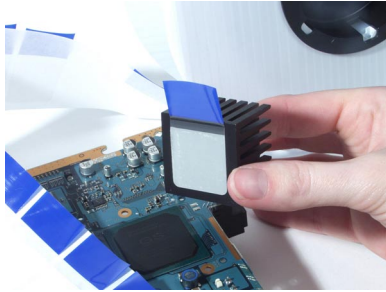


Thermally Conductive, Pressure Sensitive Adhesive Tape

Features and Benefits

- Thermal Performance
5.4 °C/W (1)
- Easy application
- Eliminates need for external hardware (screws, clips, etc.)
- Available with easy release tabs



Bergquist 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.

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:

- Sheet form or roll form
- Die-Cut parts
-can be supplied on rolls with easy release, protective tabs
- Standard sheet size is 10” by 10”
- Standard roll size is 10” by 300”
- Die-Cut parts can be supplied on rolls or as individual parts
- Thickness of: 0.003”, 0.005” and 0.010”

Typical Properties of Bond-Ply 400					
Property	Imperial Value	Metric Value	Test Method		
Color	White	White	Visual		
Thickness, (inch) / (mm)	0.005	0.127	ASTM D374		
Glass Transition, (°F) / (°C)	-22	-30	DSC		
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 5hr @ 100°C	>200	>1.4	ASTM D1002		
Lap Shear after 2min @ 200°C	>200	>1.4	ASTM D1002		
Electrical					
Dielectric Breakdown Voltage, (Vac)	3000	3000	ASTM D149		
Thermal					
Thermal Conductivity, (W/m-K)	0.4	0.4	ASTM D5470		
Thermal Performance vs. Assembly Pressure (1)					
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

1) Bergquist standard TO-220 thermal test methodology was utilized with initial application pressure at documented levels. At 5 seconds, the pressure was removed, reducing the interface pressure to negligible levels. Test results reveal consistency of interfacial loss over a wide range of assembly pressures. This is an inherent result of a highly compliant Bond Ply 400 design with excellent surface “wet-out” characteristics.

Shelf Life: The double-sided pressure sensitive adhesive (PSA) inherent with Bond Ply products require the use of dual liners to protect the surfaces from environmental contamination and accidental contact. The adhesive bond strength between the PSA and the protective liner will typically increase while in storage conditions. Thus, the worst-case shelf life for Bond Ply products is limited not by the material characteristics of Bond Ply, but by the adhesion of the Bond Ply PSA to the protective liner. Bergquist 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.

We produce thousands of specials. Tooling charges vary depending on tolerances and complexity of the part.

Bond-Ply®: U.S. Patent 5,090,484 and others.

Product Data Sheet / PDS-10001-BP400-rev 01