Technical Data Sheet

BERGQUIST BOND PLY TBP 400P

Known as BERGQUIST BOND-PLY 660P
October 2018

PRODUCT DESCRIPTION

Thermally Conductive, Film Reinforced, Pressure Sensitive Adhesive Tape.

Technology	Acrylic
Appearance	Light brown
Reinforcement Carrier	Polyimide Film
Total Thickness	0.203 mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-40 to 125ºC

FEATURES AND BENEFITS

- Thermal impedance: 0.87ºC-in²/W @ 50 psi
- Highly puncture resistant Polyimide reinforcement carrier
- Double-sided, pressure sensitive adhesive tape
- Provides a mechanical bond, eliminating the need for mechanical fasteners or screws

TYPICAL APPLICATIONS

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

BERGQUIST BOND PLY TBP 400P 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 Polyimide film. Use BERGQUIST BOND PLY TBP 400P 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 400P 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

Glass Transition Temperature, ASTM E1356, °C		-30
Flammability Rating, UL 94		V-0

Adhesion Properties

Lap Shear Strength, ASTM D1002:

@ 25°C	MPa	0.7
	(psi)	(100)
After 5 hours @ 100ºC	MPa	1.4
	(psi)	(200)
After 2 minutes @ 200ºC	MPa	1.4
	(psi)	(200)

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	5.48
@ 25 psi	5.47
@ 50 psi	5.15
@ 100 psi	5.05
@ 200 psi	5.0
Thermal Impedance, ASTM D5470, ºC-in²/W (1):	
@ 10 psi	0.83
@ 25 psi	0.82
@ 50 psi	0.81
@ 100 psi	0.8
@ 200 psi	0.79

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 400P 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
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

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