Technical Data Sheet

BERGQUIST BOND PLY TBP 850

Known as BERGQUIST BOND-PLY 100
June 2019

PRODUCT DESCRIPTION

Silicone-Free Formulation, High Performance Thermally Conductive Material.

Technology	Acrylic
Appearance	White
Reinforcement Carrier	Fiberglass
Total Thickness	0.14 mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-30 to 120ºC

FEATURES AND BENEFITS

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

TYPICAL APPLICATIONS

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

SHELF LIFE

The double-sided, pressure sensitive adhesive used in LOCTITE BERGQUIST BOND PLY® products requires the use of dual liners to protect the surfaces from contaminants.

The recommended shelf life for BERGQUIST BOND PLY TBP 850 is 6 months at a maximum continuous storage temperature of 35°C or 3-months 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.

TYPICAL PROPERTIES

Physical Properties

Temperature Coefficient of Resistance, ºC	200
Elongation , 45º to wrap and fill, ASTM D412,%	70
Tensile Strength, ASTM D412, MPa	6
Coefficient of Thermal Expansion, ASTM D 3386, ppm	325
Glass Transition Temperature, ASTM D1356, °C	-30
Flammability Rating, UL 94	V-0

Adhesion Properties

Lap Shear Strength, ASTM D1002:

@ 25°C	N/mm² (psi)	0.7 (100)
After 5 hours @ 100ºC	N/mm² (psi)	1.4 (200)
After 2 minutes @ 200ºC	N/mm² (psi)	1.4 (200)

Static Dead Weight Shear Strength, PSTC#7, ºC	150

Electrical Properties

Dielectric Breakdown Voltage , ASTM D149:

@ 0.005" (Vac)	3,000
@ 0.008" (Vac)	6,000
@ 0.011" (Vac)	8,500

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K)	0.8

Thermal Impedance vs. Pressure

TO-220 Thermal Performance, ºC/W:

@ 0.005":	
@ 10 psi	5.17
@ 25 psi	4.87
@ 50 psi	4.49
@ 100 psi	4.18
@ 200 psi	4.1
@ 0.008":	
@ 10 psi	5.4
@ 25 psi	5.35
@ 50 psi	5.28
@ 100 psi	5.22
@ 200 psi	5.2
@ 0.011":	
@ 10 psi	6.59
@ 25 psi	6.51
@ 50 psi	6.51
@ 100 psi	6.5
@ 200 psi	6.4

Thermal Impedance, ASTM D5470, ºC-in²/W (1):	
@ 0.005":	
@ 10 psi	0.56
@ 25 psi	0.54
@ 50 psi	0.52
@ 100 psi	0.5
@ 200 psi	0.5
@ 0.008":	
@ 10 psi	0.82
@ 25 psi	0.8
@ 50 psi	0.78
@ 100 psi	0.77
@ 200 psi	0.75
@ 0.011":	
@ 10 psi	1.03
@ 25 psi	1.02
@ 50 psi	1.01
@ 100 psi	1.0
@ 200 psi	0.99

I) 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.

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

CONFIGURATIONS AVAILABLE

BERGQUIST BOND PLY TBP 850 are supplied in:

- Sheet form
- Roll form
- Die-Cut parts

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb/F
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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 and/or registered trademarks of Henkel and its affiliates in the U.S. and elsewhere.

Reference 2

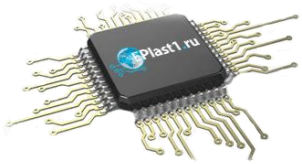
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.