | 40 - 50% | --- |

## 3. Hazards Identification

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| Signal Word | Warning |
| Hazard Statements | H315 - Causes skin irritation<br>H319 - Causes serious eye irritation<br>H412 - Harmful to aquatic life with long lasting effects |
| Precautionary statements - prevention | P273 - Avoid release to the environment<br>P280 - Wear protective gloves and eye/face protection<br>P302 + P352 - IF ON SKIN: Wash with plenty of soap and water<br>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to<br>do. Continue rinsing<br>P391 - Collect spillage<br>P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable<br>P337 + P313 - If eye irritation persists: Get medical advice/attention<br>P264 - Wash face, hands and any exposed skin thoroughly after handling<br>P332 + P313 - If skin irritation occurs: Get medical advice/attention<br>P362 - Take off contaminated clothing and wash before reuse |
| Precautionary statements - response | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor/ physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.<br>Storage: Store locked up. Store in corrosive resistant stainless steel container with a resistant inner liner.<br>Disposal: Dispose of contents/ container to an approved waste disposal plant. |

## 4. First Aid Measures

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| Eye Contact | Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Get immediate medical attention. |
| Skin Contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation persists. |
| Inhalation: | If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult. |
| Ingestion: | If swallowed, call a poison control center or doctor immediately. Do NOT induce vomiting. If conscious, drink plenty of water. |
| General Advice | The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible. |

## 5. Fire-fighting Measures

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| Suitable extinguishing media | Extinguish with carbon dioxide, dry chemical, foam or waterspray. |
| Protective Equipment | Use personal protective equipment. |
| Hazardous combustion products | Thermal decomposition can lead to release of irritating gases and vapors Carbon oxides (COx), Nitrogen oxides (NOx). |
| Advice for firefighters | As in any fire, wear self-contained breathing apparatus and full protective gear. |
| Specific extinguishing methods | Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.Containers close to fire should be removed immediately or cooled with water. Hazchem code ADG |

## 6. Accidental Release Measures

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| Personal precautions, protective equipment and emergency procedures | Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. Wear suitable personal protective equipment.Respiratory protective equipment. |
| Enviromental Precaution | Do not allow contact with soil, surface or ground water.If the products get into drains, inform the relevant authorities immediately. |
| Methods and materials for containment and cleaning up | Stop leak if safe to do so. Contain spillage, and then collect with non combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. |

## 7. Handling and Storage

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| Advice on safe handling | Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes, on skin or on clothing. Avoid spills and splashing during use. |
| Storage | Technical measures/precautions Ensure adequate ventilation. Keep airborne concentrations below exposure limits.<br>Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place Avoid contact with: Strong oxidizing agents Storage class Chemical storage. |
| Advice on general occupational hygiene | Use good work and personal hygiene practices to avoid exposure. When using do not smoke, eat or drink. Wash hands before eating, drinking or smoking Remove contaminated clothing |

## 8. Exposure controls and personal protection

| | | | | |
|---|---|---|---|---|
| Component Information | ChemicalName | Arabic | Australia | Egypt |
| | Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | Not determined | Not determined | Not determined |
| | Dicocodimethyl quaternary ammonium chloride | Not determined | Not determined | Not determined |
| | Propan-2-ol | 500 ppmSTEL<br>1230 mg/m3STEL<br>400ppmTWA<br>983mg/m3TWA | 500 ppm STEL 1230 mg/m3 STEL 400 ppm TWA 983 mg/m3 TWA | 500 ppmSTEL<br>1230 mg/m3 STEL<br>400 ppm TWA<br>983 mg/m3 TWA |
| | ChemicalName | India | Indonesian | Japan |
| | Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | Not determined | Not determined | Not determined |
| | Dicocodimethylquaternary ammonium chloride | Not determined | Not determined | Not determined |
| | Propan-2-ol | Not determined | 400 ppm TWA<br>983 mg/m3 TWA<br>500 ppmSTEL<br>1230mg/m3STEL | 200 ppm ACL |
| | ChemicalName | Kazakhstan | Kuwait | NewZealand |
| | Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | Not determined | Not determined | Not determined |
| | Dicocodimethylquaternary ammonium chloride | Notdetermined | Notdetermined | Notdetermined |
| | Propan-2-ol | 10 mg/m3 MAC | 1225 mg/m3 STEL<br>500 ppm STEL | 500 ppm STEL<br>1230 mg/m3 STEL<br>400 ppm TWA<br>983 mg/m3 TWA |
| | ChemicalName | Malaysia | Philippines | Russia |
| | Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | Not determined | Not determined | Not determined |
| | Dicocodimethylquaternary ammonium chloride | Not determined | Not determined | Not determined |

