Bond-Ply® 100

Thermally Conductive, Fiberglass Reinforced Pressure Sensitive Adhesive Tape

Features and Benefits

- Thermal impedance: 0.86°C-in²/W (@100 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

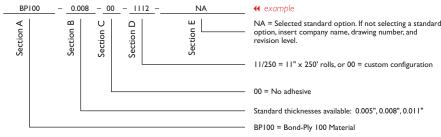
Shelf Life: The double-sided, pressure sensitive adhesive used in Bond-Ply products requires the use of dual liners to protect the surfaces from contaminants. Bergquist recommends a 6-month shelf life at a maximum continuous storage temperature of 35°C, or 3-month shelf life at a maximum continuous storage 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 | | _ | _ |
| 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 | |
| Static Dead Weight Shear (°F) / (°C) | 302 | | 150 | | PSTC#7 | |
| ELECTRICAL | | | VALUE | | TEST METHOD | |
| 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 | |
| THERMAL | | | | | | |
| Thermal Conductivity (W/m-K) | | | 0.8 | | ASTM D5470 | |
| THERMAL PERFORMANCE vs PRESSURE | | | | | | |
| Pres | sure (psi) | 10 | 25 | 50 | 100 | 200 |
| TO-220 Thermal Performance (°C/W) 0.005" | | 4.39 | 4.02 | 3.48 | 3.15 | 3.05 |
| TO-220 Thermal Performance (°C/W) 0.008" | | 5.11 | 4.69 | 4.53 | 4.45 | 4.38 |
| TO-220 Thermal Performance (°C/W) 0.011" | | 6.26 | 5.92 | 5.73 | 5.63 | 5.53 |
| Thermal Impedance (°C-in²/W) 0.005" (1) | | 0.78 | 0.61 | 0.58 | 0.55 | 0.54 |
| Thermal Impedance (°C-in²/W) 0.008" (1) | | 1.28 | 0.94 | 0.90 | 0.86 | 0.84 |
| Thermal Impedance (°C-in²/W) 0.011" (1) | | 2.47 | 1.22 | 1.19 | 1.14 | 1.11 |
| I) The ASTM D5470 (Bergquist modified) test fixture was used. The recorded value includes interfacial thermal resistance. These | | | | | | |

The ASTM DS4/0 (Bergquist modified) 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

Standard Options



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

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



www.bergquistcompany.com

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