



# RXSOL

VARANASI CHEMICAL | RX MARINE INTERNATIONAL

**RXSOL-21-2103-050**

Cotton Towel (100% White)

## Material Safety Data Sheet (MSDS)

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### 1. Product and Company Identification

|              |                    |
|--------------|--------------------|
| Product Name | Methyl Amyl Ketone |
| Part Number  | RXSOL-19-1367-210  |

#### Company Details:

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

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

|         |                                                          |
|---------|----------------------------------------------------------|
| Phone   | +91 22 20871200 - 1400                                   |
| Fax     | +91 22 27612100 ::::AOH :0091 9821214367                 |
| Email   | <a href="mailto:mail@rxmarine.com">mail@rxmarine.com</a> |
| Website | <a href="http://www.rxmarine.com">www.rxmarine.com</a>   |

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### 2. Composition / Information on ingredients

| Chemical Name | CAS      | EC number | Weight   | Formula                          |
|---------------|----------|-----------|----------|----------------------------------|
| 2-Heptanone   | 110-43-0 | 203-767-1 | <= 100 % | C <sub>7</sub> H <sub>14</sub> O |

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### 3. Hazards Identification

|                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Signal Word                                | Warning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Hazard Statements                          | H226 Flammable liquid and vapor. H302 + H332 Harmful if swallowed or if inhaled.                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Precautionary statements                   | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P301 + P312 IF SWALLOWED: 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. |
| 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                                                             | Show this material safety data sheet to the doctor in attendance.                                                                                          |
| If inhaled                                                                 | After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. 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                                                                 | 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 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                                          | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.                                                                                                                                                            |
| 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 at elevated temperatures. 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                         | Fire may cause the evolution of Sulphur oxides, nitrogen oxides.                                                                                                                                                                    |
| Advice for firefighters                               | In the event of fire, wear self-contained breathing apparatus.                                                                                                                                                                      |
| Protective Equipment                                  | Use personal protective equipment.                                                                                                                                                                                                  |
| Specific Hazards Arising from the Chemical            | Oxides of phosphorus Sodium oxides Not combustible. Fire may cause evolution of: Oxides of phosphorus Ambient fire may liberate hazardous vapours.                                                                                  |

## 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                                                            | 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. |
| 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. Chemizorb® ). Dispose of properly. Clean up affected area.                                                                                                               |

## 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                          | Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.                         |
| Hygiene measures                                | Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance. For precautions see section 2.2.                   |
| Precautions for safe handling                   | For precautions see section 2.2.                                                                                                                                  |
| Storage conditions                              | Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Recommended storage temperature see product label. |
| Storage class                                   | Storage class (TRGS 510): 3: Flammable liquids                                                                                                                    |
| Specific end use(s)                             | Apart from the uses mentioned in section 1.2 no other specific uses are stipulated                                                                                |
| 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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|                     |                                                                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exposure controls   | Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. |
| Control parameters  | Ingredients with workplace control parameters Contains no substances with occupational exposure limit values.                                               |
| 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 | Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses                |
| Body Protection     | Flame retardant antistatic 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: <a href="http://www.kcl.de">www.kcl.de</a> ). Splash contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 60 min Material tested:Butoject® (KCL 898) |
| 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          | Handle in accordance with good industrial hygiene and safety practice.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Control of environmental exposure | Do not let product enter drains. Risk of explosion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## 9. Physical and chemical properties

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|                                              |                           |
|----------------------------------------------|---------------------------|
| Physical state                               | Liquid                    |
| Colour                                       | Colorless                 |
| Odour                                        | No data available         |
| Odor Threshold                               | No data available         |
| pH                                           | No data available         |
| Melting Point                                | 35 °C                     |
| Boiling Point                                | 149 - 152 °C at 1.013 hPa |
| Flash Point                                  | 41 °C - closed cup        |
| Evaporation Rate                             | Not Applicable            |
| Flammability (solid, gas)                    | No data available         |
| Explosive limits                             | No Data Available         |
| Upper/lower flammability or explosive limits | 7,9 %(V) / 1,11 %(V)      |
| Autoignition temperature                     | 358 °C at 99,63 hPa       |
| Decomposition temperature                    | No data available         |
| Vapour pressure                              | 2,85 hPa at 20 °C         |
| Density                                      | 0,815 g/cm3               |
| Relative Density                             | 0,814 at 20 °C            |
| Relative vapor density                       | 3,94 - (Air = 1.0)        |
| Freezing point                               | No data available         |
| Viscosity                                    | 0,77 mPa.s at 20 °C       |
| Partition coefficient                        | log Pow: 1,98             |
| Explosive properties                         | No data available         |
| Solubility                                   | 4,21 g/l at 20 °C         |
| Ignition temperature                         | No information available. |

|                          |                   |
|--------------------------|-------------------|
| Particle characteristics | No data available |
|--------------------------|-------------------|

