

Bond-Ply® 800

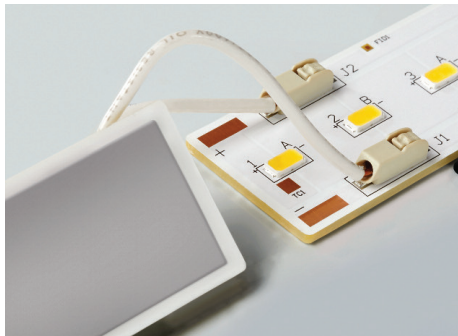
July 2014

PRODUCT DESCRIPTION

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.

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

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-in ² /W), 0.005 (2)	0.63	0.62	0.60	0.58	0.57
Thermal Impedance (°C-in 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.

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

Disclaimer

Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery. In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office

Reference 0.1