

LOCTITE ABLESTIK ABP 2100AC

September 2012

PRODUCT DESCRIPTION

LOCTITE ABLESTIK ABP 2100AC provides the following product characteristics:

Technology	Proprietary Hybrid Chemistry
Appearance	Silver Gray
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> • Low cost • Low stress
Application	Die attach
Typical Package Application	BGA and PBGA
Filler Type	Silver Coated Copper

LOCTITE ABLESTIK ABP 2100AC die attach adhesive is designed for Pb-free array packaging. This product is able to withstand the high reflow temperatures necessary for Pb-free solders @ 260°C. It is suitable for die sizes up to 12.7 x 12.7 mm.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	4.5
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	9,000
Shelf Life @ -40°C (from date of manufacture), year	1
Work Life @ 25°C, 25% change in viscosity, hours	24
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minute ramp to 175°C, hold 30 minutes in N₂

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 expansion mode:		
Below Tg, ppm/°C		65
Above Tg, ppm/°C		175
Glass Transition Temperature, TMA expansion, °C		15
Tensile Modulus, DMTA :		
@ 25 °C	N/mm ²	1,800
	(psi)	(261,070)
Thermal Conductivity @ 121°C, W/(m-K)		1.5
Moisture Absorption @ Saturation, after 85°C/85% RH exposure		0.2

Electrical Properties

Bond Joint Resistance, ohms/0.5 sq.in.	0.001
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TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength :

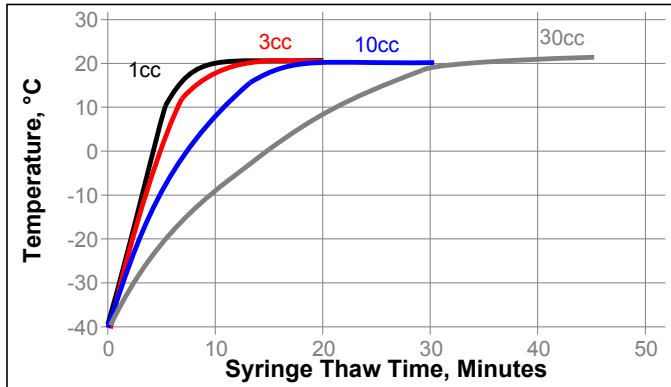
@ 25°C:	
2 X 2 mm (80 x 80 mil) BGA, kg-f	6
@ 265°C:	
5 X 5 mm (200 x 200 mil) BGA, kg-f	5.5

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. Adhesive must be completely used within the product's recommended work life.
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 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 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 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

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