



BERGQUIST GAP PAD TGP 6000ULM

October 2019

PRODUCT DESCRIPTION

A high performance, 6 W/m-K silicone thermal interface material with ultra low modulus.

| | |
|------------------------------------|--|
| Technology | Silicone |
| Appearance | Gray |
| Reinforcement Carrier | Fiberglass |
| Interface Tack | 2 sides |
| Thickness | 1.016 to 3.175mm |
| Application | Thermal management, TIM (Thermal Interface Material) |
| Operating Temperature Range | -60 to 200°C |
| UL Flammability Rating | UL 94 V-0 |

FEATURES AND BENEFITS

- Thermal Conductivity: 6.0 W/m-K
- High-compliance, low compression stress
- Ultra low modulus

BERGQUIST GAP PAD TGP 6000ULM is an extremely soft gap filling material rated at a thermal conductivity of 6.0 W/m-K. It is specially formulated for high performance applications requiring low assembly stress. The material offers exceptional thermal performance at low pressures due to the unique filler package and ultra low modulus resin formulation. BERGQUIST GAP PAD TGP 6000ULM is highly conformal, even to surfaces with high roughness and/or topography, allowing for excellent interfacing and wet-out characteristics.

BERGQUIST GAP PAD TGP 6000ULM is offered with a higher natural inherent tack on both sides of the material, eliminating the need for thermally-impeding adhesive layers and allowing for stick-in-place characteristics during assembly. The top side has minimal tack for ease of handling and rework. BERGQUIST GAP PAD TGP 6000ULM is supplied with protective liners on both sides.

TYPICAL APPLICATIONS

- Telecommunications
- ASICs and DSPs
- Consumer electronics
- Thermal modules to heat sinks assembly

TYPICAL PROPERTIES OF CURED MATERIAL

Young's modulus is calculated using 0.01in/min, step rate of strain with a sample size 0.79 in², after 5 minutes of compression at 10% strain on a 1mm thickness material.

Physical Properties

| | |
|---|-----------------------|
| Hardness, Shore 000, ASTM D2240 | 60 |
| Heat Capacity, ASTM E1269, J/g-K | 1.0 |
| Density, Bulk rubber, ASTM D792, g/cc | 3.2 |
| Young's Modulus | kPa 41.3 (psi) (6) |
| Flammability Rating @ 0.76 mm, 3.0 mm, 4.7 mm thicknesses, IEC 60695-11-10, UL 94 | V-0 |

Electrical Properties

| | |
|--|--------------------|
| Dielectric Strength, ASTM D149, VAC | >5,000 |
| Dielectric Constant, ASTM D150, 1,000Hz | 6.5 |
| Volume Resistivity, ASTM D257, ohm-meter | 1×10 ¹⁰ |

Thermal Properties

| | |
|---|------|
| Thermal Conductivity, ASTM D5470, W/(m-K) | 6.0 |
| Thermal Impedance, 0.040 inch | |
| ASTM D5470, °C-in ² /W: | |
| 10% Deflection | 0.34 |
| 20% Deflection | 0.29 |
| 30% Deflection | 0.26 |

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 GAP PAD TGP 6000ULM is available in the following configurations:

| | |
|----------------------|--|
| Sheet size | 8" x 16" |
| Standard Thicknesses | 0.040", 0.060", 0.080", 0.100", 0.125" |

Natural tack both sides with fiberglass.



STORAGE

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

Optimal Storage: 25°C (±3), 50% RH (±10) for a 12 months 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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb/F}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{psi} \times 145 = \text{N/mm}^2$
 $\text{MPa} = \text{N/mm}^2$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

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.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage: [Except as otherwise noted] All trademarks in this document are trademarks and/or registered trademarks of Henkel and its affiliates in the U.S. and elsewhere.

Reference **N/A**