Gap Pad®VO Ultra Soft

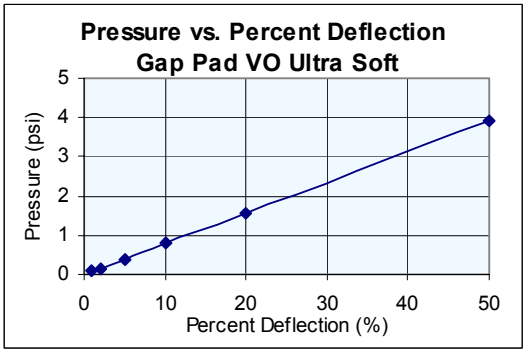
Highly Conformable, Thermally Conductive Material for Filling Air Gaps

Features and Benefits

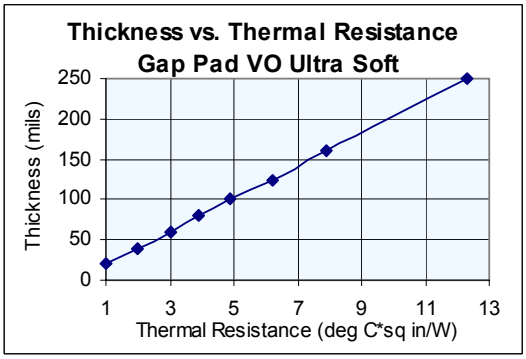
- Thermal conductivity 1.0 W/m-K
- Highly conformable nature
- Shock absorbing characteristics
- Electrically isolating

Gap Pad VO Ultra Soft is recommended for applications that require a minimum amount of stress on components. The viscoelastic nature of the material also gives excellent low stress vibration dampening and shock absorbing characteristics. Gap Pad VO Ultra Soft is an electrically isolating material, which allows its use in applications requiring isolation between heat sinks and high voltage, bare leaded devices.

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 VO Ultra Soft

Property	Imperial Value	Metric Value	Test Method
Color	Mauve / Pink	Mauve / Pink	Visual
Reinforcement Carrier	Sil-Pad	Sil-Pad	***
Thickness, (inch) / (mm)	0.020 to 0.250	0.508 to 6.350	ASTM D374
Inherent Surface Tack, 1 or 2 sided	1	1	***
Density, (g/cc)	1.6	1.6	ASTM D792
Heat Capacity, (J/g-K)	1.0	1.0	ASTM C351
Hardness, bulk rubber, (Shore 00)	15	15	ASTM D2240
Young's Modulus, (psi)/(kPa) (1)	8	55	ASTM D575
Continuous Use Temp., (°F) / (°C)	-76 to 392	-60 to 200	***
Electrical			
Dielectric Breakdown Voltage, (Vac)	>6000	>6000	ASTM D149
Dielectric Constant, (1000 Hz)	5.5	5.5	ASTM D150
Volume Resistivity, (Ohm-meter)	10^{11}	10^{11}	ASTM D257
Flame Rating	94 V-O	94 V-O	U.L.
Thermal			
Thermal Conductivity, (W/m-K)	1.0	1.0	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 $inch^2$. For more information on Gap Pad modulus refer to Bergquist Application Note #116.

Typical Applications Include

- Telecommunications
- Computer and peripherals
- Power conversion
- Between heat generating semiconductors and a heat sink
- Area where heat needs to be transferred to a frame, chassis, or other type of heat spreader
- Between heat generating magnetic components and a heat sink

Configurations

Available:

- Sheet form
- Die-Cut parts
- With or without pressure sensitive adhesive
- 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", 0.250"

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

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

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