

LOCTITE ABLESTIK ABP 8065T

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PRODUCT DESCRIPTION

LOCTITE ABLESTIK ABP 8065T provides the following product characteristics:

Technology	BMI Acrylate
Appearance	Silver
Cure	Heat cure
Product Benefits	• Medium to high thermal conductivity • High electrical conductivity • No channel void issue • High die shear strength • Dispensable silver paste • Soft solder replacement
Application	Die attach

LOCTITE ABLESTIK ABP 8065T highly filled, conductive die-attach adhesive is designed for bonding mini dies in high reliability package applications. It is formulated to provide high heat transfer generated by power devices. This material can also be used as a soft solder alternate for applications requiring high thermal and electrical conductivity.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	6.0
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	9,000
Filler Content %	82
Work Life @ 25°C, hours	24
Shelf Life @ -40°C, days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minutes ramp from 25°C to 175°C, hold 60 minutes @ 175°C in N2 oven

Alternate Cure Schedule (for <1x1 mm die)

45 minutes ramp from 25°C to 200°C, hold 60minutes @ 200°C in N2 oven

Recommended Snap Cure Schedule

3 minutes @ 200 to 220°C

Weight Loss on Cure

Weight Loss on Cure, % 2

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 expansion:

Below Tg, ppm/°C 40

Above Tg, ppm/°C 146

Thermal Conductivity, W/(m·K) 10

Tensile Modulus, DMTA :

@ -65°C N/mm² 6,560
(psi) (951,010)

@ 25 °C N/mm² 5,180
(psi) (751,005)

@ 150 °C N/mm² 965
(psi) (139,961)

@ 250 °C N/mm² 860
(psi) (124,300)

Extractable Ionic Content @ 100°C, :

Chloride (Cl-) <10

Sodium (Na+) <10

Potassium (K+) <10

Electrical Properties

Volume Resistivity, ohms-cm 3×10⁻⁵

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

Die Shear Strength:

1 X 1 mm (40 x 40 mil) Ag back metal die to AG LF, Kg:

@ 25°C >2.5

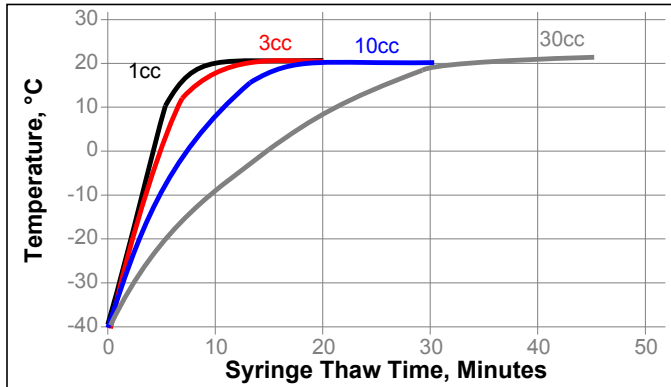
@ 260°C >0.8

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 of 24 hours.
4. Silver-resin separation may occur if the adhesive is left out at room temperature, beyond the recommended work life.
5. Apply enough adhesive to achieve a 25 to 50 µm wet bondline thickness, dispensed with approximately 25 to 50 % filleting on all sides of the die.
6. Alternate dispense amounts may be used depending on the application requirements.
7. 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 Henkel representative for assistance and recommendations on the specifications of 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 minus (-)40 °C or greater than minus (-)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

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

Disclaimer

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