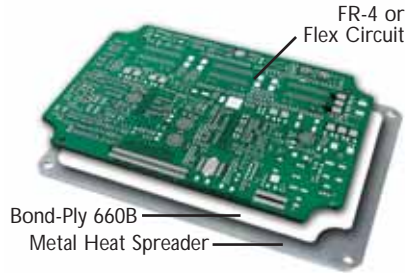


Bond-Ply® 660B

Silicone-Free Formulation, High Performance Thermally Conductive Material

Features and Benefits

- Designed to replace mechanical fasteners or screws
- For applications that require electrical isolation
- Double-sided pressure sensitive adhesive tape



Bond-Ply 660B is a thermally conductive, electrically insulating, double-sided pressure sensitive adhesive tape. The tape consists of a high performance, thermally conductive acrylic adhesive coated on both sides of a PEN film. Use Bond-Ply 660B in applications to replace mechanical fasteners or screws.

Typical Applications Include:

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

Configurations Available:

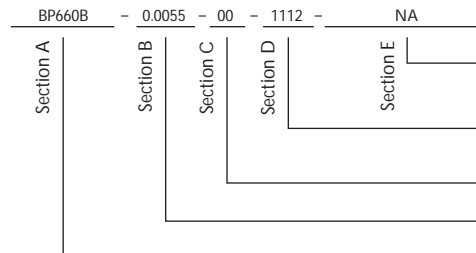
- Roll form and die-cut parts

The material as delivered will include a continuous base liner with differential release properties to allow simplicity in roll packaging and application assembly.

| TYPICAL PROPERTIES OF BOND-PLY 660B | | | | | |
|---|----------------|--------------|-------------|------|------|
| PROPERTY | IMPERIAL VALUE | METRIC VALUE | TEST METHOD | | |
| Color | White | White | Visual | | |
| Reinforcement Carrier | PEN Film | PEN Film | — | | |
| Thickness (inch) / (mm) | 0.0055 | 0.14 | ASTM D374 | | |
| Temp. Resistance, 30 sec. (°F) / (°C) | 392 | 200 | — | | |
| Elongation (%) | 40 | 40 | ASTM D412 | | |
| Tensile Strength (psi) / (MPa) | 30000 | 210 | ASTM D412 | | |
| CTE (ppm) | 250 | 250 | ASTM D3386 | | |
| 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 | | |
| Static Dead Weight Shear (°F) / (°C) | 302 | 150 | PSTC#7 | | |
| ELECTRICAL | | | | | |
| Dielectric Breakdown Voltage (Vac) | 6000 | 6000 | ASTM D149 | | |
| Flame Rating | V-O | V-O | U.L.94 | | |
| THERMAL | | | | | |
| Thermal Conductivity (W/m-K) | 0.4 | 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) | 5.28 | 5.10 | 4.95 | 4.80 | 4.51 |
| Thermal Impedance (°C-in ² /W) (1) | 0.59 | 0.59 | 0.58 | 0.58 | 0.58 |
| 1) The ASTM D5470 (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. | | | | | |

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.

Building a Part Number



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, 11/250 = 11" x 250' rolls, or 00 = custom configuration
 - 00 = No adhesive
 - Standard thicknesses available: 0.0055"
 - BP660B = Bond-Ply 660B Material

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

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



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