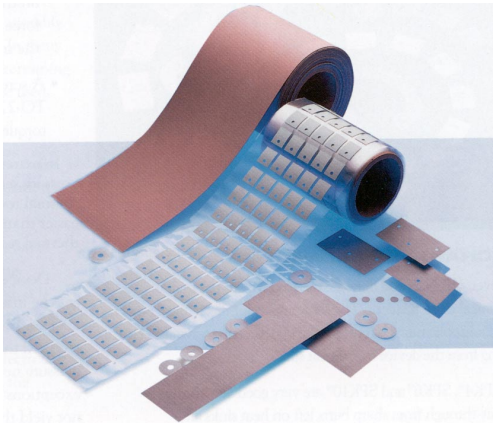
THE BERGQUIST COMPANY

Sil-Pad®400

The Original Sil-Pad Material

Features and Benefits

- Thermal impedance 1.13°C-in²/W (@50 psi)
- Original sil-pad material
- Excellent mechanical and physical characteristics
- Flame retardant



Sil-Pad 400 is a composite of silicone rubber and fiberglass. It is flame retardant and is specially formulated for use as a thermally conductive insulator. Primary use is to electrically isolate power sources from heat sinks.

Sil-Pad 400 has excellent mechanical and physical characteristics. Surfaces are pliable and allow complete surface contact with excellent heat dissipation. Sil-Pad 400 actually improves its thermal resistance with age. The reinforcing fiberglass gives excellent cut-through resistance and Sil-Pad 400 is non-toxic and resists damage from cleaning agents.

MIL SPEC. MIL-M-38527/8A
MIL-M-38527C
MIL-I-49456
MIL-M-87111
U.L. FILE NUMBER E59150
FSCM NUMBER 55285

Typical Properties of Sil-Pad 400

Property	Imperial Value	Metric Value	Test Method
Color	Gray	Gray	Visual
Reinforcement Carrier	Fiberglass	Fiberglass	***
Thickness, (inch) / (mm)	0.007, 0.009	0.178, 0.229	ASTM D374
Hardness, (Shore A)	85	85	ASTM D2240
Breaking Strength, (lbs./inch) / (kN/m)	100	18	ASTM D1458
Elongation, (%45° to Warp & Fill)	40	40	ASTM D412
Tensile Strength, (psi) / (Mpa)	3000	20	ASTM D412
Continuous Use Temp., (°F) / (°C)	-76 to 356	-60 to 180	***
Electrical	**Imperial Value**	**Metric Value**	**Test Method**
Dielectric Breakdown Voltage, (VAC)	3500, 4500	3500, 4500	ASTM D149
Dielectric Constant, (1000 Hz)	5.5	5.5	ASTM D150
Volume Resistivity, (Ohm-meter)	10^{11}	10^{11}	ASTM D257
Flame Rating	94 V-O	94 V-O	U.L.
Thermal	**Imperial Value**	**Metric Value**	**Test Method**
Thermal Conductivity, (W/m-K)	0.9	0.9	ASTM D5470

Thermal Impedance vs. Pressure

	Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance, (°C/W)	0.007"	6.62	5.93	5.14	4.38	3.61
TO-220 Thermal Performance, (°C/W)	0.009"	8.51	7.62	6.61	5.63	4.64
Thermal Impedance, (°C-in²/W) (1)	0.007"	1.82	1.42	1.13	0.82	0.54
Thermal Impedance, (°C-in²/W) (1)	0.009"	2.34	1.83	1.45	1.05	0.69

1). 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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