



# BERGQUIST GAP PAD TGP 2000SF

Known as BERGQUIST GAP PAD 2000SF

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## PRODUCT DESCRIPTION

Thermally Conductive, Silicone-Free Gap Filling Material.

<b>Technology</b>	Silicone free
Appearance	Green
Reinforcement Carrier	Fiberglass
Thickness, ASTM D374	0.254 to 3.175mm
Inherent Surface Tack	2 (1 or 2 sided)
<b>Application</b>	Thermal management, TIM (Thermal Interface Material)
Operating Temperature Range	-60 to 125°C

## FEATURES AND BENEFITS

- High Thermal Conductivity: 2 W/m-K
- Natural inherent tack reduces interfacial thermal resistance and aids assembly
- Conforms to demanding contours and maintains structural integrity with little stress applied to fragile component leads
- Fiberglass reinforced for puncture, shear and tear resistance

BERGQUIST GAP PAD TGP 2000SF is a silicone-free insulating material. Silicone-sensitive applications benefit from this fiberglass-reinforced gap filling material, which combines electrical isolation with exceptional thermal performance (2.0 W/mK).

While highly thermally conductive, the material is exceptionally soft and more compliant than other silicone-free materials. BERGQUIST GAP PAD TGP 2000SF is capable of conforming to the most demanding contours while applying little stress on component leads.

## TYPICAL APPLICATIONS

- Automotive brushed motors
- Optical applications
- Set top boxes
- Hard drives
- Relays or other electrical components with open contacts

## TYPICAL PROPERTIES OF CURED MATERIAL

## Physical Properties

Hardness, Shore 00, Thirty second delay value, ASTM D2240, Bulk rubber	70
Heat Capacity, ASTM C351, J/g-K	1.0
Density, ASTM D792, g/cc	2.8
Flammability, UL 94	V-0
Young's Modulus, ASTM D575	kPa 228 (psi) (33)

Young's Modulus, calculated using 0.01 in/min. step rate of strain with a sample size of 0.89 inch<sup>2</sup>.

## 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 <sup>8</sup>

## Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	2.0
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## Thermal Performance vs. Pressure

TO-220 Thermal Performance, °C/W(10 mil)	
@ 10 psi	2.26
@ 25 psi	2.22
@ 50 psi	2.1
@ 100 psi	1.95
@ 200 psi	1.74

Thermal Impedance, ASTM D5470, °C-in <sup>2</sup> /W <sup>(1)</sup>	
@ 10 psi	0.67
@ 25 psi	0.5
@ 50 psi	0.42
@ 100 psi	0.39
@ 200 psi	0.37

(1) 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 2000SF is available in the following configurations:

- Die-cut parts are available in any shape or size, separated or in sheet form
- Standard material thicknesses of 10, 15, 20, 40, 60, 80, 100 and 125 mil
- Custom thicknesses available upon request

**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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