

MATERIAL SAFETY DATA SHEET

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Product Name: **SEALXPERT® RUBBER REPAIR LIQUID-RESIN**
MSDS No: 166

Revision No: 0

Issued by: Yogesh
Issue Date: 15 October 2015

Section 1 – Company Details

Company Name: SealXpert Products
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Singapore 415979

Tel: +65 6742 4992/6742 4998
Fax: +65 6749 6916
Email: mailbox@sealxpert.com

Section 2 – Composition

| Ingredient | CAS NO. | Content (Wt%) |
|--|------------|---------------|
| Polyether Polyol | 25322-69-4 | 68.9-76.2 |
| Dicyclohexylmethane -4,4'-diisocyanate | 5124-30-1 | 24.9-27.5 |
| Polyol | | 1.1-1.2 |

Section 3 – Hazardous Identification

Route of exposure: Eyes. Skin. Inhalation. Ingestion.

Potential health effects:

Eye: Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.

Skin: Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.

Inhalation: Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.

Ingestion: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

Chronic health effects:

Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.

Signs/Symptoms:

Overexposure can cause headaches, dizziness, nausea, and vomiting.

Target organs:

Eyes. Skin. Respiratory system. Digestive system.

Aggravation of pre-existing conditions:

Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

Isocyanate exposure levels must be monitored. Medical supervision of all employees who handle or come in contact with isocyanates is recommended (i.e. FEV, FVC). This should include pre-employment and periodic medical examinations.

Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases, recurrent skin eczema or sensitization should be excluded from working with this product. Once sensitized no further exposure can be permitted.

Section 4 – First Aid Measures

Ingestion: If swallowed, do not induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Skin contact: Immediately wash skin with plenty of soap and water for 15 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers and get immediate medical attention.

Note to physicians: Asthmatic type symptoms may develop which may be immediate or delayed for several hours.

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Section 5 – Fire Fighting Measures

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| Flash point: | >275°F (135°C) |
| Flash point method: | Tag closed cup. (TCC) |
| Auto ignition temperature: | Not determined. |
| Lower flammable /explosive limit: | Not determined. |
| Upper flammable /explosive limit: | Not determined. |
| Firefighting instructions: | Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water. |
| Extinguishing media: | Use carbon dioxide (CO ₂) or dry chemical when fighting fires involving this material. |
| Protective equipment: | As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approve d or equivalent) and full protective gear. |
| Unusual fire hazards: | Do not reseal containers if contaminated with water, resin will react with water to release carbon dioxide. As a result of the water contamination, pressure will build up in the sealed container causing it to rupture. |

Section 6 – Accidental Release Measures

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| Personnel precautions: | Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. |
| Environmental precautions: | Avoid runoff into storm sewers, ditches, and waterways. |
| Spill cleanup measures: | Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. Neutralize residue with appropriate neutralizer. Do not attempt to neutralize large quantities of material unless measures to control reactivity and heat generation have been taken. After removal, flush spill area with soap and water to remove trace residue. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in Section 8. A blanket of protein foam may be placed over spill for temporary control of isocyanate vapor. |
| Other precautions: | Pump large quantities into closed but not sealed metal containers. Isocyanates will react with water and generate carbon dioxide; this could result in the rupture of any closed containers. Neutralize using 10 parts neutralizer to 1 part isocyanate solution. Mix and allow to stand for 48 hrs in containers, letting evolved carbon dioxide to vent. Neutralizer consist of 90% water, 3-8% concentrated ammonia (or sodium carbonate), 2% detergent. |

Section 7 – Handling and Storage

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| Handling: | Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. |
| Storage: | Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Do not reseal container if moisture or water contamination is suspected. Water contaminated material in a sealed container may rupture due to pressure buildup. |
| Special handling procedures: | Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product. |
| Hygiene practices: | Wash thoroughly after handling. |

Section 8 – Exposure Controls / Personal Protection

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| Eye protection: | Wear safety glasses or vented safety goggles. |
| Skin protection: | Wear rubber or plastic gloves. |
| Respiratory system protection: | Use a respirator, unless there is fine ventilation equipment. |

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Section 9 – Physical and Chemical Characteristics

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| Physical state appearance: | Thick liquid |
| Color: | Light yellow |
| Odor: | Faint |
| Boiling point: | >300°F (148.8°C) |
| Melting point: | Not determined |
| Specific gravity: | 1.04 |
| Solubility: | Negligible |
| Vapor density: | Not determined |
| Vapor pressure : | <0.001 mm Hg @70°F |
| Percent volatile : | 0 |
| Evaporation rate: | Not determined |
| pH: | 7.0 @ 5 Percent Solution |
| Molecular formula: | Mixture |
| Molecular weight: | Mixture |
| Flash point: | >400°F (204.4°C) |
| Flash point method: | Tag closed cup. (TCC) |
| Auto ignition temperature: | Not determined. |
| VOC content: | 0 g/L |
| Percent solids by weight: | 100 |

Section 10 – Stability and Reactivity

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| Stability: | Stable under normal temperatures and pressures |
| Hazardous polymer: | Polymerization may occur under certain conditions. |
| Incompatibility materials: | Alcohols, amines, strong bases (alkali, ammonia), acids, metal compounds, moisture or water. Resin reacts with water to give off carbon dioxide. |
| Conditions to avoid: | Extreme heats, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Moisture and extended exposure over 85 F. |

Section 11 – Toxicological Information

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| Health Hazard: | Refer to section 3 |
| Sensitization: | Not known |
| Mutagenicity: | Not known |
| Procreation Transmissibility: | Not known |
| Carcinogenicity: | Not known |
| Other health hazard information: | Unavailable |

Section 12 – Ecological Information

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| Environmental Effect and Distribution: | Reach sewage and sullage by aggradation or agglutination. |
| Environmental Influence: | No harmful effect to aquatic organism. |
| Biology Accumulation: | No biology accumulation ability. |

Section 13 – Disposal Considerations

Special Instructions: Observe all federal, state and local laws and regulations.

Section 14 – Transportation Information

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| Transportation: | Not classified as Dangerous Goods according to Singapore Code for Transport of Dangerous Goods by Road, Rail and Air. |
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Section 15 – Regulatory Information

Observe the governmental or local regulations to use the product safely.

Section 16 – Other Information

Discard contaminated clothing immediately. Maintain clean equipment and work areas. When adding Hardener to Resin, exothermic reaction occurs within 15 – 20 minutes, reaching temperature of 120°C (248°F). Avoid inhalation of fumes. Wipe up spills immediately.

Warning to users:

This data sheet completes the technical notices but does not supersede them. The information contained in it is grounded to the statement of our knowledge of the product concerned at the publishing date.

Moreover, user's attention should be drawn on the possible risks incurred when a product is used for other purposes than those for which it has been designed. It does not stop in any case the user knowing and following the whole regulatory texts related to his activity. He will be the sole responsible of the precautions related to the use of the products he knows.

The aim of the whole regulatory prescriptions mentioned is to help the receiver to fulfill his duties when using the product. This list must not be considered as exhaustive. It does not stop the user from making sure that he complies with the written obligations other than those previously cited and which rule the fact of keeping and using the product for which he is the sole responsible person.