

LOCTITE ABLESTIK ABP 2450

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PRODUCT DESCRIPTION

LOCTITE ABLESTIK ABP 2450 provides the following product characteristics:

Technology	BMI Hybrid
Appearance	Silver paste
Product Benefits	<ul style="list-style-type: none"> • High electrical conductivity • Low moisture uptake • Solvent-free • Low halogen content
Cure	Heat cure
Application	Die attach
Typical Package Application	LED die bonding, SMD and bullet type packaging

LOCTITE ABLESTIK ABP 2450 die attach is formulated for use in high brightness LED manufacturing applications. This material is formulated to have a low moisture uptake and high light stability performance to extend LED lamp product life.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	5.5
Viscosity, Brookfield DV-II, 25 °C, mPa·s (cP):	
Speed 5 rpm	14,000
Density, g/cm ³	4.41
Shelf Life @ -40°C, days	180
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minutes @ 170°C plus 2 hours @ 170°C Isothermal heating

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.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Coefficient of Thermal Expansion, TMA, 5°C/minute, ppm/°C:	
Below Tg	61
Above Tg	118
Glass Transition Temperature (Tg) by TMA, @5°C/minute, °C	67
Extractable Ionic Content, @ 100°C:	
Chloride (Cl ⁻)	<10
Sodium (Na ⁺)	<10
Potassium (K ⁺)	<10

Young's modulus (E), DMA, @5°C/minute:

@ 25°C	GPa 5.4 (N/mm ²) (5,400) (psi) (783,000)
@ 100°C	GPa 2.8 (N/mm ²) (2,800) (psi) (406,000)
@ 200°C	GPa 1.4 (N/mm ²) (1,400) (psi) (203,000)

Moisture Absorption 3 mm thick plate, 1 hour boil, % 0.064

Electrical Properties

Volume Resistivity, ohm-cm <math>< 5 \times 10^5</math>

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Die Shear Strength:

2 x 2 mm Bare Si die on Ag-plated Cu LF, Kg:

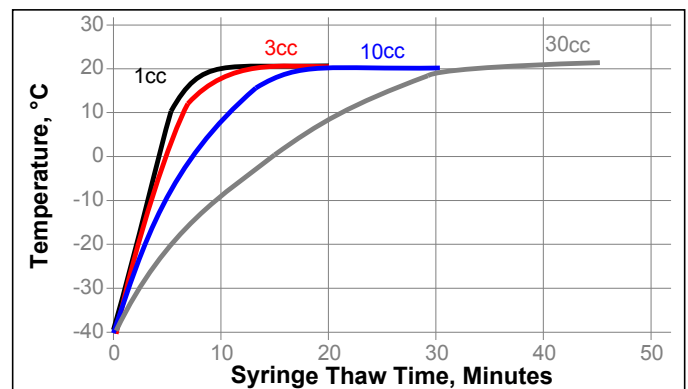
@ 25°C	>10
@ 260°C	>1.5

GENERAL INFORMATION

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

THAWING:

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.
3. Refer to the Syringe Thaw time chart for the thaw time recommendation.
4. DO NOT open the container before contents reach 25°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.
5. DO NOT re-freeze. Once thawed to 25°C, the adhesive should not be re-frozen.



DIRECTIONS FOR USE

1. Thawed material should immediately be placed on dispense equipment for use.
2. If the adhesive is transferred to a final dispensing reservoir, care must be exercised to avoid entrapment of contaminants and/or air into the adhesive.
3. Silver-resin separation may occur if the adhesive is left out at room temperature, beyond the recommended work life.
4. Adhesive must be completely used within the product's recommended work life.
5. Alternate dispense amounts may be used depending on the application requirements..
6. Star or crossed shaped dispense patterns will yield fewer bondline voids than the matrix style of dispense pattern.

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.

STORAGE:

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

Optimal Storage: -40°C. Storage below 50°C or above -35°C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

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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