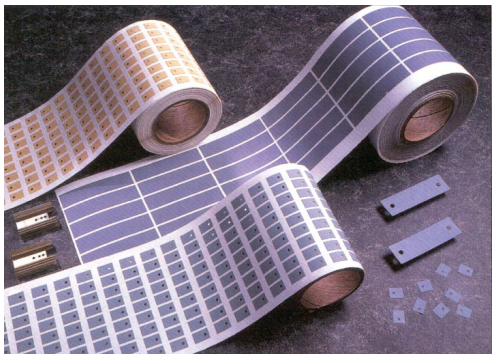
Sil-Pad® K-10

The High Performance Kapton® Based Insulator

Features and Benefits

- Thermal impedance 0.41°C-in²/W (@50 psi)
- Tough dielectric barrier against cut-through
- High performance film
- Designed to replace ceramic insulators



Sil-Pad K-10 is a high performance insulator. It combines special film with a filled silicone rubber. The result is a product with good cut-through properties and excellent thermal performance.

Sil-Pad K-10 is designed to replace ceramic insulators such as Beryllium Oxide, Boron Nitride, and Alumina. These insulators are expensive and they break easily. Sil-Pad K-10 eliminates breakage and costs much less than ceramics.

Typical Properties of Sil-Pad K-10

Property	Imperial Value	Metric Value	Test Method
Color	Beige	Beige	Visual
Reinforcement Carrier	Kapton	Kapton	***
Thickness, (inch) / (mm)	0.006	0.152	ASTM D374
Hardness, (Shore A)	90	90	ASTM D2240
Breaking Strength, (lbs./inch) / (kN/m)	30	5	ASTM D1458
Elongation, (%45° to Warp & Fill)	40	40	ASTM D412
Tensile Strength, (psi) / (Mpa)	5000	34	ASTM D412
Continuous Use Temp., (°F) / (°C)	-76 to 356	-60 to 180	***
Electrical	**Imperial Value**	**Metric Value**	**Test Method**
Dielectric Breakdown Voltage, (VAC)	6000	6000	ASTM D149
Dielectric Constant, (1000 Hz)	3.7	3.7	ASTM D150
Volume Resistivity, (Ohm-meter)	10^{12}	10^{12}	ASTM D257
Flame Rating	VTM-O	VTM-O	U.L.
Thermal	**Imperial Value**	**Metric Value**	**Test Method**
Thermal Conductivity, (W/m-K)	1.3	1.3	ASTM D5470

Thermal Impedance vs. Pressure

Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance, (°C/W)	2.35	2.19	2.01	1.87	1.76
Thermal Impedance, (°C-in²/W) (1)	0.86	0.56	0.41	0.29	0.24

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
- 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.

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

The Bergquist Company
North American Headquarters
18930 West 78th Street
Chanhassen, MN 55317
Phone: 800-347-4572
Fax: 952-835-4156

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

The Bergquist Company-Asia
9F-1, No. 314, Section 4
Ren Ai Road
Taipei, Taiwan, ROC 106
Phone: 886-2-2700-7796
Fax: 886-2-2700-7795