SilCool* TIA350R Adhesive

Thermally Conductive Silicone Adhesive

Silcool TIA350R is a one-component, heat curable silicone adhesive designed for thermally conductive applications. Silcool TIA350R silicone adhesive cures quickly upon exposure to heat, and adheres well to a wide variety of substrates.

Key Features and Typical Benefits

- Good thermal conductivity
- Low temperature, fast cure
- Easy to use one component formulation
- Electrically insulative.
- Primerless adhesion to many substrates
- Non-corrosive to metals

Potential Applications

- Thermal Interface Material between dies and heat spreaders.
- Adhesive for use between various heat sources and heat dissipation devices.

Typical Physical Properties

<table>
<thead>
<tr>
<th>Uncured Properties</th>
<th>Cured Properties (30 min at 120°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Appearances</td>
</tr>
<tr>
<td></td>
<td>Gray paste</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Initial Characteristics**

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>MPa</td>
<td>1.6</td>
</tr>
<tr>
<td>Elongation</td>
<td>%</td>
<td>20</td>
</tr>
<tr>
<td>Adhesion Strength</td>
<td>MPa</td>
<td>1.0</td>
</tr>
<tr>
<td>Volume Resistivity</td>
<td>MΩ·m</td>
<td>4.8x10⁶</td>
</tr>
<tr>
<td>Dielectric Strength</td>
<td>kV/mm</td>
<td>20</td>
</tr>
</tbody>
</table>

1: Hot Wire Method  2: Laser flash method  3: Al/Al (lap shear)

Typical properties are average data and are not to be used as or to develop specifications.

**General Guidelines**

- Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. A sample patch should always be conducted before proceeding to determine compatibility.
- All parts should be as clean and dry as possible prior to application.
- Wear eye protection and protective gloves as required when handling this product.
- Maintain adequate ventilation in the work area at all times.

**Storage**

- Store at cool temperature (<5°C) to prevent viscosity increase. When returning to room temperature, allow the contents to return to room temperature before opening the container to avoid condensation.
- Keep out of the reach of children.

**Patent Status**

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.
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