

BERGQUIST LIQUI BOND TLB EA1800

BERGQUIST LIQUI-BOND EA 1805
June 2019

PRODUCT DESCRIPTION

Thermally Conductive, Two-Part, Liquid Epoxy Adhesive.

Technology	Epoxy
Appearance - Part A	Gray
Appearance - Part B	Pale yellow
Cure	Room temperature cure
Application	Thermal management, TIM (Thermal Interface Material)
Mix Ratio by volume: Part A: Part B	1 : 1
Operating Temperature Range	-40 to 125°C
UL Flammability Rating	UL 94 V-0

FEATURES AND BENEFITS

- Room temperature cure
- Room temperature storage
- Thermal Conductivity: 1.8 W/m-K
- Eliminates need for mechanical fasteners
- Maintains structural bond in severe environment applications
- Excellent chemical stability and mechanical stability

BERGQUIST LIQUI BOND TLB EA1800 is a two-component, epoxy based, liquid-dispensable adhesive formulated with a thermal conductivity of 1.8 W/mK. It is supplied in a two-component format, and refrigeration is not required.

BERGQUIST LIQUI BOND TLB EA1800 has a high bond strength with room temperature cure that can be accelerated with additional heat. The high bond strength eliminates the need for fasteners and maintains structural bond in severe environments.

Recommended usage is filling any surface irregularities between heat sources and heat spreaders of similar CTE. BERGQUIST LIQUI BOND TLB EA1800 is thixotropic and will remain in place during dispensing, and the material will flow easily under minimal pressure resulting in thin bondlines and very low stress placed on fragile components during assembly.

TYPICAL APPLICATIONS

- LED lighting
- Power supplies
- Discrete component to heat spreader
- Automotive lighting

- White goods

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, High shear, Capillary, ASTM D2196, Pa·s:
Part A 60
Part B 62
200/ sec, Part A and B measured separately

Density, ASTM D792, g/cc 2.7
Shelf Life @ 25°C, months 6

TYPICAL CURE SCHEDULE

Cure Schedule
10 hours @ 25°C or
10 minutes @ 125°C ⁽¹⁾

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties
Hardness, Shore D, 30 second delay, ASTM D2240 90

Electrical Properties
Dielectric Strength, ASTM D149, V/mm 10,000
Dielectric Constant, ASTM D150 @ 1,000 Hz 7.5
Volume Resistivity, ASTM D257, ohm-meter 1×10^{14}

Thermal Properties
Thermal Conductivity, ASTM D5470, W/(m-K) 1.8

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength
Shear Strength, ASTM D1002:
Al to Al @ 25°C MPa 3.1
(psi) (450)

1) 90% cure cycle - time after cure temperature is achieved at the interface. Ramp time is application dependent

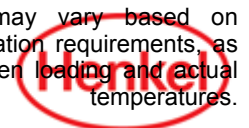
GENERAL INFORMATION

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.

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.



CONFIGURATIONS AVAILABLE

- Supplied in cartridge or kit form

STORAGE

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 25°C for a 6 month shelf life, in sealed containers with moisture barrier packaging.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb/F}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{psi} \times 145 = \text{N/mm}^2$

$\text{MPa} = \text{N/mm}^2$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

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Reference **N/A**

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