Gap Pad® VO Ultra Soft

PRODUCT DESCRIPTION
Ultra Conformable, Thermally Conductive Material for Filling Air Gaps

FEATURES AND BENEFITS
• Thermal conductivity: 1.0 W/m-K
• Highly conformable, low hardness
• “Gel-like” modulus
• Decreased strain
• Puncture, shear and tear resistant
• Electrically isolating

Gap Pad® VO Ultra Soft is recommended for applications that require a minimum amount of pressure on components. The viscoelastic nature of the material also gives excellent low-stress vibration dampening and shock absorbing characteristics. Gap Pad® VO Ultra Soft is an electrically isolating material, which allows its use in applications requiring isolation between heat sinks and high-voltage, bare-ledged devices.

Note: To build a part number, visit our website at www.bergquistcompany.com.

TYPICAL PROPERTIES OF GAP PAD VO ULTRA SOFT

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>IMPERIAL VALUE</th>
<th>METRIC VALUE</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Mauve/Pink</td>
<td>Mauve/Pink</td>
<td>Visual</td>
</tr>
<tr>
<td>Reinforcement Carrier</td>
<td>Fiberglass</td>
<td>Fiberglass</td>
<td>—</td>
</tr>
<tr>
<td>Thickness (inch) / (mm)</td>
<td>0.020 to 0.250</td>
<td>0.508 to 6.350</td>
<td>ASTM D374</td>
</tr>
<tr>
<td>Inherent Surface Tack (1 sided)</td>
<td>1</td>
<td>1</td>
<td>—</td>
</tr>
<tr>
<td>Density (Bulk Rubber) (g/cc)</td>
<td>1.6</td>
<td>1.6</td>
<td>ASTM D792</td>
</tr>
<tr>
<td>Heat Capacity (J/g-k)</td>
<td>1.0</td>
<td>1.0</td>
<td>ASTM E1269</td>
</tr>
<tr>
<td>Hardness (Bulk Rubber) (Shore 00) (1)</td>
<td>5</td>
<td>5</td>
<td>ASTM D2240</td>
</tr>
<tr>
<td>Young’s Modulus (psi) / (kPa) (2)</td>
<td>8</td>
<td>55</td>
<td>ASTM D575</td>
</tr>
<tr>
<td>Continuous Use Temp (°F) / (°C)</td>
<td>-76 to 392</td>
<td>-60 to 200</td>
<td>—</td>
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</tbody>
</table>

ELECTRICAL

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>IMPERIAL VALUE</th>
<th>METRIC VALUE</th>
<th>TEST METHOD</th>
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<tbody>
<tr>
<td>Dielectric Breakdown Voltage (Vac)</td>
<td>6000</td>
<td>6000</td>
<td>ASTM D149</td>
</tr>
<tr>
<td>Dielectric Constant (1000 Hz)</td>
<td>5.5</td>
<td>5.5</td>
<td>ASTM D150</td>
</tr>
<tr>
<td>Volume Resistivity (Ohm-meter)</td>
<td>(10^{11})</td>
<td>(10^{11})</td>
<td>ASTM D257</td>
</tr>
<tr>
<td>Flame Rating</td>
<td>V-0</td>
<td>V-0</td>
<td>UL 94</td>
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THERMAL

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>IMPERIAL VALUE</th>
<th>METRIC VALUE</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Conductivity (W/m-K)</td>
<td>1.0</td>
<td>1.0</td>
<td>ASTM D5470</td>
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</tbody>
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THERMAL PERFORMANCE vs. STRAIN

<table>
<thead>
<tr>
<th>Deflection (% strain)</th>
<th>10</th>
<th>20</th>
<th>30</th>
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</thead>
<tbody>
<tr>
<td>Thermal Impedance (°C-in²/W)</td>
<td>0.040&quot;</td>
<td>1.97</td>
<td>1.87</td>
</tr>
</tbody>
</table>

1) Thirty second delay value. Shore 00 hardness scale. 2)Young’s Modulus, calculated using 0.01 in/min. step rate of strain with a sample size of 0.79 inch². 3) The ASTM D5470 test fixture was used. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

TYPICAL APPLICATIONS INCLUDE
• Telecommunications
• Computer and peripherals
• Power conversion
• Between heat-generating semiconductors or magnetic components and a heat sink
• Area where heat needs to be transferred to a frame, chassis, or other type of heat spreader

CONFIGURATIONS AVAILABLE
• Sheet form and die-cut parts

 property: thickness vs. thermal resistance gap pad vo ultra soft
Disclaimer

Note:
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Reference 0.1