Technical Data Sheet

BERGQUIST GAP PAD TGP 1000HD

Known as BERGQUIST GAP PAD 1000HD
November 2018

PRODUCT DESCRIPTION

Highly Durable, Conformable, Thermally Conductive, Gap Filling Material.

Technology	Silicone
Appearance	Gray/Black
Reinforcement Carrier	Polyimide
Thickness ASTM D374	0.508 to 3.175 mm
Inherent Surface Tack	1 (1 or 2 side)
Application	Thermal management, TIM (Thermal Interface Material)
Operating Temperature Range	-60 to 180ºC

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

BERGQUIST GAP PAD TGP 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 BERGQUIST GAP PAD TGP 1000HD allows excellent interfacing and wet-out characteristics, even to surfaces with a high degree of roughness or uneven topography. The asymmetric construction of BERGQUIST GAP PAD TGP 1000HD provides minimal tack on the polyimide side, with high inherent tack on the upcoated side. BERGQUIST GAP PAD TGP 1000HD can be assembled with manual or automated processes.

TYPICAL APPLICATIONS

- 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 semiconductor and a heat sink

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties		
Hardness, Shore 00, ASTM D2240, Bulk rubber		40
Heat Capacity, ASTM E1269, J/g-K		1.0
Density, ASTM D792, g/cc		2.1
Flammability, UL 94		V-0
Young's Modulus, ASTM D575 (1)	kPa (psi)	414 (60)
Electrical Properties		
Dielectric Breakdown Voltage , ASTM D149, VAC		>10,000
Dielectric Constant, ASTM D150, 1,000Hz		5.5
Volume Resistivity, ASTM D257, ohm-meter		1×10^{11}
Thermal Properties		
Thermal Conductivity, ASTM D5470, W/(m-K)		1.0
Thermal Impedance, 0.040"(2) ASTM D5470, ºC-in²/W:		
10% Deflection		1.7
20% Deflection		1.59
30% Deflection		1.47

(1) Young's Modulus, calculated using 0.01 in/min. step rate of strain with a sample size of 0.79 inch²

(2) The ASTM D5470 test fixture was utilized. The recorded values include the interfacial thermal resistance. The 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 1000HD is available in the following configurations:

- Sheet form and die-cut parts

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:
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