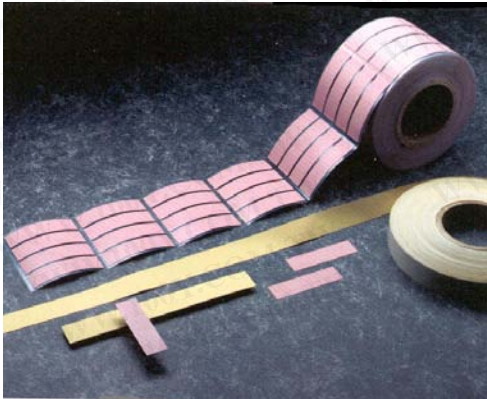


High Performance Insulator for Low Pressure Applications

Features and Benefits

- Thermal impedance
0.45°C-in²/W (@50 psi)
- Low mounting pressures
- Smooth and highly compliant surface
- Electrically isolating



The Sil-Pad 800 family of thermally conductive insulation materials is designed for applications requiring high thermal performance and electrical isolation. These applications also typically have low mounting pressures for component clamping.

Sil-Pad 800 material combines a smooth and highly compliant surface characteristic with high thermal conductivity. These features optimize the thermal resistance properties at low pressure.

Applications requiring low component clamping forces include discrete semiconductors (TO-220, TO-247 and TO-218) mounted with spring clips. Spring clips assist with quick assembly but apply a limited amount of force to the semiconductor. The smooth surface texture of Sil-Pad 800 minimizes interfacial thermal resistance and maximizes thermal performance.

Typical Properties of Sil-Pad 800						
Property	Imperial Value	Metric Value	Test Method			
Color	Gold	Gold	Visual			
Reinforcement Carrier	Fiberglass	Fiberglass	***			
Thickness, (inch) / (mm)	0.005	0.127	ASTM D374			
Hardness, (Shore A)	91	91	ASTM D2240			
Elongation, (%45° to Warp & Fill)	20	20	ASTM D412			
Tensile Strength, (psi) / (Mpa)	1700	12	ASTM D412			
Continuous Use Temp., (°F) / (°C)	-76 to 356	-60 to 180	***			
Electrical	Imperial Value	Metric Value	Test Method			
Dielectric Breakdown Voltage, (VAC)	1700	1700	ASTM D149			
Type 3 Electrodes	3000	3000	ASTM D149			
Dielectric Constant, (1000 Hz)	6.0	6.0	ASTM D150			
Volume Resistivity, (Ohm-meter)	10 ¹⁰	10 ¹⁰	ASTM D257			
Flame Rating	94 V-O	94 V-O	U.L.			
Thermal	Imperial Value	Metric Value	Test Method			
Thermal Conductivity, (W/m-K)	1.6	1.6	ASTM D5470			
Thermal Impedance vs. Pressure						
	Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance, (°C/W)		3.56	3.01	2.45	2.05	1.74
Thermal Impedance, (°C-in ² /W) (I)		0.92	0.60	0.45	0.36	0.29

I). The ASTM D5470 (Bergquist Modified) test fixture was used. The recorded value includes interfacial thermal resistance. These values are given to the customer for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

Typical Applications Include

- Power supplies
- Automotive electronics
- Motor controls
- Power semiconductors

Configurations

Available:

- Sheet form
- Die-Cut parts
- Roll form
- With or without pressure sensitive adhesive

We produce thousands of specials. Tooling charges vary depending on tolerances and complexity of the part.

Sil-Pad[®]: U.S. Patents 4,574,879; 4,602,125; 4,602,678; 4,685,987; 4,842,911 and others

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