Technical Data Sheet

BERGQUIST SIL PAD TSP PP1200

Known as BERGQUIST POLY-PAD 1000
September 2019

PRODUCT DESCRIPTION

Polyester-Based, Thermally Conductive Insulation Material.

Technology	Polyester-based
Appearance	Yellow
Reinforcement Carrier	Fiberglass
Total Thickness , ASTM D374	0.229mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-20 to 150ºC

FEATURES AND BENEFITS

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

TYPICAL APPLICATIONS

- Power supplies
- Automotive electronics
- Motor controls
- Power semiconductors

BERGQUIST SIL PAD TSP PP1200 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

Physical Properties

Hardness, Shore A, ASTM D2240	90
Breaking Strength, ASTM D1458, KN/m	18
Elongation , ASTM D412,%	10
Tensile Strength, ASTM D412, MPa	48

Electrical Properties

Dielectric Breakdown Voltage , ASTM D149, Vac	2,500
Dielectric Constant, ASTM D150 @ 1,000 Hz	4.5
Volume Resistivity, ASTM D257, ohm-meter	1×10^{11}

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K)	1.2

Thermal Performance vs. Pressure

TO-220 Thermal Performance, ºC/W	
@ 10 psi	4.7
@ 25 psi	4.25
@ 50 psi	3.74
@ 100 psi	3.27
@ 200 psi	2.89
Thermal Impedance, ASTM D5470, ºC-in²/W (1)	
@ 10 psi	1.3
@ 25 psi	1.02
@ 50 psi	0.82
@ 100 psi	0.61
@ 200 psi	0.43

I) 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.

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

CONFIGURATIONS AVAILABLE

BERGQUIST SIL PAD TSP PP1200 are supplied in:

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

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb/F
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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