

## Polyester-Based, Thermally Conductive Insulation Material

### Features and Benefits

- Thermal impedance: 0.60°C-in<sup>2</sup>/W (@50 psi)
- Polyester based
- For applications requiring non-silicone conformal coatings
- Designed for silicone-sensitive applications
- Excellent dielectric strength and thermal performance



Poly-Pad K-10 is a composite of film coated with a polyester resin. The material offers superior thermal performance for your most critical applications with a thermal resistance of 0.2°C-in<sup>2</sup>/W as well as excellent dielectric strength.

Polyester-based, thermally conductive insulators from Bergquist provide a complete family of materials for silicone-sensitive applications. Poly-Pads are ideally suited for applications requiring conformal coatings or applications where silicone contamination is a concern (telecomm and certain aerospace applications). Poly-Pads are constructed with ceramic-filled polyester resins coating either side of a fiber-glass carrier or a film carrier. The Poly-Pad family offers a complete range of performance characteristics to match individual applications.

TYPICAL PROPERTIES OF POLY-PAD K-10						
PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD			
Color	Yellow	Yellow	Visual			
Reinforcement Carrier	Kapton	Kapton	—			
Thickness (inch) / (mm)	0.006	0.152	ASTM D 374			
Hardness (Shore A)	90	90	ASTM D 2240			
Breaking Strength (lbs/inch) / (kN/m)	30	5	ASTM D 1458			
Elongation (%)	40	40	ASTM D 412			
Tensile Strength (psi) / (MPa)	5000	34	ASTM D 412			
Continuous Use Temp (°F) / (°C)	-4 to 302	-20 to 150	—			
<b>ELECTRICAL</b>						
Dielectric Breakdown Voltage (Vac)	6000	6000	ASTM D 149			
Dielectric Constant (1000 Hz)	3.7	3.7	ASTM D 150			
Volume Resistivity (Ohm-meter)	10 <sup>12</sup>	10 <sup>12</sup>	ASTM D 257			
Flame Rating	V-O	V-O	U.L.94			
<b>THERMAL</b>						
Thermal Conductivity (W/m-K)	1.3	1.3	ASTM D 5470			
<b>THERMAL PERFORMANCE vs PRESSURE</b>						
	Pressure (psi)	10	25	50	100	200
	TO-220 Thermal Performance (°C/W)	3.76	3.35	2.75	2.30	2.03
	Thermal Impedance (°C-in <sup>2</sup> /W) (1)	1.04	0.80	0.60	0.43	0.30

1) The ASTM D 5470 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.

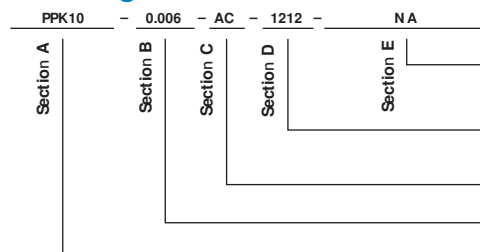
### Typical Applications Include:

- Power supplies
- Motor controls
- Power semiconductors

### Configurations Available:

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

### Building a Part Number



### Standard Options

◀ example

N A = 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, one side  
00 = No adhesive

Standard thicknesses available: 0.006"

PPK10 = Poly-Pad K-10 Material

Note: To build a part number, visit our website at [www.bergquistcompany.com](http://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

Kapton® is a registered trademark of DuPont.



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