

Gap Pad® 2000SF

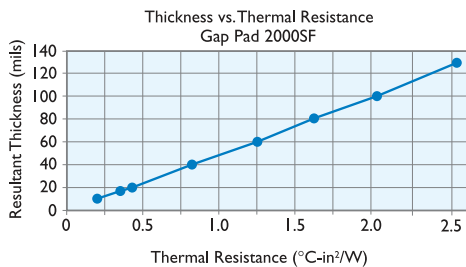
Thermally Conductive, Silicone-Free Gap Filling Material

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



Gap Pad 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. Gap Pad 2000SF is capable of conforming to the most demanding contours while applying little stress on component leads.



Note: Resultant thickness is defined as the final gap thickness of the application.

TYPICAL PROPERTIES OF GAP PAD 2000SF

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD			
Color	Green	Green	Visual			
Reinforcement Carrier	Fiberglass	Fiberglass	—			
Thickness (inch) / (mm)	0.010 to 0.125	0.254 to 3.175	ASTM D374			
Inherent Surface Tack (1 or 2 sided)	2	2	—			
Density (g/cc)	2.8	2.8	ASTM D792			
Heat Capacity (J/g-K)	1.0	1.0	ASTM C351			
Hardness (Bulk Rubber) (Shore 00) (1)	70	70	ASTM D2240			
Young's Modulus (psi) / (kPa) (2)	33	228	ASTM D575			
Continuous Use Temp (°F) / (°C)	-76 to 257	-60 to 125	—			
ELECTRICAL						
Dielectric Breakdown Voltage (Vac)	>5000	>5000	ASTM D149			
Dielectric Constant (1000 Hz)	6.0	6.0	ASTM D150			
Volume Resistivity (Ohm-meter)	10 ⁸	10 ⁸	ASTM D257			
Flame Rating	V-O	V-O	U.L. 94			
THERMAL						
Thermal Conductivity (W/m-K)	2.0	2.0	ASTM D5470			
THERMAL PERFORMANCE vs. PRESSURE						
	Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W) (10 mil)		2.26	2.22	2.10	1.95	1.74
Thermal Impedance (°C-in ² /W) (3)		0.67	0.50	0.42	0.39	0.37

1) Thirty second delay value Shore 00 hardness scale. 2) Young's Modulus, calculated using 0.01 in/min. step rate of strain with a sample size of 0.79 inch². For more information on Gap Pad modulus, refer to Bergquist Application Note #116. 3) The ASTM D5470 test fixture was used. 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.

Typical Applications

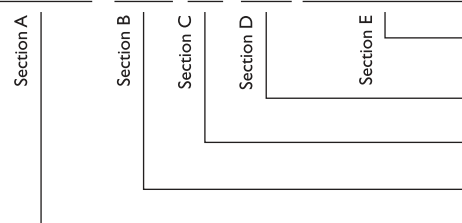
- Automotive brushed motors
- Optical Applications
- Relays or other electrical components with open contacts
- Set top boxes
- Hard Drives

Configurations Available:

- 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.

Building a Part Number

GP2000SF - 0.020 - 02 - 0816 - NA



Standard Options

example

NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

0816 = Standard sheet size 8" x 16", or 00 = custom configuration

02 = Natural tack, both sides

Standard thicknesses available: 0.010", 0.015", 0.020", 0.040", 0.060", 0.080", 0.100", 0.125"

GP2000SF = Gap Pad 2000SF Material

Note: To build a part number, visit our website at www.bergquistcompany.com.

Gap Pad®: U.S. Patent 5,679,457 and others



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