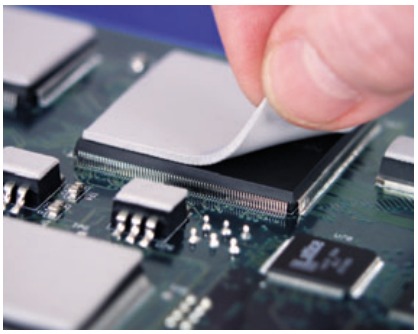
Gap Pad® 2000S40

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

Features & Benefits

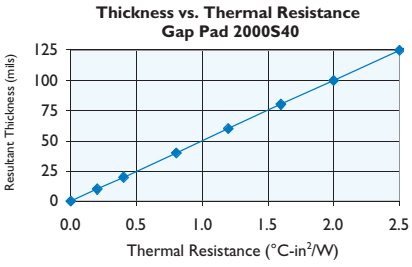
- Thermal conductivity = 2.0 W/mK
- Low S-Class thermal resistance at very low pressures
- Highly conformable low hardness
- Designed for low stress applications
- Fiberglass reinforced for puncture, shear and tear resistance



Gap Pad 2000S40 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.

Gap Pad 2000S40 is electrically isolating, thus well-suited for applications requiring electrical isolation between heat sinks and high voltage, bare leaded devices. Gap Pad 2000S40 is a filled, thermally conductive polymer reinforced with a fiberglass carrier on one side, allowing for easy material handling and enhanced puncture, shear, and tear resistance.

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



TYPICAL PROPERTIES OF GAP PAD 2000S40

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Gray	Gray	Visual
Reinforcement Carrier	Fiberglass	Fiberglass	—
Thickness (inch) / (mm)	0.020 to 0.125	0.508 to 3.175	ASTM D374
Inherent Surface Tack (1 or 2 sided)	2	2	—
Density (g/cc)	2.9	2.9	ASTM D792
Heat Capacity (J/g-K)	0.6	0.6	ASTM C351
Hardness, Bulk Rubber (Shore 00) (1)	35	35	ASTM D2240
Young's Modulus (psi) / (kPa) (2)	45	310	ASTM D575
Continuous Use Temp (°F) / (°C)	-76 to 392	-60 to 200	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	340	13.4 kVac/mm	ASTM D149
Dielectric Constant (1000 Hz)	6.0	6.0	ASTM D150
Volume Resistivity (Ohm-meter)	4.2×10^{11}	4.2×10^{11}	ASTM D257
Flame Rating	V-O	V-O	U.L.
THERMAL			
Thermal Conductivity (W/m-K)	2.0	2.0	ASTM D5470

1) One 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.

Typical Applications Include:

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

Configurations Available:

- Die cut parts in any shape or size, separated or in sheet form.

Building a Part Number

GP2000S40 - 0.020 - 02 - 0816 - NA

Section A: GP2000S40 = Gap Pad 2000S40

Section B: Standard thicknesses available: 0.020", 0.040", 0.060", 0.080", 0.100", 0.125"

Section C: 02 = Naturally tacky both sides

Section D: 0816 = Standard sheet size 8" X 16", 00 = Custom configuration

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

Standard Options

example

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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