T-putty™ 502 Series

Creates compression of interface material

T-putty™ 502 is the best material for applications where large tolerance differences create the need for compression of the interface material beyond 50% of its original thickness.

T-putty™ 502 will flow and ensure low pressures on the components being cooled. In conjunction with outstanding compression characteristics, T-putty™ 502 has a high thermal conductivity, resulting in very low thermal resistance.

T-putty™ 502 is naturally tacky and requires no additional adhesive coating that can inhibit thermal performance.

Features and Benefits:

- Soft and ultra high compressibility for low stress applications
- 3 W/mK thermal conductivity
- Available in sheets 0.020" - 0.200" (0.5mm - 5.0mm) thick and in bulk
- Naturally tacky needing no further adhesive coating

Applications:

- Cooling components to the chassis or frame
- Entire large panel PCB cooling
- Semiconductor automated test equipment (ATE)
- Any high compression low stress application

For sales information:
In Asia, please telephone +886-3-3129292
In Europe, please telephone +44-1342-315044
In the USA please telephone +1-1-800-246-9050

or visit: www.lairdtech.com

global solutions : local support™
<table>
<thead>
<tr>
<th>T-putty™ 0.020</th>
<th>T-putty™ 0.040</th>
<th>T-putty™ 0.060</th>
<th>T-putty™ 0.080</th>
<th>T-putty™ 0.100</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction &amp; Composition</td>
<td>Reinforced boron nitride filled silicone elastomer</td>
<td>Reinforced boron nitride filled silicone elastomer</td>
<td>Reinforced boron nitride filled silicone elastomer</td>
<td>Reinforced boron nitride filled silicone elastomer</td>
<td>Reinforced boron nitride filled silicone elastomer</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>Thickness</td>
<td>0.020&quot; (0.51mm)</td>
<td>0.040&quot; (1.02mm)</td>
<td>0.060&quot; (1.52mm)</td>
<td>0.080&quot; (2.03mm)</td>
<td>0.100&quot; (2.54mm)</td>
</tr>
<tr>
<td>Thickness Tolerance</td>
<td>± 0.002&quot; (± 0.05mm)</td>
<td>± 0.003&quot; (± 0.08mm)</td>
<td>± 0.004&quot; (± 0.10mm)</td>
<td>± 0.004&quot; (± 0.10mm)</td>
<td>± 0.005&quot; (± 0.13mm)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.39 g/cc</td>
<td>1.38 g/cc</td>
<td>1.37 g/cc</td>
<td>1.37 g/cc</td>
<td>1.36 g/cc</td>
</tr>
<tr>
<td>Hardness *without fiberglass</td>
<td>05 Shore OO</td>
<td>05 Shore OO</td>
<td>05 Shore OO</td>
<td>05 Shore OO</td>
<td>05 Shore OO</td>
</tr>
<tr>
<td>Outgassing TML (Post Cured)</td>
<td>0.11%</td>
<td>0.11%</td>
<td>0.11%</td>
<td>0.11%</td>
<td>0.11%</td>
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<tr>
<td>Outgassing CVM (Post Cured)</td>
<td>0.06%</td>
<td>0.06%</td>
<td>0.06%</td>
<td>0.06%</td>
<td>0.06%</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-45°C to 200°C</td>
<td>-45°C to 200°C</td>
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<td>-45°C to 200°C</td>
<td>-45°C to 200°C</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>3 W/mK</td>
<td>3 W/mK</td>
<td>3 W/mK</td>
<td>3 W/mK</td>
<td>3 W/mK</td>
</tr>
<tr>
<td>Thermal Impedance @ 10 psi @ 69KPa</td>
<td>0.44 °C-in/W 2.84 °C-cm/W</td>
<td>0.49 °C-in/W 3.16 °C-cm/W</td>
<td>0.53 °C-in/W 3.42 °C-cm/W</td>
<td>0.58 °C-in/W 3.74 °C-cm/W</td>
<td>0.62 °C-in/W 4.00 °C-cm/W</td>
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<tr>
<td>Thermal Expansion</td>
<td>92 ppm/C</td>
<td>92 ppm/C</td>
<td>92 ppm/C</td>
<td>92 ppm/C</td>
<td>92 ppm/C</td>
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<tr>
<td>Breakdown Voltage</td>
<td>2000 Volts AC</td>
<td>4000 Volts AC</td>
<td>&gt;5000 Volts AC</td>
<td>&gt;5000 Volts AC</td>
<td>&gt;5000 Volts AC</td>
</tr>
<tr>
<td>Volume Resistivity</td>
<td>5 x 10^1 ohm-cm</td>
<td>5 x 10^1 ohm-cm</td>
<td>5 x 10^1 ohm-cm</td>
<td>5 x 10^1 ohm-cm</td>
<td>5 x 10^1 ohm-cm</td>
</tr>
<tr>
<td>Dielectric Constant @ 1 MHz</td>
<td>3.20</td>
<td>3.20</td>
<td>3.20</td>
<td>3.20</td>
<td>3.20</td>
</tr>
</tbody>
</table>

**Standard Thicknesses:**

- 0.020" (0.51mm)
- 0.030" (0.76mm)
- 0.040" (1.02mm)
- 0.050" (1.27mm)
- 0.060" (1.52mm)
- 0.070" (1.78mm)
- 0.080" (2.03mm)
- 0.090" (2.29mm)
- 0.100" (2.54mm)
- 0.110" (2.79mm)
- 0.120" (3.05mm)
- 0.130" (3.30mm)
- 0.140" (3.56mm)
- 0.150" (3.81mm)
- 0.160" (4.06mm)
- 0.170" (4.32mm)
- 0.180" (4.57mm)
- 0.190" (4.83mm)

Consult the factory for alternate thicknesses

**Bulk:**

T-putty™ 502 is available in bulk form in the following sizes: 100 cc Jar 500 cc Jar 1000 cc Jar

Consult the factory for alternate bulk sizes.

**Standard Sheet Sizes:**

- 9" x 9" (229mm x 229mm) and 18" x 18" (457mm x 457mm). 9" x 9" only over 0.100" thickness

T-putty™ 502 is available in individual die cut shapes. Pressure sensitive adhesive is not applicable for T-putty™ products.

**Reinforcement:**

T-putty™ 502 sheets are reinforced on both sides with fiberglass.

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Our customers are reminded that they bear the responsibility for testing Laird Technologies' materials for their proposed use. Any information furnished by Laird Technologies and its agents is believed to be accurate and reliable, but our customers must bear all responsibility for the use and application of Laird Technologies' materials since Laird Technologies’ and its agents cannot be aware of all potential use. Laird Technologies makes no warranties as to the fitness, merchantability, or suitability of any Laird Technologies' materials or products for any specific or general use. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies' products are sold pursuant to the Laird Technologies' domestic terms and conditions of sale in effect from time to time, a copy of which will be furnished upon request.