Technical Data Sheet

BERGQUIST BOND PLY TBP 800

Known as BERGQUIST BOND-PLY 800
October 2018

PRODUCT DESCRIPTION

Thermally Conductive, Fiberglass Reinforced Pressure Sensitive Adhesive Tape.

Technology	Acrylic
Appearance	Gray
Reinforcement Carrier	Fiberglass
Total Thickness	0.005, 0.008 inch (0.127, 0.203 mm)
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-40 to 125ºC

FEATURES AND BENEFITS

- Thermal impedance: 0.6ºC-in²/W @ 50 psi
- High bond strength to most epoxies and metals
- Double-sided, pressure sensitive adhesive tape
- High performance, thermally conductive acrylic adhesive
- More cost-effective than heat-cure adhesive, screw mounting or clip mounting

TYPICAL APPLICATIONS

- Mount LED assembly to troffer housing
- Mount LED assembly to heat sink
- Mount heat spreader onto power converter PCB or onto motor control PCB
- Mount heat sink onto BGA graphic processor or drive processor

BERGQUIST BOND PLY TBP 800 is a thermally conductive, electrically isolating double-sided tape. BERGQUIST BOND PLY TBP 800 is utilized in lighting applications that require thermal transfer and electric isolation.

High bond strengths obtained at ambient temperature lead to significant processing cost savings in labor, materials and throughput due to the elimination of mechanical fasteners and high temperature curing.

TYPICAL PROPERTIES

Physical Properties

Elongation , 45º to warp and fill, ASTM D412,%		70
Coefficient of Thermal Expansion, ASTM D 3386, ppm/°C		600
Flammability Rating, UL 94		V-0
Tensile Strength	MPa (psi)	10 (1,500)

Adhesion Properties

Lap Shear Strength @ 25 °C, ASTM D1002 (1)	MPa (psi)	1.0 (150)

Electrical Properties

Dielectric Breakdown Voltage , ASTM D149:	
@ 0.005" (Vac)	4,000
@ 0.008" (Vac)	6,000
Dielectric Constant , ASTM D150 @ 1,000 Hz	4.0
Volume Resistivity, ASTM D257, ohm-meter	1×10^{11}

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K)	0.8

Thermal Performance vs. Pressure

TO-220 Thermal Performance, ºC/W:	
@ 0.005":	
@ 10 psi	5.0
@ 25 psi	5.0
@ 50 psi	4.8
@ 100 psi	4.3
@ 200 psi	4.2
@ 0.008":	
@ 10 psi	6.2
@ 25 psi	6.0
@ 50 psi	5.6
@ 100 psi	5.3
@ 200 psi	5.2
Thermal Impedance, ASTM D5470, ºC-in²/W (2):	
@ 0.005":	
@ 10 psi	0.63
@ 25 psi	0.62
@ 50 psi	0.6
@ 100 psi	0.58
@ 200 psi	0.57
@ 0.008":	
@ 10 psi	0.78
@ 25 psi	0.74
@ 50 psi	0.72
@ 100 psi	0.71
@ 200 psi	0.71

1) Tested per ASTM D1002 with aluminum lap shear samples, 75 psi applied for 5 seconds then pressure removed. 0.5 square inch BERGQUIST BOND PLY TBP 800

2) 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 BOND PLY TBP 800 are supplied in:

- Sheet form
- Roll form
- Die-Cut parts

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

Disclaimer

Note:

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