ORBYLUX POLYESTER PUTTY
Material Safety Data Sheet

1. Identification of the Preparation and the Company

1.1- Identification of product:

Product name : ORBYLUX Polyester Putty
Product code  : 0200270XX

1.2- Product use:

Knife putty based on unsaturated polyester resin and especially designed for car refinish market. Excellent adhesion on steel, old painted surfaces and FRP substrates.

1.3- Identification of the company:

Manufacturer : Orbay Kimya İmalat San. Ve Tic. Ltd. Şti.
Address      : Organize Sanayi Bölgesi Sarı Cadde 2. Sokak No:1, 16140 Nilüfer/BURSA
Phone        : +90 224 243 6057
Fax           : +90 224 242 7244

1.4- Emergency telephone number : +90 224 243 6057

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Cas No.</th>
<th>Concentration</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>%5-15</td>
<td>R10, Xn; R20, Xi; R36/38</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Physico-chemical hazards: Flammable solid.

 Eyes  : Irritating to eyes
 Skin  : Irritating to skin
 Ingestion  : It may cause nausea. High concentrations may cause unrest, instability.
 Inhalation : Harmful by inhalation.
4. FIRST AID MEASURES

Eye Contact: Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses. Seek medical advice and show this container or label.

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.

5. Fire Fighting Measures

5.1- Particular method of intervention and Personal protective equipment

Firefighters should always protective equipment and breathing apparatus when handling fire coming from these products.

5.2- Recommendation

Keep containers and surroundings cool with water spray. The product exposed to fire, contains carbon monoxide. Solvent vapours are heavier than air and may spread along floors. Keep away from sources of ignition.

5.3- Recommended extinguish media

In big fires, use alcohol-resistant foam for big fires. Keep containers and surroundings cool with water spray.
In small fires, use dry chemical, carbon dioxide, sand and soil.

5.4- Non-recommended extinguish media

Do not use water jet.
6. ACCIDENTAL RELEASE MEASURES

6.1- General information:

Use the recommended personal protective equipment mentioned in part 8

6.2- Spilling / Spreading

- Avoid contact with skin, eyes and clothing. Ventilate the area. Avoid inhalation of vapor or mist.
- Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in chemical disposal container
- Pick up and transfer to properly labeled containers.
- Clean contaminated surface thoroughly with water. Do not allow to enter drains or watercourses.
- Keep away from sources of ignition. To dissipate static electricity during transfer, ground drums and connect to receiving container with bonding strap. Electrical installations / working materials must comply with the technological safety standards.
- Vapors may form explosive mixtures with air.
- In order to drag vapor in another direction use water spray or water mist. If the vapor cloud occurs, use water mist or cover spillage area with foam.
- 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 regulations
- Dispose of in accordance with local, state, and federal regulations.
- If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

7. Handling and Storage

7.1- Handling

- Use in well-ventilated area. Do not smoke
- Avoid from open flames, sparks, heat, electrical and static discharge. Ground all equipment.
- Empty containers may contain substances that may be dangerous. Keep containers tightly closed.
- Avoid contact with heat, sparks or flames.
- Do not breathe or swallow
ORBYLUX POLYESTER PUTTY
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- Do not make any process on empty containers such as welding, drilling, grinding and contact with heat, sparks or flames.
- Eating and drinking should be prohibited in the application area. Employees should wash their hands and faces before eating or drinking.
- Never use pressure to empty. Packing is not a pressure vessel.

7.2- Storage

- Store in accordance with local regulations.
- Observe label precautions.
- Keep away from heat, sparks and flames.
- Keep away from ignition sources.
- Store containers tightly closed. Kept upright to prevent leakage
- Store in a dry, well ventilated place away from source of heat, ignition and direct sunlight.
- Store away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. When workers are facing concentrations above the exposure limit they must use appropriately certified respirators

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No</th>
<th>Type</th>
<th>Value [ppm]</th>
<th>Value [mg/m³]</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>styrene</td>
<td>100-42-5</td>
<td>TWA</td>
<td>50.0 ppm</td>
<td>213.0 mg/m³</td>
<td>OEL-BELGIUM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>100.0 ppm</td>
<td>426.0 mg/m³</td>
<td>OEL-BELGIUM</td>
</tr>
</tbody>
</table>
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Personal protective equipment

Eyes : Use appropriate protective glasses
Skin : Use appropriate protective gloves
Cloth : Wear protective clothing to avoid contact with the skin
Inhalation : If necessary use suitable respiratory protective equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General Information

