

LOCTITE ABLESTIK ABP 2045

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PRODUCT DESCRIPTION

LOCTITE ABLESTIK ABP 2045 provides the following product characteristics:

Technology	Epoxy
Appearance	Red liquid
Filler Type	Alumina
Product Benefits	<ul style="list-style-type: none"> • Non-conductive • One component • Fast cure • Low temperature cure • Low stress • Low warpage
Cure	Heat cure
Application	Semiconductor Pastes, Non-conductive die attach paste, Electronic adhesive
Typical Package Application(s)	Camera module

LOCTITE ABLESTIK ABP 2045 is a non-conductive adhesive designed for CCM attach applications. It is designed to minimize stress and decrease warpage between dissimilar surfaces. This material is fast curable, making it ideal for high throughput bonding processes.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	15,000
Thixotropic Index (0.5/5 rpm)	4.0
Pot Life @ 25 °C, days	3
Shelf Life @ -40°C (from date of manufacture), days	365

TYPICAL CURING PERFORMANCE

Recommended Snap Cure Schedule

3 minutes @ 120°C

Alternate Snap Cure Condition

3 minutes @ 95°C

Alternate Oven Cure Schedule

30 minutes @ 80°C

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and specific 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, ppm/°C:	
Below Tg	56
Above Tg	187
Glass Transition Temperature (Tg) by TMA, °C	33
DMA Modulus :	
@ 25°C	N/mm ² 2,924 (psi) (424,090)

Adhesion Properties

Die Shear Strength @ 25°C:	
2 x 2 mil Si die on PCB, Kgf	15
Warpage :	
6 x 6 mm Si die on 0.25 mm thick PCB, µm	3

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. 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.
4. 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. Adhesive must be completely used within the product's recommended work life.
4. Alternate dispense amounts may be used depending on the application requirements.
5. Star or crossed shaped dispense patterns will yield fewer bondline voids than the matrix style of dispense pattern.

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 -40°C or above -40°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 Henkel Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb/F}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{N/mm}^2 = \text{MPa}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

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