

BOND-PLY 400

Thermally Conductive, Unreinforced, Pressure Sensitive Adhesive Tape

Features and Benefits

- Thermal impedance: 0.87°C-in.²/W (@ 50 psi)
- Easy application
- Eliminates need for external hardware (screws, clips, etc.)
- Available with easy release tabs



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

Typical Applications Include:

Secure:

- 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

Configurations Available:

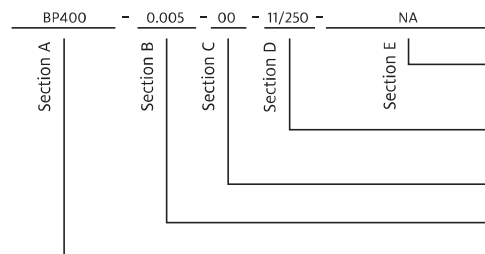
- Die-cut parts (supplied on rolls with easy release, protective tabs)

TYPICAL PROPERTIES OF BOND-PLY 400

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD		
Color	White	White	Visual		
Thickness (in.) / (mm)	0.005 to 0.010	0.127 to 0.254	ASTM D374		
Glass Transition (°F) / (°C)	-22	-30	ASTM E1356		
Continuous Use Temp. (°F) / (°C)	-22 to 248	-30 to 120	—		
ADHESION					
Lap Shear @ RT (psi) / (mPa)	100	0.7	ASTM D1002		
Lap Shear after 5 hrs. @ 100°C	200	1.4	ASTM D1002		
Lap Shear after 2 mins. @ 200°C	200	1.4	ASTM D1002		
ELECTRICAL		VALUE	TEST METHOD		
Dielectric Breakdown Voltage (Vac.)		3,000	ASTM D149		
Flame Rating		V-O	UL 94		
THERMAL					
Thermal Conductivity (W/m-K)		0.4	ASTM D5470		
THERMAL PERFORMANCE VS. PRESSURE					
Initial Assembly Pressure (psi for 5 seconds)	10	25	50	100	200
TO-220 Thermal Performance (°C/W) 0.005 in.	5.4	5.4	5.4	5.4	5.4
Thermal Impedance (°C-in. ² /W) ¹⁾			0.87		
1) 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.					

Shelf Life: The double-sided pressure sensitive adhesive used in BOND-PLY products requires the use of dual liners to protect the surfaces from contaminants. Henkel recommends a 6-month shelf life at a maximum continuous storage temperature of 35°C, or 3-month shelf life 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.

Building a Part Number



Note: To build a part number, go to www.bergquistcompany.com/Part_Number_Builder.php.

Standard Options

◀ example

NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

11/250 = 11" x 250-foot rolls or 00 = custom configuration

00 = No adhesive

Standard thicknesses available: 0.005", 0.010"

BP400 = BOND-PLY 400 Material