Gap Pad® 1000HD was designed to withstand applications requiring high durability.

The coated polyimide carrier on one side of the material allows easy rework, excellent handling characteristics and puncture resistance.

The conformable and elastic nature of Gap Pad® 1000HD allows excellent interfacing and wet-out characteristics, even to surfaces with a high degree of roughness or uneven topography.

The asymmetric construction of Gap Pad® 1000HD provides minimal tack on the polyimide side, with high inherent tack on the upcoated side. Gap Pad® 1000HD can be assembled with manual or automated processes.

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

**PRODUCT DESCRIPTION**
Highly Durable, Conformable, Thermally Conductive, Gap Filling Material

**FEATURES AND BENEFITS**
- Thermal Conductivity: 1.0 W/m-K
- Designed for high durability applications
- Robust Polyimide carrier provides excellent voltage breakdown, puncture and tear resistance
- Highly conformable
- Ease of handling and rework in applications

**TYPICAL APPLICATIONS INCLUDE**
- High durability applications
- Automotive energy storage: Ultra capacitors, batteries, power transmissions, power inverters
- Industrial automotive applications such as trucks, busses and trains
- Computer and peripherals
- Telecommunications
- Between any heat-generating device and a heat sink

**CONFIGURATIONS AVAILABLE**
- Sheet form and die-cut parts

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**TYPICAL PROPERTIES OF GAP PAD 1000HD**

<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>Gray/Black</td>
<td>Gray/Black</td>
<td>Visual</td>
</tr>
<tr>
<td>Reinforcement Carrier</td>
<td>Polyimide</td>
<td>Polyimide</td>
<td>—</td>
</tr>
<tr>
<td>Thickness (inch) / (mm)</td>
<td>0.020 to 0.125 / 0.508 to 3.175</td>
<td>ASTM D374</td>
<td></td>
</tr>
<tr>
<td>Inherent Surface Tack (1- or 2-sided)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Density (g/cc)</td>
<td>2.1</td>
<td>2.1</td>
<td>ASTM D792</td>
</tr>
<tr>
<td>Heat Capacity (W/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>40</td>
<td>40</td>
<td>ASTM D2240</td>
</tr>
<tr>
<td>Young's Modulus (psi) / (kPa) (2)</td>
<td>60</td>
<td>414</td>
<td>ASTM D575</td>
</tr>
<tr>
<td>Continuous Use Temp. (°C)</td>
<td>-76 to 358</td>
<td>-60 to 180</td>
<td>—</td>
</tr>
</tbody>
</table>

**ELECTRICAL**

- Dielectric Breakdown Voltage (Vac) > 10,000
- Dielectric Constant (1000 Hz) 5.5
- Volume Resistivity (Ohm-meter) $10^1$
- Flame Rating V-O

**THERMAL**

- Thermal Conductivity (W/m-K) 1.0
- Thermal Resistance (°C-in2/W) 0.040”

**THERMAL PERFORMANCE vs. STRAIN**

<table>
<thead>
<tr>
<th>Deflection (% strain)</th>
<th>10</th>
<th>20</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Impedance (°C-in2/W) 0.040”</td>
<td>1.70</td>
<td>1.59</td>
<td>1.47</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 inch.
(3) The ASTM D5470 test fixture was utilized. The recorded values 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.

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**TYPICAL PROPERTIES OF GAP PAD 1000HD**

![Graph: Thickness vs. Thermal Resistance for Gap Pad 1000HD](image)
Disclaimer

Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as of the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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