

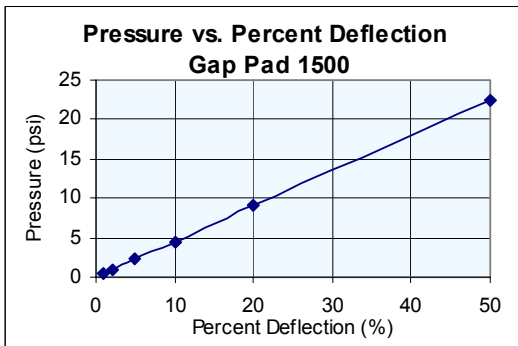
## High Thermally Conductive Gap Filling Material

### Features and Benefits

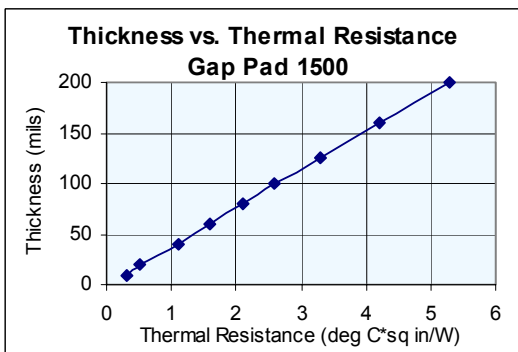
- Thermal conductivity 1.5 W/m-K
- Low modulus characteristics
- Electrically isolating
- Two-sided inherent surface tack

Gap Pad 1500 has an ideal filler blend that gives it's low modulus characteristic yet maintains optimal thermal performance. The tacky nature of both sides of the material allows for good compliance to adjacent surfaces of components, minimizing interfacial resistance.

To calculate the approximate amount of deflection for a specific material thickness, at a given pressure, refer to the graph below. Multiply the thickness of the material by the percentage at the given pressure.\*



The resultant thickness of the Gap Pad will determine the thermal resistance. Subtracting the initial gap pad thickness by the deflection value, obtained above, will give the resultant thickness. Refer to the graph below to obtain the thermal resistance of the material.



Typical Properties of Gap Pad 1500			
Property	Imperial Value	Metric Value	Test Method
Color	Black	Black	Visual
Reinforcement Carrier	None	None	***
Thickness, (inch) / (mm)	0.020 to 0.200	0.508 to 5.080	ASTM D374
Inherent Surface Tack, 1 or 2 sided	2	2	***
Density, (g/cc)	2.1	2.1	ASTM D792
Heat Capacity, (J/g-K)	1.0	1.0	ASTM C351
Hardness, bulk rubber, (Shore 00)	40	40	ASTM D2240
Young's Modulus, (psi)/(kPa) (I)	45	310	ASTM D575
Continuous Use Temp., (°F) / (°C)	-76 to 392	-60 to 200	***
Electrical	Imperial Value	Metric Value	Test Method
Dielectric Breakdown Voltage, (VAC)	>6000	>6000	ASTM D149
Dielectric Constant, (1000 Hz)	5.5	5.5	ASTM D150
Volume Resistivity, (Ohm-meter)	10 <sup>11</sup>	10 <sup>11</sup>	ASTM D257
Flame Rating	94 V-O	94 V-O	U.L.
Thermal	Imperial Value	Metric Value	Test Method
Thermal Conductivity, (W/m-K)	1.5	1.5	ASTM D5470

1) Graphs and data generated from Young's Modulus, calculated using 0.01 inch/min. step rate of strain with a sample size of 0.79 inch<sup>2</sup>. For more information on Gap Pad modulus refer to Bergquist Application Note #116.

### Typical Applications Include

- Telecommunications
- Computer and peripherals
- Power conversion
- RDRAM<sup>™</sup> memory modules / chip scale packages
- CDROM / DVD cooling
- Area where heat needs to be transferred to a frame, chassis, or other type of heat spreader

### Configurations

Available:

- Sheet form
- Die-Cut parts
- Standard sheet size is 8" x 16"
- Standard thickness of:  
0.020", 0.040", 0.060", 0.080", 0.100", 0.125", 0.160", 0.200"

We produce thousands of specials. Tooling charges vary depending on tolerances and complexity of the part.

Gap Pad<sup>®</sup>: U.S. Patent 5,679,457 and others.