

Thermally Conductive, Unreinforced, Pressure Sensitive Adhesive Tape

## Features and Benefits

- Thermal impedance: 0.87°C-in<sup>2</sup>/W (@50 psi)
- 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:

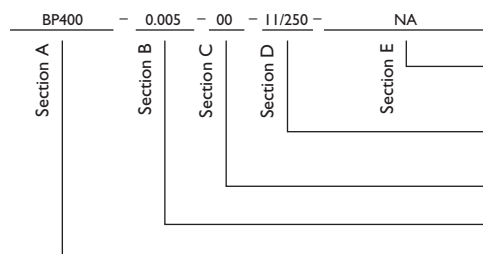
- Die-cut parts (supplied on rolls with easy release, protective tabs)

### 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          | ASTM E1356         |     |     |
| 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         |     |     |
| <b>ELECTRICAL</b>  |                | <b>VALUE</b> | <b>TEST METHOD</b> |     |     |
| Dielectric Breakdown Voltage (Vac)   |                | 3000         | ASTM D149          |     |     |
| Flame Rating   |                | V-O          | U.L.94             |     |     |
| <b>THERMAL</b>   |                |              |                    |     |     |
| Thermal Conductivity (W/m-K)   |                | 0.4          | 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"   | 5.4            | 5.4          | 5.4                | 5.4 | 5.4 |
| Thermal Impedance (°C-in <sup>2</sup> /W) (I)  |                |              | 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. |                |              |                    |     |     |

**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



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.

11/250 = 11" x 250' rolls or 00 = custom configuration

00 = No adhesive

Standard thicknesses available: 0.003", 0.005", 0.008", 0.010"

BP400 = Bond-Ply 400 Material



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