BERGQUIST

Technical Data Sheet

Gap Pad® 3500ULM

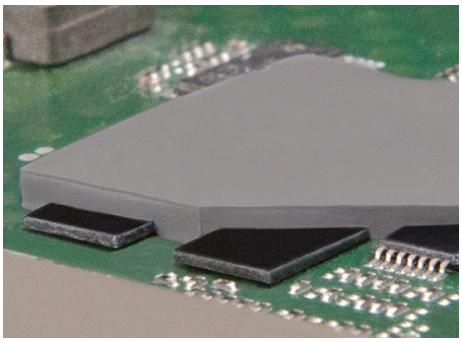
December 2014

PRODUCT DESCRIPTION

Highly Conformable, Thermally Conductive, Ultra-Low Modulus Material

FEATURES AND BENEFITS

- Thermal Conductivity: 3.5 W/m-K
- Fiberglass reinforced for shear and tear resistance
- Non-fiberglass option for applications that require an additional reduction in stress



Gap Pad® 3500ULM (ultra-low modulus) is an extremely soft gap filling material with a thermal conductivity of 3.5 W/m-K. The material offers exceptional thermal performance at low pressures due to a unique 3.5 W/m-K filler package and ultra-low modulus resin formulation. The enhanced material is well suited for high performance applications requiring extremely low assembly stress. Gap Pad® 3500ULM maintains a conformable nature that allows for excellent interfacing and wet-out characteristics, even to surfaces with high roughness and/or topography.

Gap Pad® 3500ULM is offered with and without fiberglass and has higher natural inherent tack on one side of the material, eliminating the need for thermally-impeding adhesive layers. The top side has minimal tack for ease of handling. Gap Pad® 3500ULM is supplied with protective liners on both sides.

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

TYPICAL PROPERTIES OF GAP PAD 3500ULM

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Gray	Gray	Visual
Reinforcement Carrier	Fiberglass or No fiberglass	Fiberglass or No fiberglass	—
Thickness (inch) / (mm)	0.020 to 0.125	0.508 to 3.175	ASTM D374
Inherent Surface Tack	2	2	—
Density (Bulk Rubber) (g/cc)	3.1	3.1	ASTM D792
Heat Capacity (J/g-K)	1.0	1.0	ASTM E1269
Young's Modulus (psi) / (kPa) (1) (2)	4	27.5	—
Continuous Use Temp (°F) / (°C)	-76 to 392	-60 to 200	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	>5000	>5000	ASTM D149
Dielectric Constant (1000 Hz) (3)	6.0	6.0	ASTM D150
Volume Resistivity (Ohm-meter)	10^{10}	10^{10}	ASTM D257
Flame Rating	V-O	V-O	U.L. 94
THERMAL			
Thermal Conductivity (W/m-K)	3.5	3.5	ASTM D5470

THERMAL PERFORMANCE vs. STRAIN			
Deflection (% strain)	10	20	30
Thermal Impedance (°C-in²/W) 0.040" (4)	0.50	0.44	0.39

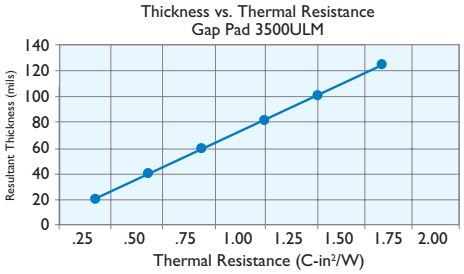
1) Young's Modulus, calculated using 0.01 in/min. step rate of strain with a sample size of 0.79 inch² after 5 minutes of compression at 10% strain on a 1mm thickness material.
2) Thirty second delay value Shore 000 hardness scale is 70 for 125 mil.
3) Minimum value at 20 mil.
4) The ASTM D5470 test 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 INCLUDE

- Consumer electronics
- ASICs and DSPs
- Telecommunications
- PC applications

CONFIGURATIONS AVAILABLE

- Sheet form and die-cut parts



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