## 10. Stability and reactivity

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|                                    |                                                                                                                                |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | Vapor/air-mixtures are explosive at intense warming.                                                                           |
| Stability                          | The product is chemically stable under standard ambient conditions (room temperature) .                                        |
| Possibility of hazardous reactions | Risk of ignition or formation of inflammable gases or vapours with: Strong oxidizing agents alkalines Isocyanates Amines acids |
| Conditions to avoid                | Heating.                                                                                                                       |
| Incompatible materials             | Various plastics                                                                                                               |
| Hazardous decomposition products   | In the event of fire: see section 5                                                                                            |

## 11. Toxicological information

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|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acute toxicity                                   | LD50 Oral - Rat - 1.600 mg/kg LC50 Inhalation - Rat - male and female - 4 h - > 16,7 mg/l - vapor (OECD Test Guideline 403) LD50 Dermal - Rat - male and female - > 5.000 mg/kg (OECD Test Guideline 402)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Skin corrosion/irritation                        | Skin - Rabbit Result: Mild skin irritation - 4 h (OECD Test Guideline 404)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Serious eye damage/eye irritation                | Eyes - Rabbit Result: Mild eye irritation (OECD Test Guideline 405)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Respiratory or skin sensitization                | Mouse Did not cause sensitization on laboratory animals. (OECD Test Guideline 429)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 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                                  | No data available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Germ cell mutagenicity                           | Test Type: in vitro test Test system: lymphocyte Metabolic activation: with and without metabolic activation Result: negative Species: Rat Application Route: Inhalation Result: negative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Reproductive toxicity                            | No data available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 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. |
| Endocrine disrupting properties                  | To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Central nervous system depression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## 12. Ecological information

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|                                                     |                                                                                                                                                                                                                                                             |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bioaccumulative potential                           | No data available                                                                                                                                                                                                                                           |
| Persistence and degradability                       | Biodegradability aerobic - Exposure time 28 d Result: 69 % - Readily biodegradable. (OECD Test Guideline 310) Ratio BOD/ThBOD 1,77 %                                                                                                                        |
| Toxicity to fish                                    | LC50 - Pimephales promelas (fathead minnow) - 126 - 137 mg/l - 96 h                                                                                                                                                                                         |
| Toxicity to daphnia and other aquatic invertebrates | Semi-static test EC50 - Daphnia magna (Water flea) - > 90,1 mg/l - 48 h                                                                                                                                                                                     |
| Toxicity to algae                                   | Static test EC50 - Pseudokirchneriella subcapitata (algae) - 98,2 mg/l - 72 h (OECD Test Guideline 201)                                                                                                                                                     |
| Toxicity to bacteria                                | Static test EC50 - activated sludge - 563 mg/l - 3 h (OECD Test Guideline 209)<br>Remarks: (in analogy to similar products) The value is given in analogy to the following substances: sodium hypochlorite solution                                         |
| Mobility in soil                                    | No Information 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                               | No data available                                                                                                                                                                                                                                           |

### 13. Disposal considerations

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|                             |                                                                                                                                                                                                                                                          |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Disposal methods            | The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems. |
| Contaminated packaging      | Dispose of as unused product.                                                                                                                                                                                                                            |
| Waste treatment      Method | No data available                                                                                                                                                                                                                                        |

### 14. Transport information

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|                            |                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------|
| UN number                  | ADR/RID: 1110      IMDG: 1110      IATA: 1110                                               |
| UN proper shipping name    | ADR/RID:n-Amyl methyl ketone      IMDG: n-Amyl methyl ketone      IATA:n-Amyl methyl ketone |
| 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                                                     |
| Further information        | 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 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.                                                                                                                                                                                                                                                                                                                                                |
| National legislation                                                                           | Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : FLAMMABLE LIQUIDS                                                                                                                                                                                                                                                                     |
| 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 | <p>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.</p> <p>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.</p> |
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