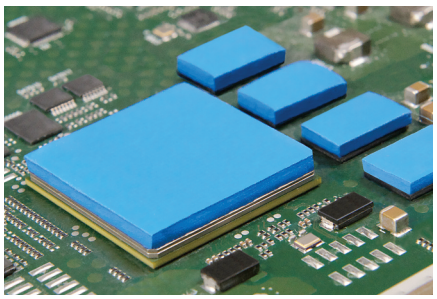
Gap Pad® HC 3.0

High-Compliance, Thermally Conductive, Low Modulus Material

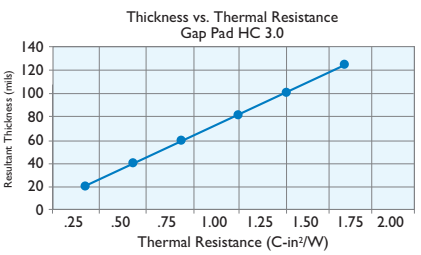
Features and Benefits

- Thermal Conductivity: 3.0 W/m-K
- High-compliance, low compression stress
- Fiberglass reinforced for shear and tear resistance



Gap Pad® HC 3.0 is a soft and compliant gap filling material with a thermal conductivity of 3.0 W/m-K. The material offers exceptional thermal performance at low pressures due to a unique 3.0 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 3.0 maintains a conformable nature that allows for quick recovery and excellent wet-out characteristics, even to surfaces with high roughness and/or topography.

Gap Pad® HC 3.0 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 3.0 is supplied with protective liners on both sides.



TYPICAL PROPERTIES OF GAP PAD HC 3.0

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Blue	Blue	Visual
Reinforcement Carrier	Fiberglass	Fiberglass	—
Thickness (inch) / (mm)	0.010 to 0.125	0.254 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
Hardness (Bulk Rubber) (Shore 00) (4)	15	15	ASTM D2240
Young's Modulus (psi) / (kPa) (1)	16	110	ASTM D575
Continuous Use Temp (°F) / (°C)	-76 to 392	-60 to 200	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac) (3)	5000	5000	ASTM D149
Dielectric Constant (1000 Hz)	6.5	6.5	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) (2)	3.0	3.0	ASTM D5470

THERMAL PERFORMANCE vs. STRAIN			
Deflection (% strain)	10	20	30
Thermal Impedance (°C-in²/W) 0.040" (2)	0.57	0.49	0.44

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.
3) Typical value at 20 mil.
4) Thirty second delay value on Shore 00 hardness scale.

Typical Applications Include:

- Telecommunications
- ASICs and DSPs
- Consumer electronics
- Thermal modules to heat sinks

Configurations Available:

- Sheet form and die-cut parts

Building a Part Number

GPHC3.0 – 0.020 – 02 – 0816 – NA

- Section A: GPHC3.0 = Gap Pad HC 3.0 Material with fiberglass
- Section B: 0.020 = Standard thicknesses available: 0.010", 0.015", 0.020", 0.030", 0.040", 0.060", 0.080", 0.100", 0.125"
- Section C: 02 = Natural tack, both sides (With Fiberglass)
- Section D: 0816 = Standard sheet size 8" x 16", or 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.

BERGQUIST www.bergquistcompany.com

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