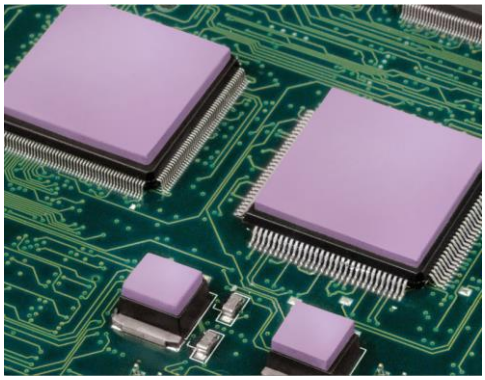
Gap Pad HC 5.0 (Pr. Barracuda)

Highly Conformable, Thermally Conductive, Low Modulus Material Preliminary 02.18.2015

- Thermal Conductivity: 5.0 W/m-K
- Highly-compliance, low compression low compression stress
- Fiberglass reinforced for shear and tear resistance



Gap Pad HC 5.0 is a soft and compliant gap filling material with a thermal conductivity of 5.0 W/m-K. The material offers exceptional thermal performance at low pressures due to a unique 5.0 W/m-K filler package and low-modulus resin formulation. The enhanced material is ideal for applications requiring low stress on components and boards during assembly. Gap Pad HC 5.0 maintains a conformable nature that allows for excellent interfacing and wet-out characteristics, even to surfaces with high roughness and/or topography.

Gap Pad HC 5.0 is offered with natural inherent tack on both sides of the material, eliminating the need for thermally-impeding adhesive layers. The top side has minimal tack for ease of handling. Gap Pad HC 5.0 is supplied with protective liners on both sides.

Typical Properties of Gap Pad HC 5.0

PROPERTY	Imperial Value	Metric Value	Test Method
PHYSICAL			
Color	Violet	Violet	Visual
Reinforcement Carrier	Fiberglass	Fiberglass	—
Thickness (inch) / (mm)	0.020 to 0.125	0.508 to 3.175	ASTM D374
Inherent Surface Tack (Sides)	2	2	—
Density (Bulk Rubber) (g/cc)	3.6	3.6	ASTM D792
Heat Capacity (J/g-K)	1.0	1.0	ASTM E1269
Hardness (Bulk Rubber) Shore 00 (3)	35	35	ASTM 2240
Young's Modulus (psi) / (kPa) (1)	17.5	121	ASTM D575
Continuous Use Temp (°F) / (°C)	-76 to 392	-60 to 200	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac) (4)	>5000	>5000	ASTM D149
Dielectric Constant (1000 Hz)	7.5	7.5	ASTM D150
Volume Resistivity (Ohm-meter)	10^9	10^9	ASTM D257
Flame Rating	TBD	TBD	U.L.94
THERMAL			
Thermal Conductivity (W/mK)	5.0	5.0	ASTM D5470
Thermal Performance vs Strain			
Deflection (% strain)	10	20	30
Thermal Impedance (°C-in²/W) (2)	0.40	0.33	0.29

(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) 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. Based on 40 mil material.

(3) Thirty second delay value on Shore 00 hardness scale.

(4) Minimum value at 20 mil

Preliminary data for reference only. Bergquist will update pending on further results.

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