Technical Data Sheet

BERGQUIST GAP PAD TGP 2000

Known as BERGQUIST GAP PAD 2000S40
October 2018

PRODUCT DESCRIPTION

Highly Conformable, Thermally Conductive, Reinforced "S-Class" Gap Filling Material.

Technology	Silicone
Appearance	Gray
Reinforcement Carrier	Fiberglass
Thickness	0.508 to 3.175mm , ASTM D374
Inherent Surface Tack	2 (1 sided)
Application	Thermal management, TIM (Thermal Interface Material)
Operating Temperature Range	-60 to 200ºC

FEATURES AND BENEFITS

- Thermal Conductivity: 2.0 W/m-K
- Low "S-Class" thermal resistance at very low pressures
- Highly Conformable, low hardness
- Designed for low-stress applications
- Fiberglass reinforced for puncture, shear and tear resistance

BERGQUIST GAP PAD TGP 2000 is recommended for low-stress applications that require a mid to high thermally conductive interface material. The highly conformable nature of the material allows the pad to fill in air voids and air gaps between PC boards and heat sinks or metal chassis with stepped topography, rough surfaces and high stack-up tolerances.

BERGQUIST GAP PAD TGP 2000 is offered with inherent natural tack on both sides of the material allowing for stick-in-place characteristics during application assembly. The material is supplied with protective liners on both sides. The top side has reduced tack for ease of handling.

TYPICAL APPLICATIONS

- Power electronics DC/DC; 1/4, 1/2, full bricks, etc.
- Mass storage devices
- Graphics card / processor / ASIC
- Wireline / wireless communications hardware
- Automotive engine / transmission controls

TYPICAL PROPERTIES OF CURED MATERIAL

Young's modulus is calculated using 0.01 in/min, step rate of strain with a sample size 0.79 inch² .

Physical Properties		
Hardness, Shore 00		30
, Thirty second delay value , ASTM D2240, Bulk rubber		
Heat Capacity, ASTM E1269, J/g-K		0.6
Density, Bulk rubber, ASTM D792, g/cc		2.9
Flammability, UL 94		V-0
Young's Modulus, ASTM D575	kPa (psi)	310 (45)
Electrical Properties		
Dielectric Breakdown Voltage , ASTM D149, VAC		>5,000
Dielectric Constant, ASTM D150, 1,000Hz		6.0
Volume Resistivity, ASTM D257, ohm-meter		1×10^{11}
Thermal Properties		
Thermal Conductivity, ASTM D5470, W/(m-K)		2.0
Thermal Impedance, 0.040 inch ASTM D5470, ºC-in²/W:		
10% Deflection		0.97
20% Deflection		0.89
30% Deflection		0.8

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 GAP PAD TGP 2000 is available in the following configurations:

- Sheet form
- Die-Cut parts

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: 25ºC (±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

(°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