MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PERMOSEAL (PTY) LTD
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Fax +27 (0)21 552-1848
Toll-free No. 0800 222 400
Website www.alcolin.com

TRADE NAME ALCOLIN CONTACT ADHESIVE
Chemical abstract no. Mixture
Chemical family Chloroprene based adhesive
Chemical name Mixture
Synonyms None
UN no. 1133 Flammable liquids NOS

2. COMPOSITION / INFORMATION OF INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Approx. (%)</th>
<th>Hazard Classification &amp; Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Aliphatic Petroleum Solvent</td>
<td>64742-89-8</td>
<td>35%</td>
<td>Unknown</td>
</tr>
<tr>
<td>Ethyl Acetate</td>
<td>141-78-6</td>
<td>10%</td>
<td>EEC – 607-022-00-5</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>45%</td>
<td>EEC – 601-021-00-3</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>&lt;1%</td>
<td>EEC – 601-020-00-8</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Main hazard: Highly flammable
Health effects: Eyes Irritant to eyes
Health effects: Skin Irritant on skin, defatting agent and prolonged contact may cause dryness of skin
Health effects: Ingestion Hazardous – may be fatal if swallowed
Health effects: Inhalation Hazardous – vapours cause drowsiness/dizziness, disorientation and/or vertigo
Carcinogenicity: Both NTP and IARC list Benzene as a human carcinogen

4. FIRST-AID MEASURES

Product in eyes Remove any contact lenses from the eyes before rinsing thoroughly with plenty of water (lift eye lids). Rinse for at least 15 minutes. Seek medical attention if any discomfort continues
Product on skin Wash skin with soap and water – do not use solvents! Seek medical attention if irritation persists
Product ingested Never make an unconscious person vomit or drink fluids. Get the affected person to drink a lot of water in small gulps. Do not induce vomiting. Seek medical attention if discomfort continues
Product inhaled Move to fresh air and seek medical if nausea and dizziness persists. Aspiration into lungs may lead to pneumonitis

5. FIRE-FIGHTING MEASURES

Extinguishing media Water, dry chemical powder, foam, carbon dioxide or sand
Special hazards In case of fire, hazardous combustion-gases are formed – CO. Toxic vapours may be released. Cool containers exposed to flames with water until well after the fire is out. Vapour accumulation could flash and/or explode if ignited. Under certain conditions of combustion traces of other toxic substances cannot be excluded. Flammable vapours may form explosive mixture with air.
Protective clothing In case of fire, wear respiratory protection such as NIOSH approved breathing equipment
6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear NIOSH approved self contained breathing apparatus. Spill surface may be slippery.

Environmental precautions: Avoid contamination of ground and water surfaces.

Small spills: If recovery is not feasible, absorb with dry sand, soil or non-reactive absorbent material or coagulate by sprinkling sodium chloride over the spill. If product has dried, scrape off the ground. Place in a container suitable for disposal.

Large spills: Stop leak if without risk. Ventilate area. Prevent entry into drains or sewers. Clean as per small spills.

7. HANDLING AND STORAGE

Suitable material: Steel container lined with polyethylene or polypropylene, polyethylene, PVC containers.

Storage precautions: Keep product in a sealed container at temperatures between 5 and 30°C. Minimize contact with atmosphere to reduce solvent evaporation. Avoid heat, sparks, open flames and static charge.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Name</th>
<th>TWA - 8 hrs</th>
<th>STEL - 15 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>50ppm (Sk)</td>
<td>150ppm (Sk)</td>
</tr>
<tr>
<td>LAPS</td>
<td>100ppm (Sk)</td>
<td>-</td>
</tr>
<tr>
<td>Ethyl Acetate</td>
<td>400ppm (Sk)</td>
<td>-</td>
</tr>
<tr>
<td>Benzene</td>
<td>50ppm (Sk)</td>
<td>-</td>
</tr>
</tbody>
</table>

Engineering controls: Provide good ventilation when handling large quantities. No special measures are required if stored and handled as above. Ventilation must be explosive proof.

Respiratory Protection: Not required under normal conditions of use in a well-ventilated space.

Hand Protection: Rubber gloves should be used if there is a risk of direct contact onto skin.

Eye Protection: Safety glasses.

Skin Protection: Observe the usual precautions when handling chemicals. Remove soiled or soaked clothing immediately.

Other Protection: Wash hands at the end of each work shift and before eating.

9. PHYSICAL PROPERTIES

- Appearance: Semi-viscous yellow liquid
- Odour: Mild odour
- pH: n/a
- Boiling point: Approx 61°C @ 760mmHg
- Flash point: <10°C
- Explosive properties: None
- Oxidising properties: None
- Density (g/cm³ @ 20°C): Approx 0.85
- Solubility water: Insoluble

10. STABILITY AND REACTIVITY

Conditions to avoid: Prolonged exposure to air will result in solvent evaporation and gellation of product. Avoid temperature extremes: below 5°C and above 30°C.

Incompatible materials: Organic solvents, strong acids, strong alkalis, salts. Reactive with oxidising agents.

Hazardous decomposition products: Carbon Monoxide.
11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>LD50</th>
<th>Dermal</th>
<th>Rabbit &gt;2000 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LD50</td>
<td>Oral</td>
<td>Rat &lt;200 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50</td>
<td>Vapour</td>
<td>Rat &lt;50 mg/l</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

This product has not been tested for environmental effects. Based on its components, this product is unlikely to result in any detrimental ecological effects.

13. DISPOSABLE CONSIDERATIONS

Disposal methods: Whatever cannot be saved for recovery or recycling should be handled according to current local waste disposal legislation. Do not allow to enter drains or sewers. Do not allow to enter any body of water.

Disposal of packaging: Contaminated packaging should be emptied as far as possible and after appropriate cleaning may be taken for reuse or disposed of in approved facility in accordance with current local legislation.

14. TRANSPORT REGULATIONS

<table>
<thead>
<tr>
<th></th>
<th>UN no</th>
<th>Substance identity no.</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road / rail transport</td>
<td>ADR / RID</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>Marine Transport</td>
<td>IMDG</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>Inland waterways</td>
<td>ADNR</td>
<td>Not regulated</td>
<td></td>
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<tr>
<td>Air transport</td>
<td>IATA</td>
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15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>EEC hazard classification</th>
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<tbody>
<tr>
<td>Risk phrases</td>
<td>R11, R20, R22, R36/37</td>
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<tr>
<td>Safety phrases</td>
<td>S16, S29, S38, S36/37/39</td>
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<tr>
<td>National legislation</td>
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</table>

16. OTHER INFORMATION

For intended use and applications see the Technical Date Sheet for the product. The information provided in this Material Safety Data Sheet is based on the present state of our knowledge. This data is intended to enable safety assessments to be made and should not be construed as guaranteeing specific properties. Recipients of our product must take responsibility for observing existing laws and regulations.

Risk Phrases
- R11 Highly flammable.
- R20/21 Harmful by inhalation and in contact with skin.
- R36 Irritating to eyes.
- R38 Irritating to skin.

Safety Phrases
- S16 Keep away from sources of ignition - No smoking.
- S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.