**PRODUCT DESCRIPTION**
High Cut-Through Resistant, Electrically Insulating, Thermally Conductive Material.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Silicone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Mauve</td>
</tr>
<tr>
<td>Reinforcement Carrier</td>
<td>Fiberglass</td>
</tr>
<tr>
<td>Total Thickness</td>
<td>0.229mm</td>
</tr>
<tr>
<td>Application</td>
<td>Thermal management, Thermally conductive adhesive</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40 to 150ºC</td>
</tr>
</tbody>
</table>

**FEATURES AND BENEFITS**
- Thermal impedance: 1.07ºC-in²/W @ 50 psi
- Excellent cut-through resistance
- Use in screw-mounted applications with cut-through problems

**TYPICAL APPLICATIONS**
- Silicone-sensitive assemblies
- Telecommunications
- Automotive electronics

In addition to excellent heat transfer and dielectric properties, BERGQUIST SIL PAD TSP 1680 is specially formulated for high resistance to crushing and cut-through typically found in high-pressure applications where surface imperfections such as burrs and dents are inherently common (e.g. heavily-machined metal surfaces manufactured from extrusions or castings).

With a field-proven history of reliability, BERGQUIST SIL PAD TSP 1680 is Bergquist’s best material for cut-through resistance in screw-mounted and other applications with cut-through problems.

**TYPICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shore Hardness, ASTM D2240, Shore A</td>
<td>95</td>
</tr>
<tr>
<td>Hardness, Shore A, ASTM D2240</td>
<td>95</td>
</tr>
<tr>
<td>Breaking Strength, ASTM D1458, KN/m</td>
<td>26</td>
</tr>
<tr>
<td>Elongation, 45º to warp and fill, ASTM D412, %</td>
<td>10</td>
</tr>
<tr>
<td>Cut-Through Resistance, ASTM D412, Kg</td>
<td>340</td>
</tr>
<tr>
<td>Flammability Rating, UL 94</td>
<td>V-0</td>
</tr>
</tbody>
</table>

**Electrical Properties**
- Dielectric Breakdown Voltage, ASTM D149, Vac: 4,000
- Dielectric Constant, ASTM D150 @ 1,000 Hz: 6.0
- Volume Resistivity, ASTM D257, ohm-meter: 1×10¹⁰

**Thermal Properties**
- Thermal Conductivity, ASTM D5470, W/(m-K): 1.2
- Thermal Impedance, ASTM D5470, ºC-in²/W (1): 1.51
  @ 10 psi
  @ 25 psi
  @ 50 psi
  @ 100 psi
  @ 200 psi

(1) 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.

**GENERAL INFORMATION**
For safe handling information on this product, consult the Safety Data Sheet, (SDS).

**Not for product specifications**
The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

**CONFIGURATIONS AVAILABLE**
BERGQUIST SIL PAD TSP 1680 are supplied in:
- Sheet form, roll form and die-cut parts
- With or without pressure-sensitive adhesive
Conversions

°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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 at 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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Reference 1