| | | | |
|---|---|---|---|
| Propan-2-ol | 400 ppm TWA<br>983 mg/m3 TWA | 400 ppm TWA<br>980 mg/m3 TWA | 50 mg/m3 STEL<br>10 mg/m3 TWA |
| ChemicalName | Thailand | Vietnam | Turkey |
| Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | Not determined | Not determined | Not determined |
| Dicocodimethylquaternary ammonium chloride | Not determined | Not determined | Not determined |
| Propan-2-ol | 400 ppm TWA | Not determined | Not determined |

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| Engineering Controls | Ensure adequate ventilation Mechanical ventilation or local exhaust ventilation is required. |
| Personal Protection | Eye protection : Wear eye protection/ face protection.<br>Hand protection : Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.<br>Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing<br>Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. |
| Exposure Conrol | All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation. |
| Hygiene measures | Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard. |




Gloves Suit

## 9. Physical and chemical properties

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| Form | Liquid |
| Apperance | Aqueous solution, Clear Yellow |
| Odour | Alcohol |
| Odor threshold | Not applicable |
| Flash Point | > 93.3 °C / > 199.4 °F PMCC |
| Boiling Point | ~ 100 °C / 212 °F |
| Freezing Point | 5 °C / 41 °F |
| pH | 9 -11 |
| Evaporation rate | No information available |
| Flammability (solid, gas) | No data available |
| Upper explosion limit | No data available |
| Lower explosion limit | No data available |

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| Explosive properties | No data available |
| Vapor pressure | No data available |
| Vapor density | No information available |
| Specific gravity | 0.99 - 1.03 g/cm3 @ 20 °C |
| Relative density | ~ 1.0 @ 20°C. |
| Water solubility | Soluble |
| Solubility in other solvents | No data available |
| Partition coefficient: octanol | No data available |
| Autoignition temperature | No data available |
| Thermal decomposition | No data available |
| Viscosity, kinematic | No data available |
| Explosive properties | No data available |
| Oxidizing properties | No data available |
| Dynamic viscosity | 5-50 mPa s @ 16 °C |
| VOC (%) | 1 |
| Pour point | No information available |

## 10. Stability and reactivity

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| Recativity | No specific reactivity hazards associated with this product. |
| Stability | Stable under normal conditions and recommended use. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Incompatible materials | Avoid to contact with oxidizing agents. |
| Hazardous Decomposition | Thermal decomposition can lead to release of irritating gases and vapors Carbon oxides (COx), Nitrogen oxides (NOx). |
| Condition to Avoid | None Known |
| Polymerization | Hazardous polymerization does not occur. |

## 11. Toxicological information

Acute toxicity

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| Route of Exposure | Inhalation, Eye contact, Skin contact |
| Eyes | Causes serious eye irritation. |
| Skin | Causes skin irritation. |
| Ingestion | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| Inhalation | Inhalation of vapors in high concentration may cause irritation of respiratory system. |
| Unknown acute toxicity | Not applicable. |

Toxicology data for the components

| ChemicalName | LD50Oral | LD50Dermal | LC50Inhalation | |
|---|---|---|---|---|
| Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | LD50:1250mg/kg,rat,(based ondatafromsimilarsubstance) | LD50: > 2000 mg/kg, rat, (basedondatafromsimilar component) | Nodataavailable | |
| Dicocodimethylquaternaryammoniumchloride | =960mg/kg(Rat) | LD50>2930mg/kg,rabbit | Nodataavailable | |
| Propan-2-ol | =1870mg/kg(Rat) | =4059mg/kg(Rabbit) | =72600mg/m3(Rat)4 | |

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| Sensitization | This product does not contain any components suspected to be sensitizing. |
| Mutagenic effects | This product does not contain any known or suspected mutagens. |
| Carcinogenicity | This product does not contain any known or suspected carcinogens |
| Reproductive toxicity | This product does not contain any known or suspected reproductive hazards. |
| Specific target organ toxicity -Single exposure | Not classified |
| Specific target organ toxicity -Repeated exposure | Not classified |
| Aspiration hazard | Not applicable. |
| Other information | Key literature references and sources for data. See Section 16 for more information. |

