Technical Data Sheet

BERGQUIST® LIQUI BOND TLB EA1800

Known as 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 125ºC
UL flammability rating	UL 94 V-0

Features and benefits
- Room temperature storage
- Room temperature cure
- 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 s a two-component, epoxy based, liquid-dispensable adhesive formulated with athermal 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

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 for handling stability

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	$1^{x}10^{14}$

Thermal properties

Thermal Conductivity, ASTM D5470, W/m-K	1.8

Typical properties 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 dependen

General information
For safe handling information on this product, consult the Material Safety Data Sheet.

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 the specifications of 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 months shelf life, in sealed containers with moisture barrier packaging.

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

Additional information
Disclaimer
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