

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. 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 (Bergquist modified) 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.

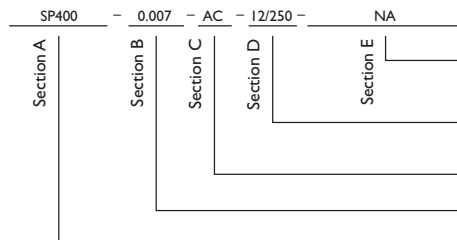
Typical Applications Include:

- Power supplies
- Power semiconductors
- Military Specifications:
- MIL-M-38527/8A - MIL-M-38527C - MIL-I-49456 - MIL-M-87111
- Automotive electronics
- U.L. File Number E59150
- Motor controls
- FSCM Number 55285

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.

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

AC = Adhesive on one side,
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



www.bergquistcompany.com

The Bergquist Company -
North American Headquarters
18930 West 78th Street
Chanhassen, MN 55317
Phone: 800-347-4572
Fax: 952-835-0430

The Bergquist Company - Europe
Bramenberg 9a, 3755 BT Eemnes
Netherlands
Phone: 31-35-5380684
Fax: 31-35-5380295

The Bergquist Company - China
Rm. 7C, Aihe Mansion
No. 629 Ling Ling Road
Shanghai, China 200030
Ph: 86-21-6464-2206
Fax: 86-21-6464-2209

All statements, technical information and recommendations herein are based on tests we believe to be reliable, and THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MARKETABILITY AND FITNESS FOR PURPOSE. Sellers' and manufacturers' only obligation shall be to replace such quantity of the product proved to be defective. Before using, user shall determine the suitability of the product for its intended use, and the user assumes all risks and liability whatsoever in connection therewith. NEITHER SELLER NOR MANUFACTURER SHALL BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE, DIRECT, INCIDENTAL OR CONSEQUENTIAL, INCLUDING LOSS OF PROFITS OR REVENUE ARISING OUT OF THE USE OR THE INABILITY TO USE A PRODUCT. No statement, purchase order or recommendations by seller or purchaser not contained herein shall have any force or effect unless in an agreement signed by the officers of the seller and manufacturer.

PDS_10093_SP_400_0305