

Polyester-Based, Thermally Conductive Insulation Material

Features and Benefits

- Thermal impedance: 0.82° C-in²/W (@50 psi)
- Polyester based
- For applications requiring non-silicone conformal coatings
- Designed for silicone-sensitive applications requiring high performance



Poly-Pad 1000 is a fiberglass-reinforced insulator coated with a filled polyester resin. The material offers superior thermal resistance for high performance applications.

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 fiberglass 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 1000						
PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD			
Color	Yellow	Yellow	Visual			
Reinforcement Carrier	Fiberglass	Fiberglass	—			
Thickness (inch) / (mm)	0.009	0.229	ASTM D 374			
Hardness (Shore A)	90	90	ASTM D 2240			
Breaking Strength (lbs/inch) / (kN/m)	100	18	ASTM D 1458			
Elongation (%)	10	10	ASTM D 412			
Tensile Strength (psi) / (MPa)	7000	48	ASTM D 412			
Continuous Use Temp (°F) / (°C)	-4 to 302	-20 to 150	—			
ELECTRICAL						
Dielectric Breakdown Voltage (Vac)	2500	2500	ASTM D 149			
Dielectric Constant (1000 Hz)	4.5	4.5	ASTM D 150			
Volume Resistivity (Ohm-meter)	10 ¹¹	10 ¹¹	ASTM D 257			
THERMAL						
Thermal Conductivity (W/m-K)	1.2	1.2	ASTM D 5470			
THERMAL PERFORMANCE vs PRESSURE						
	Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)		4.70	4.25	3.74	3.27	2.89
Thermal Impedance (°C-in ² /W) (1)		1.30	1.02	0.82	0.61	0.43

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.

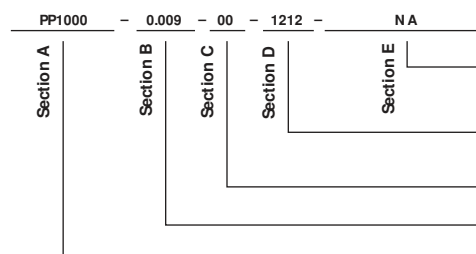
Typical Applications Include:

- Power supplies
- Automotive electronics
- 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

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, one side
00 = No adhesive

Standard thicknesses available: 0.009"

PP1000 = Poly-Pad 1000 Material

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

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



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