## 12. Ecological information

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| Toxicity | Harmful to aquatic life with long lasting effects |
| Toxicity to alge | See component information below. |
| Toxicity to daphnia and others | See component information below. |
| Toxicity to Fish | See component information below. |

Toxicology data for the components

| ChemicalName | Toxicitytofish | Toxicitytoalgae | Toxicitytodaphniaandother aquatic invertebrates |
|---|---|---|---|
| Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | LC5096h,Brachydaniorerio (zebrafish):>100mg/l(testbased on similar component) | EC50,72h:>100mg/kg(basedon similar substance) | EC50,48h,Daphniamagna(Water flea):>100mg/l(basedonsimilar product) |
| Dicocodimethylquaternary ammoniumchloride | Noinformationavailable | Noinformationavailable | EC50,48h,Daphnia:0.01mg/l |
| Propan-2-ol | > 1400000 µg/L LC50 Lepomis macrochirus 96 h = 11130 mg/L LC50Pimephalespromelas96h= 9640mg/LLC50Pimephales promelas 96 h | >1000mg/LEC50Desmodesmus subspicatus 96 h > 1000 mg/L EC50 Desmodesmus subspicatus 72 h | =13299mg/LEC50Daphnia magna 48 h |

Persistence and degradability

| Chemical Name | Persistence and degradability |
|---|---|
| Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | Readily biodegradable |
| Dicocodimethylquaternaryammonium chloride | No information available |
| Propan-2-ol | Readily biodegradable |

Bioaccumulative potential

| Chemical Name | Bioaccumulation |
|---|---|
| Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | Not likely to bioaccumulate |
| Dicocodimethylquaternaryammonium chloride | No information available |
| Propan-2-ol | No bioaccumulation potential |

Mobility

| Chemical Name | Mobility |
|---|---|
| Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy- | Miscible in water |
| Dicocodimethylquaternaryammonium chloride | Soluble in water |
| Propan-2-ol | Soluble in water |

Results of PBT and vPvB assessment: Not classified as PBT/vPvB by current EU criteria.

## 13. Disposal considerations

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| Remarks | Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. |
| Waste Disposal | The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility |

## 14. Transport information

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|---|---|
| UN Number | Not Regulated |
| Proper shipping name | The product is not covered by international regulation on the transport of dangerous goods |
| Transport hazard class(es) | |
| ADR/RID | Hazard class/division Not regulated |
| Subsidiary risk IMDG | Hazard class/division Not regulated |
| Subsidiary risk IATA | Hazard class/division Not regulated |
| Packing group | |
| Packing group | Not regulated |
| Environmental hazards | |
| Environmental hazards | No |
| Marine pollutant | No |

| | |
|---|---|
| ADR/RID | |
| Hazchem code | ADG 3Z |
| Tunnel Category | Not Reguted |
| IMDG | |
| EmS Code | Not Reguted |
| IATA | |
| Packing Instruction (Cargo) | Not Reguted |
| Maximum quantity | Not Reguted |
| Packing Instruction (Passenger) | Not Reguted |
| Maximum quantity | Not Reguted |

## 15. Regulatory information

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| Regulations | Safety, health and environmental regulations/legislation specific for the substance or mixture<br><br>The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)<br><br>National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)].<br><br>National Occupational Health and Safety Commission's Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004) 3rd Edition].<br><br>National Occupational Health and Safety Commission's Exposure Standards for Atmospheric Contaminants in the occupational Environment [NOHSC:1003 (1995)]. Safe Work Australia.<br><br>Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).<br><br>ADG Code – Australian Dangerous Goods Code |
| International inventories | USA (TSCA) Complies<br>Canada (DSL) Complies<br>Philippines (PICCS) Does not comply<br>Japan (ENCS) Complies<br>China (IECSC) Complies<br>Australia (AICS) Complies<br>Korean (KECL) Complies<br>New Zealand (NZIoC) Complies |
| Further information | FOR INDUSTRIAL USE. |

## 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.<br><br>DISCLAIMER OF LIABILITY :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable. |