

LOCTITE ABLESTIK ABP 8066T

July 2017

PRODUCT DESCRIPTION

LOCTITE ABLESTIK ABP 8066T provides the following product characteristics:

Technology	Hybrid chemistry
Appearance	Silver paste
Cure	Heat cure
Product Benefits	• High thermal conductivity • High electrical conductivity • Long open time • High die shear strength • Dispensable silver paste
Application	Die attach
Key Substrates	Most metals and Plastics
Typical Applications	

LOCTITE ABLESTIK ABP 8066T highly filled, conductive die attach adhesive is designed to provide high thermal and electrical conductivity in the attachment of integrated circuits and components onto metallic leadframes. The material is hydrophobic and stable at high temperatures. 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	10,000
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 at 175°C in N2 oven

Alternate Cure Schedule

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

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

Glass Transition Temperature, °C	67
Coefficient of Thermal Expansion, TMA expansion:	
Below Tg, ppm/°C	53
Above Tg, ppm/°C	90
Thermal Conductivity, W/(m·K):	
Cured @ 175°C (Standard Cure)	15
Cured @ 200°C (Alternate Cure)	25
Tensile Modulus, DMTA:	
@ 25°C	N/mm ² 4,824 (psi) (699,662)
@ 250°C	N/mm ² 1,606 (psi) (232,930)
Extractable Ionic Content, @ 100°C, ppm:	
Chloride (Cl-)	<10
Sodium (Na+)	<10
Potassium (K+)	<10

Electrical Properties

Volume Resistivity, ohm-cm	4×10 ⁻⁵
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TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

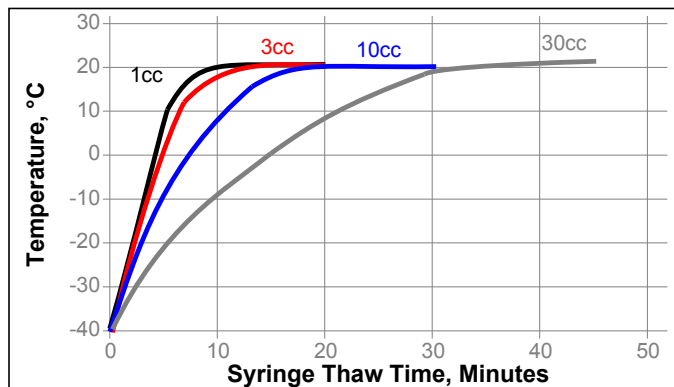
Die Shear Strength:	
2 x 2 mm Si die on Ag LF, kg-f:	
@ 25 °C	9.2
@ 260 °C	1.7
2 x 2 mm Si die on PPF LF, kg-f:	
@ 25 °C	8
@ 260 °C	2.5

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 adhesive 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 -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 Technical Service Center or Customer Service Representative.

Conversions

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

Disclaimer

Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is,

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