

## Thermally Conductive, Fiberglass Reinforced Pressure Sensitive Adhesive Tape

### Features and Benefits

- Thermal impedance: 0.52°C-in<sup>2</sup>/W (@50 psi)
- High bond strength to a variety of surfaces
- Double-sided, pressure sensitive adhesive tape
- High performance, thermally conductive acrylic adhesive
- Can be used instead of heat-cure adhesive, screw mounting or clip mounting



### Typical Applications Include:

- Mount heat sink onto BGA graphic processor or drive processor
- Mount heat spreader onto power converter PCB or onto motor control PCB

### Configurations Available:

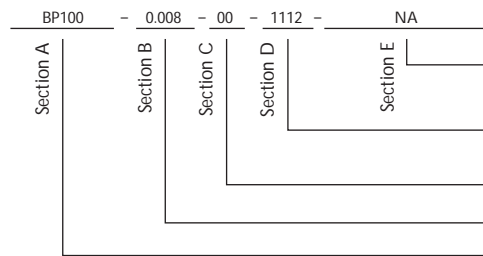
- Sheet form, roll form and die-cut parts

**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. 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.

### TYPICAL PROPERTIES OF BOND-PLY 100

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD		
Color	White	White	Visual		
Reinforcement Carrier	Fiberglass	Fiberglass	—		
Thickness (inch) / (mm)	0.005, 0.008, 0.011	0.127, 0.203, 0.279	ASTM D374		
Temp. Resistance, 30 sec. (°F) / (°C)	392	200	—		
Elongation (%45° to Warp & Fill)	70	70	ASTM D412		
Tensile Strength (psi) / (MPa)	900	6	ASTM D412		
CTE (ppm)	325	325	ASTM D3386		
Glass Transition (°F) / (°C)	-22	-30	ASTM 1356		
Continuous Use Temp (°F) / (°C)	-22 to 248	-30 to 120	—		
<b>ADHESION</b>					
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		
Static Dead Weight Shear (°F) / (°C)	302	150	PSTC#7		
<b>ELECTRICAL</b>		<b>VALUE</b>	<b>TEST METHOD</b>		
Dielectric Breakdown Voltage - 0.005" (Vac)		3000	ASTM D149		
Dielectric Breakdown Voltage - 0.008" (Vac)		6000	ASTM D149		
Dielectric Breakdown Voltage - 0.011" (Vac)		8500	ASTM D149		
Flame Rating		V-O	U.L.94		
<b>THERMAL</b>					
Thermal Conductivity (W/m-K)		0.8	ASTM D5470		
<b>THERMAL PERFORMANCE vs PRESSURE</b>					
Initial Assembly Pressure (psi for 5 seconds)	10	25	50	100	200
TO-220 Thermal Performance (°C/W) 0.005"	5.17	4.87	4.49	4.18	4.10
TO-220 Thermal Performance (°C/W) 0.008"	5.40	5.35	5.28	5.22	5.20
TO-220 Thermal Performance (°C/W) 0.011"	6.39	6.51	6.51	6.50	6.40
Thermal Impedance (°C-in <sup>2</sup> /W) 0.005" (1)	0.56	0.84	0.52	0.50	0.50
Thermal Impedance (°C-in <sup>2</sup> /W) 0.008" (1)	0.82	0.80	0.78	0.77	0.75
Thermal Impedance (°C-in <sup>2</sup> /W) 0.011" (1)	1.03	1.02	1.01	1.00	0.99
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.					

### Building a Part Number



Note: To build a part number, visit our website at [www.bergquistcompany.com](http://www.bergquistcompany.com).

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

### Standard Options

◀ example

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

1112 = 11" x 12" sheets, 11250 = 11" x 250' rolls  
or 00 = custom configuration

00 = No adhesive

Standard thicknesses available: 0.005", 0.008", 0.011"

BP100 = Bond-Ply 100 Material



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