BERGQUIST

Technical Data Sheet

Bond-Ply® 400

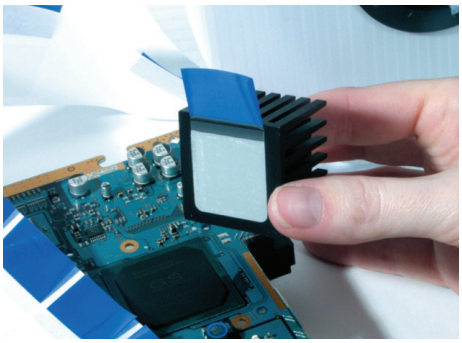
July 2014

PRODUCT DESCRIPTION

Thermally Conductive, Unreinforced, Pressure Sensitive Adhesive Tape

FEATURES AND BENEFITS

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



Bond-Ply® 400 is an un-reinforced, 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.

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. The recommended shelf life for Bergquist Bond-Ply® 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.

Note: To build a part number, visit our website at www.bergquistcompany.com.

TYPICAL PROPERTIES OF BOND-PLY 400

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	White	White	Visual
Thickness (inch) / (mm)	0.003 to 0.010	0.076 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 hr @ 100°C	200	1.4	ASTM D1002
Lap Shear after 2 min @ 200°C	200	1.4	ASTM D1002
ELECTRICAL		**VALUE**	**TEST METHOD**
Dielectric Breakdown Voltage (Vac)		3000	ASTM D149
Flame Rating		V-O	U.L.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"	5.4	5.4	5.4	5.4	5.4
Thermal Impedance (°C-in²/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.

TYPICAL APPLICATIONS INCLUDE

- 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)

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