BERGQUIST GAP FILLER TGF 2000
Known as BERGQUIST GAP FILLER 2000
October 2018

PRODUCT DESCRIPTION
A thermally conductive, liquid gap filler material.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Silicone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
</tr>
<tr>
<td>(cured)</td>
<td>Pink</td>
</tr>
<tr>
<td>Appearance - Part A</td>
<td>Pink</td>
</tr>
<tr>
<td>Appearance - Part B</td>
<td>White</td>
</tr>
<tr>
<td>Cure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Room temperature cure or Heat cure</td>
</tr>
<tr>
<td>Application</td>
<td>Thermal management, TIM (Thermal Interface Material)</td>
</tr>
<tr>
<td>Mix Ratio by weight:</td>
<td>1 : 1</td>
</tr>
<tr>
<td>Part A: Part B</td>
<td></td>
</tr>
<tr>
<td>Mix Ratio by volume:</td>
<td>1 : 1</td>
</tr>
<tr>
<td>Part A: Part B</td>
<td></td>
</tr>
<tr>
<td>Solids Content, %</td>
<td>100</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-60 to 200°C</td>
</tr>
</tbody>
</table>

FEATURES AND BENEFITS
- Thermal Conductivity: 2.0 W/m-K
- Ultra-conforming, designed for fragile and low-stress applications
- Ambient and accelerated cure schedules
- 100% solids - no cure by-products
- Excellent low and high temperature mechanical and chemical stability

BERGQUIST GAP FILLER TGF 2000 is a high performance, thermally conductive, liquid gap filling material supplied as a two-component, room or elevated temperature curing system. The material provides a balance of cured material properties and good compression set (memory). The result is a soft, thermally conductive, form-in-place elastomer ideal for coupling “hot” electronic components mounted on PC boards with an adjacent metal case or heat sink. Before cure, BERGQUIST GAP FILLER TGF 2000 flows under pressure like a grease. After cure, it does not pump from the interface as a result of thermal cycling and is dry to the touch.

Unlike cured Gap Filling materials, the liquid approach offers infinite thickness with little or no stress during displacement and assembly. BERGQUIST GAP FILLER TGF 2000 eliminates the need for specific pad thickness and die-cut shapes for individual applications.

BERGQUIST GAP FILLER TGF 2000 is intended for use in thermal interface applications when a strong structural bond is not required. As cured, BERGQUIST GAP FILLER TGF 2000 is formulated to have pliable low-modulus, properties.

TYPICAL APPLICATIONS
- Automotive electronics (HEV, NEV, batteries)
- Telecommunications
- Computer and peripherals
- Thermally conductive vibration dampening
- Between any heat-generating semiconductor and a heat sink

TYPICAL PROPERTIES OF UNCURED MATERIAL
Mixed Viscosity, Brookfield - RV, - Helipath, ASTM D2196, 25 ºC, mPa-s (cP):
- Spindle TF, speed 20 rpm 300,000
Density, ASTM D792, g/cc 2.9
Pot Life @ 25ºC , time for viscosity to double:
- @ 15 minutes
- @ 60 minutes
- @ 600 minutes
Shelf Life @ 25ºC , days 180

TYPICAL CURE SCHEDULE
Cure Schedule
1 to 2 hours @ 25°C
5 minutes @ 100°C

Alternative Cure Schedule 1
3 to 4 hours @ 25°C
15 minutes @ 100°C

Alternative Cure Schedule 2
3 days @ 25°C
1 hour @ 100°C
Rheometer - time to read 90% cure.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties
- Hardness, Shore 00, Thirty second delay value, 70
- ASTM D2240
- Heat Capacity, ASTM D1269, J/g-K 1.0
- Flammability, UL 94 V-0

Electrical Properties
- Dielectric Strength, ASTM D149, V/ml 500
- Dielectric Constant , ASTM D150 @ 1,000 Hz 7
- Volume Resistivity, ASTM D257, ohm-meter 1×10¹¹
Thermal Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Conductivity, ASTM D5470, W/(m-K)</td>
<td>2.0</td>
</tr>
</tbody>
</table>

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.

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers’ experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

CONFIGURATIONS AVAILABLE

BERGQUIST GAP FILLER TGF 2000 is available in the following configurations:

- Cartridges
- Kits

STORAGE

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 5 to 25°C for a 6 month shelf life. Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

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
- mPα·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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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