Technical Data Sheet

BERGQUIST BOND PLY TBP 400

Known as BERGQUIST BOND-PLY 400
October 2018

PRODUCT DESCRIPTION

Thermally Conductive, Unreinforced, Pressure Sensitive Adhesive Tape.

Technology	Acrylic
Appearance	White
Total Thickness	0.076 to 0.254 mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-30 to 120ºC

FEATURES AND BENEFITS

- Thermal impedance: 0.87ºC-in²/W @ 50 psi
- Easy application
- Eliminates need for external hardware (screws, clips, etc.)
- Available with easy release tabs

TYPICAL APPLICATIONS

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

BERGQUIST BOND PLY TBP 400 is an un-reinforced, thermally conductive, pressure sensitive adhesive tape. The tape is supplied with protective topside tabs and a carrier liner.

BERGQUIST BOND PLY TBP 400 is designed to attain high bond strength to a variety of “low energy” surfaces, including many plastics, while maintaining high bond strength with long term exposure to heat and high humidity.

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 400 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	3,000

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K)	0.4

Thermal Performance vs. Pressure

TO-220 Thermal Performance, ºC/W:	
@ 0.005":	
@ 10 psi	5.4
@ 25 psi	5.4
@ 50 psi	5.4
@ 100 psi	5.4
@ 200 psi	5.4
Thermal Impedance, ASTM D5470, ºC-in²/W (1):	
@ 50 psi	0.87

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 400 are supplied in:

- Die-cut parts (supplied on rolls with easy release, protective tabs)

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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