

BOND-PLY 800

Thermally Conductive, Fiberglass-Reinforced Pressure Sensitive Adhesive Tape

Features and Benefits

- Thermal impedance: 0.60°C-in.²/W (@ 50 psi)
- High bond strength to most epoxies and metals
- Double-sided, pressure sensitive adhesive tape
- High performance, thermally conductive acrylic adhesive
- More cost-effective than heat-cure adhesive, screw mounting or clip mounting



BOND-PLY 800 is a thermally conductive, electrically isolating double-sided tape.

BOND-PLY 800 is used in lighting applications that require thermal transfer and electric isolation. High bond strengths obtained at ambient temperature lead to significant processing cost savings in labor, materials and throughput due to the elimination of mechanical fasteners and high temperature curing.

Typical Applications Include:

- Mount LED assembly to troffer housing
- Mount LED assembly to heat sink
- Mount heat spreader onto power converter PCB or onto motor control PCB
- Mount heat sink to BGA graphic processor or drive processor

Configurations Available:

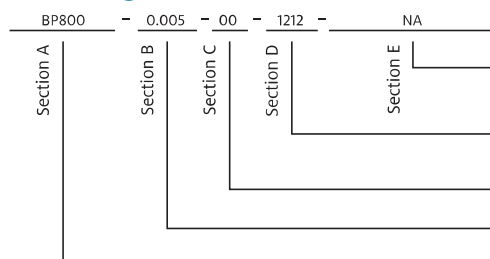
- Sheet form, roll form and die-cut parts

TYPICAL PROPERTIES OF BOND-PLY 800

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD		
Color	Gray	Gray	Visual		
Reinforcement Carrier	Fiberglass	Fiberglass	—		
Thickness (in.) / (mm)	0.005, 0.008	0.127, 0.203	ASTM D374		
Elongation (% , 45° to Warp & Fill)	70	70	ASTM D412		
Tensile Strength (psi) / (mPa)	1,500	10	ASTM D412		
CTE (um/m-°C), -40°C to +125°C	600	600	ASTM D3386		
Continuous Use Temp. (°F) / (°C)	-40 to 257	-40 to 125	—		
ADHESION					
Lap Shear @ RT (psi) / (mPa) ⁽¹⁾	150	1.0	ASTM D1002		
ELECTRICAL		VALUE	TEST METHOD		
Dielectric Breakdown Voltage (Vac.), 0.005		4,000	ASTM D149		
Dielectric Breakdown Voltage (Vac.), 0.008		6,000	ASTM D149		
Dielectric Constant (1,000 Hz)		4.0	ASTM D150		
Volume Resistivity (Ohmmeter)		10 ¹¹	ASTM D257		
Flame Rating		V-O	UL 94		
THERMAL					
Thermal Conductivity (W/m-K)		0.8	ASTM D5470		
THERMAL PERFORMANCE VS. PRESSURE					
Initial Assembly Pressure (psi for 5 seconds)	10	25	50	100	200
TO-220 Thermal Performance (°C/W), 0.005	5.0	5.0	4.8	4.3	4.2
TO-220 Thermal Performance (°C/W), 0.008	6.2	6.0	5.6	5.3	5.2
Thermal Impedance (°C-in. ² /W), 0.005 ⁽²⁾	0.63	0.62	0.60	0.58	0.57
Thermal Impedance (°C-n. ² /W), 0.008 ⁽²⁾	0.78	0.74	0.72	0.71	0.71

1) Tested per ASTM D1002 with aluminum lap shear samples, 75 psi applied for 5 seconds then pressure removed. 0.5 square inch BOND-PLY 800 sample.
2) 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, go to www.bergquistcompany.com/Part_Number_Builder.php.

Standard Options

◀ example

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

1212 = 12" x 12" sheets, 12250 = 12" x 250' rolls or 00 = custom configuration

00 = Standard double-sided adhesive

Standard thicknesses available: 0.005", 0.008"

BP800 = BOND-PLY 800 Material