

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. The material is flame retardant and is specially formulated for use as a thermally conductive insulator. The primary use for Sil-Pad 400 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 provides excellent cut-through resistance. In addition, Sil-Pad 400 is non-toxic and resists damage from cleaning agents.

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)		30	5		ASTM D1458	
Elongation (%45° to Warp and Fill)		54	54		ASTM D412	
Tensile Strength (psi) / (MPa)		3000	20		ASTM D412	
Continuous Use Temp (°F) / (°C)		-76 to 356	-60 to 180		—	
ELECTRICAL						
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		V-O	V-O		U.L. 94	
THERMAL						
Thermal Conductivity (W/m-K)		0.9	0.9		ASTM D5470	
THERMAL PERFORMANCE 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-in ² /W) 0.007" (1)		1.82	1.42	1.13	0.82	0.54
Thermal Impedance (°C-in ² /W) 0.009" (1)		2.34	1.83	1.45	1.05	0.69
1) 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.						

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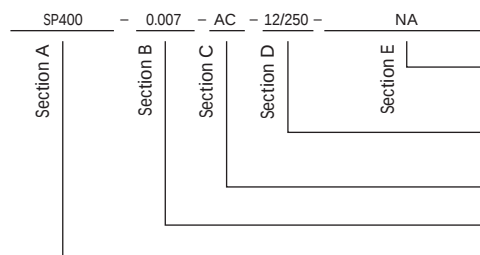
Typical Applications Include:

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

Configurations Available:

- Sheet form, die-cut parts and roll form; with or without pressure sensitive adhesive

Building a Part Number



Standard Options

◀ example

NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

1212 = Standard configuration dash number, 1212 = 12" x 12" sheets, 12/250 = 12" x 250' rolls, or 00 = custom configuration

AC = Adhesive, one side; AC2 = Adhesive, two sides; or 00 = no adhesive

Standard thicknesses available: 0.007", 0.009"

SP400 = Sil-Pad 400 Material

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

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