9.1.1- Color : Yellow, Grey, White
9.1.2- Odor : Characteristic

9.2. Significant Health, Safety and Environmental Information

- pH : Not Concerned
- Boiling point : Not Concerned
- Flash point : 27°C
- Auto ignition temperature : Not Concerned
- Explosive properties : Not Concerned
- Oxidizing properties : Not Concerned
- Vapor density : Not Concerned
- Density : 0,98 ±0,1 g/ml
- Solubility
  - in the water : Insoluble
  - in the oil : Insoluble
- Partition coefficient (n-octanol/ water) : Not Concerned
- Viscosity : Not Concerned
- Evaporation density : Not Concerned
- Evaporation speed : Not Concerned
10. Stability and Reactivity

Stable under recommended storage and handling conditions (see section 7).
Keep away from the following materials to prevent strong exothermic reactions:

- oxidizing agents,
- strongly alkaline,
- strongly acid

10.1. Hazardous decomposition materials

Decomposition materials not occur under recommended storage and handling conditions

11. TOXICOLOGICAL INFORMATION

There is no data available.
Repeated or prolonged contact with the skin and eyes results irritation. In case long-term inhalation there are effects on the lungs.

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>styrene</td>
<td>LD50</td>
<td>Rat</td>
<td>898 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Intraperitoneal</td>
<td>Rat</td>
<td>5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2650 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Ecological Information

No available data about dangerous for ecology.
Do not allow to enter drains or watercourses.

12.1. Eco toxicity : Not Concerned.
12.2. Mobility : Not Concerned
12.3. Persistence and availability : Not Concerned
12.4. Bio accumulative potential : Not Concerned
12.5. Other adverse effects : No specific data on the product
## ORBYLUX POLYESTER PUTTY
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<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mortality</td>
<td>Acute EC50 4.7 mg/L</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Mortality</td>
<td>Acute LC50 10 mg/L</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Mortality</td>
<td>Acute LC50 29 mg/L</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Mortality</td>
<td>Acute LC50 4.02 mg/L</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Mortality</td>
<td>Acute LC50 25.05 mg/L</td>
<td></td>
<td>96 hours</td>
</tr>
</tbody>
</table>

### 13. DISPOSAL CONSIDERATIONS

Dispose of according to all federal, state and local applicable regulations. If you want to re-use the product, please contact with the manufacturing company, Orbay Kimya İmalat San. Ve Tic. Ltd. Şti.

### 14. Transport Information

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>ADN/ADNR</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN number</td>
<td>UN3269</td>
<td>UN3269</td>
<td>UN3269</td>
</tr>
<tr>
<td>14.2 Transport document name</td>
<td>Polyester resin kits (styrene)</td>
<td>Polyester resin kits (styrene)</td>
<td>Polyester resin kits (styrene)</td>
</tr>
<tr>
<td>14.3 Class</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>14.5 Special precautions for user</td>
<td>Transport within user’s premises: Always transport in closed containers that are upright and secure. Ensure that persons</td>
<td>Transport within user’s premises: Always transport in closed containers that are upright and secure. Ensure that persons</td>
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</tr>
</tbody>
</table>

Orbay Kimya İmalat San. ve Tic. Ltd.Şti
Organize Sanayi Bölgesi Sarı Cadde 2.Sokak No:1 Bursa / Turkey
Tel:0 224 2436057 Fax:0 224 2427244 www.orbay.com info@orbay.com
## 15. REGULATORY INFORMATION

EU regulations: The product is classified and labelled for supply in accordance with the Directive 1999/45/EC as follows:

<table>
<thead>
<tr>
<th>Risk phrases</th>
<th>Safety phrases</th>
<th>VOC for Ready-for-Use Mixture</th>
<th>Europe inventory</th>
<th>Industrial use</th>
</tr>
</thead>
<tbody>
<tr>
<td>R10- Flammable</td>
<td>S51- Use only in well-ventilated areas.</td>
<td>IIB/b. Bodyfiller/stopper – All types. EU limit values: 250g/l. (2007). This product contains a maximum of 220 g/l VOC.</td>
<td>All components are listed or exempted.</td>
<td>The information contained in this safety data sheet does not constitute the user’s own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.</td>
</tr>
</tbody>
</table>

## 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Full text of R-phrases</th>
<th>Full text of S-phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>R10: Flammable</td>
<td>S16: Keep away from sources of ignition - No smoking</td>
</tr>
<tr>
<td>R20: Harmful by inhalation.</td>
<td>S25: Avoid contact with eyes</td>
</tr>
<tr>
<td>R36/38: Irritating to eyes and skin</td>
<td>S36/37: Wear suitable protective clothing and gloves</td>
</tr>
<tr>
<td></td>
<td>S46: If swallowed, seek medical advice immediately and show this container or label</td>
</tr>
<tr>
<td></td>
<td>S51: Use only in well-ventilated areas</td>
</tr>
</tbody>
</table>
Notice of reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.