

Gap Pad® EMI 1.0

May 2015

PRODUCT DESCRIPTION

Thermally Conductive, Conformable EMI Absorbing Material

FEATURES AND BENEFITS

- Thermal Conductivity: 1.0 W/m-K
- Electromagnetic Interference (EMI) absorbing
- Highly conformable, low hardness
- Fiberglass reinforced for puncture, shear and tear resistance
- Electrically isolating



Gap Pad® EMI 1.0 is a highly conformable, combination gap filling material offering both thermal conductivity performance and Electromagnetic Energy absorption (cavity resonances and/or cross-talk causing Electromagnetic Interference) at frequencies of 1GHz and higher.

The material offers EMI suppression and 1.0 W/m-K thermal conductivity performance with low assembly stress. The soft nature of the material enhances wet-out at the interface resulting in better thermal performance than harder materials with a similar performance rating.

Gap Pad® EMI 1.0 has an inherent, natural tack on one side of the material eliminating the need for thermally-impeding adhesive layers and allowing improved handling during placement and assembly. The other side is tack-free, again enhancing handling and rework, if required. Gap Pad® EMI 1.0 is supplied with a protective liner on the material's tacky side.

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

TYPICAL PROPERTIES OF GAP PAD EMI 1.0

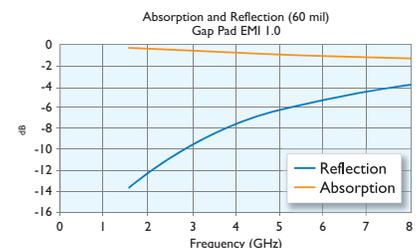
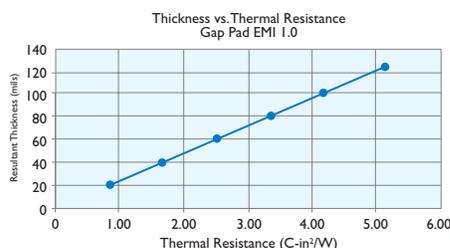
PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD	
Color	Black	Black	Visual	
Reinforcement Carrier	Fiberglass	Fiberglass	—	
Thickness (inch) / (mm)	0.020 to 0.125	0.508 to 3.175	ASTM D374	
Inherent Surface Tack	I	I	—	
Density (Bulk Rubber) (g/cc)	2.4	2.4	ASTM D792	
Heat Capacity (J/g-K)	1.3	1.3	ASTM E1269	
Hardness (Bulk Rubber) (Shore 00) (1)	5	5	ASTM D2240	
Young's Modulus (psi) / (kPa) (2)	10	69	ASTM D575	
Continuous Use Temp (°F) / (°C)	-76 to 392	-60 to 200	—	
ELECTRICAL				
Dielectric Breakdown Voltage (Vac)	>1700	>1700	ASTM D149	
Dielectric Constant (1000 Hz)	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)	1.0	1.0	ASTM D5470	
THERMAL PERFORMANCE vs. STRAIN				
	Deflection (% strain)	10	20	30
	Thermal Impedance (°C-in ² /W) 0.040"	1.53	1.40	1.25
EMI PERFORMANCE (ASTM D-5568-01 TEST METHOD)				
	Absorption (4)	dB/inch	dB/cm	
	@ 2.4 GHz	-7	-2.8	
	@ 5 GHz	-14	-5.5	
1) Thirty second delay value Shore 00 hardness scale. 2) Young's Modulus, calculated using 0.01 in/min. step rate of strain with a sample size of 0.79 inch ² . Relaxation stress @ 40 mil. 3) 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. 4) Based on waveguide testing with 60 mil thickness testing.				

TYPICAL APPLICATIONS INCLUDE

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

CONFIGURATIONS AVAILABLE

- Sheet form and die-cut parts



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Disclaimer

Note:

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