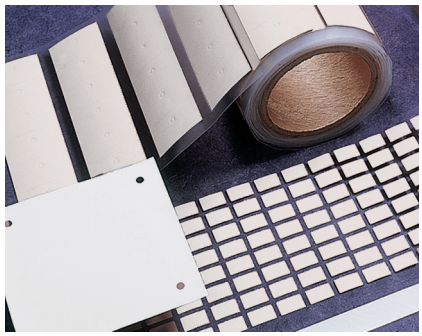
Sil-Pad® 2000

Higher Performance, High Reliability Insulator

Features and Benefits

- Thermal impedance: 0.38°C-in²/W (@50 psi)
- Optimal heat transfer
- High thermal conductivity: 3.5 W/m-K



Sil-Pad 2000 is a high performance, thermally conductive insulator designed for demanding aerospace and commercial applications.

Sil-Pad 2000 is a silicone elastomer formulated to maximize the thermal and dielectric performance of the filler/binder matrix. The result is a grease-free, conformable material capable of meeting or exceeding the thermal and electrical requirements of high-reliability electronic packaging applications.

TYPICAL PROPERTIES OF SIL-PAD 2000

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	White	White	Visual
Reinforcement Carrier	Fiberglass	Fiberglass	—
Thickness (inch) / (mm)	0.010 to 0.020	0.254 to 0.508	ASTM D374
Hardness (Shore A)	90	90	ASTM D2240
Continuous Use Temp (°F) / (°C)	-76 to 392	-60 to 200	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	4000	4000	ASTM D149
Dielectric Constant (1000 Hz)	4.0	4.0	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)	3.5	3.5	ASTM D5470

THERMAL PERFORMANCE vs PRESSURE

Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)	2.61	2.32	2.02	1.65	1.37
Thermal Impedance (°C-in²/W) (1)	0.57	0.43	0.38	0.35	0.30

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.

Typical Applications Include:

- Power supplies
- Power semiconductors
- Avionics
- Motor controls
- U.L. File Number E59150
- Aerospace

Configurations Available:

- Sheet form, die-cut parts
- With or without pressure sensitive adhesive

Building a Part Number

SP2000 – 0.010 – AC – 00 – NA

Section A: SP2000 = Sil-Pad 2000 Material

Section B: Standard thicknesses available: 0.010", 0.015", 0.020"

Section C: AC = Adhesive, one side; 00 = No adhesive

Section D: ___ = Standard configuration dash number, 1212 = 12" x 12" sheets, or 00 = custom configuration

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

Standard Options

example

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

THE BERGQUIST COMPANY 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 - European Headquarters
Bramenberg 9a, 3755 BT Eemnes
Netherlands
Phone: 31-35-5380684
Fax: 31-35-5380295

The Bergquist Company - Asia
Room 15, 8/F Wah Wai Industrial Centre
No. 38-40, Au Pui Wan Street
Fotan, Shatin, N.T. Hong Kong
Ph: 852.2690.9296
Fax: 852.2690.2344