



BERGQUIST GAP PAD TGP 1300U

Known as BERGQUIST GAP PAD VO ULTIMATE
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PRODUCT DESCRIPTION

Ultra Conformability, Robust, Improved Thermal Conductivity, Gap Filling Material.

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

FEATURES AND BENEFITS

- Thermal Conductivity: 1.3 W/m-K
- Ultra conformability
- “Gel-like” modulus
- Excellent rebound
- Decreased strain
- Remarkable handling
- Electrically isolating

BERGQUIST GAP PAD TGP 1300U is a robust, highly compliant product that is ideal for both small and large gap designs. The fiberglass carrier on one side of the material allows ease of rework, excellent handling characteristics and puncture resistance. Additionally the fiberglass carrier has a slight inherent tack, minimizing any shifting during assembly.

The conformable and elastic nature of BERGQUIST GAP PAD TGP 1300U allows excellent interfacing and wet-out characteristics, even to surfaces with a high degree of roughness or uneven topography. The construction of BERGQUIST GAP PAD TGP 1300U one side has high inherent tack, while the other side has minimal tack. This combination is useful for manual and automated processes.

TYPICAL APPLICATIONS

- Various IC packages
- Thermally enhanced BGA packages
- Between any heat-generating semiconductor and a heat sink
- Computer and peripherals
- Telecommunications
- Power conversion

- Automotive
- LED lighting packages

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	1.0
Density, Bulk rubber, ASTM D792, g/cc	1.8
Flammability, UL 94	V-0
Young's Modulus, ASTM D575	kPa 90 (psi) (13)

Electrical Properties

Dielectric Breakdown Voltage , ASTM D149, VAC	6,000
Dielectric Constant, ASTM D150, 1,000Hz	5.0
Volume Resistivity, ASTM D257, ohm-meter	1×10 ⁹

Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	1.3
Thermal Impedance, 0.040 inch	
ASTM D5470, °C-in ² /W:	
10% Deflection	1.6
20% Deflection	1.55
30% Deflection	1.46

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 1300U 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: 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

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

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