

# Gap Pad® HC 5.0

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### PRODUCT DESCRIPTION

Highly Conformable, Thermally Conductive, Low Modulus Material

#### **FEATURES AND BENEFITS**

- Thermal Conductivity: 5.0 W/m-K
- · High-compliance, 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 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.

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

TYPICAL PROPERTIES OF GAP PAD HC 5.0					
PROPERTY	IMPERIAL VALUE	METRIC VALUE		TEST METHOD	
Color	Violet	Violet		Visual	
Reinforcement Carrier	Fiberglass	Fiberglass		_	
Thickness (inch) / (mm)*	0.020, 0.040, 0.060, 0.080, 0.100, 0.125	0.508, 1.016, 1.524, 2.032, 2.540, 3.175		ASTM D374	
Inherent Surface Tack	2	2		_	
Density (Bulk Rubber) (g/cc)	3.2	3.2		ASTM D792	
Heat Capacity (J/g-K)	1.0	1.0		ASTM E1269	
Hardness (Bulk Rubber) (Shore 00) (4)	35	35		ASTM 2240	
Young's Modulus (psi) / (kPa) (1)	17.5	121		ASTM D575	
Typical Use Temp (°F) / (°C)	-76 to 392	-60 to 200		_	
ELECTRICAL					
Dielectric Breakdown Voltage (Vac) (3)	5000	5000		ASTM D149	
Dielectric Constant (1000 Hz)	8.0	8.0		ASTM D150	
Volume Resistivity (Ohm-meter)	1010	1010		ASTM D257	
Flame Rating	V-O	V-O		U.L.94	
THERMAL					
Thermal Conductivity (W/m-K) (2)	5.0 5.0		)	ASTM D5470	
THERMAL PERFORMANCE vs. STRAIN					
	Deflection (% strain)			20	30
Thermal Impedance (°C-in²/W) 0.040" (2) 0.35			0.30	0.26	

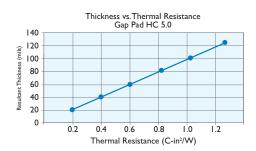
<sup>\*</sup> Custom thicknesses available. Please contact your Henkel Sales Representative for more information.

# TYPICAL APPLICATIONS INCLUDE

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

## **CONFIGURATIONS AVAILABLE**

· Sheet form and die-cut parts



PDS GP HC 5 0616



<sup>1)</sup> 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

<sup>2)</sup> 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.

<sup>3)</sup> Minimum value at 20 mil.

a) Thirty second delay value on Shore 00 hardness scale.

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