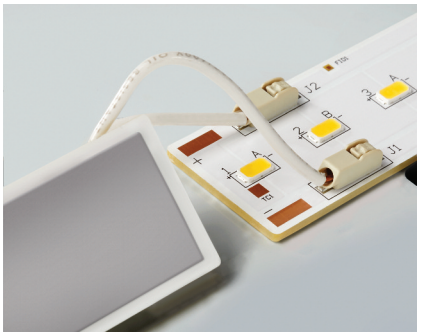
Bond-Ply® 800

Thermally Conductive, Fiberglass Reinforced Pressure Sensitive Adhesive Tape

Features and Benefits

- Thermal impedance: 0.60°C-in²/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 utilized 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 (inch) / (mm)	0.005, 0.008	0.127, 0.203	ASTM D374
Elongation (%, 45° to Warp & Fill)	70	70	ASTM D412
Tensile Strength (psi) / (MPa)	1500	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		4000	ASTM D149
Dielectric Breakdown Voltage (Vac), 0.008		6000	ASTM D149
Dielectric Constant (1000 Hz)		4.0	ASTM D150
Volume Resistivity (Ohm-meter)		10^{11}	ASTM D257
Flame Rating		V-O	U.L. 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-in²/W), 0.005 (2)	0.63	0.62	0.60	0.58	0.57
Thermal Impedance (°C-in²/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

BP800 – 0.005 – 00 – 1212 – NA

- Section A: BP800 = Bond-Ply 800 Material
- Section B: Standard thicknesses available: 0.005", 0.008"
- Section C: 00 = Standard double-sided adhesive
- Section D: 1212 = 12" x 12" sheets, 12250 = 12" x 250' rolls or 00 = custom configuration
- Section E: NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

Standard Options

example

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

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