Technical Data Sheet

BERGQUIST BOND PLY TBP 400B

Known as BOND-PLY 660B BERGQUIST
October 2018

PRODUCT DESCRIPTION

Silicone-Free Formulation, High Performance Thermally Conductive Material.

Technology	Acrylic
Appearance	White
Reinforcement Carrier	PEN Film
Total Thickness	0.14 mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-30 to 120ºC

FEATURES AND BENEFITS

- Designed to replace mechanical fasteners or screws
- For applications that require electrical isolation
- Double-sided, pressure sensitive adhesive tape

TYPICAL APPLICATIONS

- Mount heat sink onto BGA graphic processor
- Mount heat sink onto drive processor
- Mount heat spreader onto power converter PCB
- Mount heat spreader onto motor control PCB

BERGQUIST BOND PLY TBP 400B is a thermally conductive, electrically insulating, double-sided pressure sensitive adhesive tape. The tape consists of a high performance, thermally conductive acrylic adhesive coated on both sides of a PEN film. Use BERGQUIST BOND PLY TBP 400B in applications to replace mechanical fasteners or screws.

SHELF LIFE

The double-sided, pressure sensitive adhesive used in LOCTITE BERGQUIST BOND PLY® products requires the use of dual liners to protect the surfaces from contaminants.

The recommended shelf life for BERGQUIST BOND PLY TBP 400B is 6 months at a maximum continuous storage temperature of 35°C or 3-months at a maximum continuous storage temperature of 45°C, for maintenance of controlled adhesion to the liner.

The shelf life of the Bond Ply material, without consideration of liner adhesion (which is often not critical for manual assembly processing), is recommended at 12 months from date of manufacture at a maximum continuous storage temperature of 60°C.

TYPICAL PROPERTIES

Physical Properties	
Temperature Coefficient of Resistance, 30 seconds, ºC	200
Elongation , ASTM D412,%	40
Tensile Strength, ASTM D412, MPa	210
Glass Transition Temperature, ASTM E1356, °C	-30
Coefficient of Thermal Expansion, ASTM D3386, ppm	250
Flammability Rating, UL 94	V-0
Adhesion Properties	
Lap Shear Strength, ASTM D1002, MPa:	
@ 25°C	0.7
After 5 hours @ 100ºC	1.4
After 2 mins @ 200ºC	1.4
Static Dead Weight Shear Strength, PSTC#7, ºC	150
Electrical Properties	
Dielectric Breakdown Voltage , ASTM D149, Vac	6,000
Thermal Properties	
Thermal Conductivity , ASTM D5470, W/(m-K)	0.4
Thermal Performance vs. Pressure	
TO-220 Thermal Performance, ºC/W:	
@ 10 psi	5.28
@ 25 psi	5.1
@ 50 psi	4.95
@ 100 psi	4.8
@ 200 psi	4.51
Thermal Impedance, ASTM D5470, ºC-in²/W (1):	
@ 10 psi	0.59
@ 25 psi	0.59
@ 50 psi	0.58
@ 100 psi	0.58
@ 200 psi	0.58

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 BOND PLY TBP 400B are supplied in:

- 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

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