

LOCTITE ABLESTIK GA5

December 2016

PRODUCT DESCRIPTION

LOCTITE ABLESTIK GA5 provides the following product characteristics:

Technology	Acrylic
Appearance	Silver
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none">• Conductive• Single component• Low temperature cure• Fast cure• Improved viscosity• Thixotropic• Good dispensability
Application	Die attach
Filler Type	Silver

LOCTITE ABLESTIK GA5 is designed for slider attach bonding applications. This adhesive can be fast cured using directed heat energy techniques. In conventional box or convection conveyor oven curing, it will cure at temperatures as low as 120°C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	5.0
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	10,000
Work Life @ 25°C, hours	48
Shelf Life @ -40°C (from date of manufacture), days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE Cure Schedule

30 minute ramp to 175°C, 15 minutes @ 175°C

Alternate Cure Schedule

30 minute ramp to 120°C, 10 minutes @ 120°C

Weight Loss on Cure

10 x 10 mm Si die on glass slide, %	0.3
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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:

Below Tg, ppm/°C	49
Above Tg, ppm/°C	168

Glass Transition Temperature, Tan Δ Max, °C 17

Tensile Modulus, DMTA :

@ 25 °C	N/mm ² 100 (psi) (14,500)
@ 50 °C	N/mm ² 60 (psi) (8,700)
@ 100 °C	N/mm ² 40 (psi) (5,800)
@ 150 °C	N/mm ² 37 (psi) (5,400)
@ 200 °C	N/mm ² 35 (psi) (5,000)

Extractable Ionic Content, ppm:

Chloride (Cl-)	7
Sodium (Na+)	3
Potassium (K+)	N/D

Moisture Absorption @ Saturation, wt.% @ 85°C/85%RH 0.1

TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength :

5 X 5 mm Si die to BT and AUS-5 solder mask

Post Cure, @ 25°C

Curing temp.	MPa	psi
@ 120°C	6.9	1000
@ 175°C	10.8	1560

Chip Warpage :

12 x 12 mm Si die to 0.52 mm BT and AUS-5 solder mask with 25 µm bond line thickness, µm

Post Cure, @ 25°C

@120°C	@175°C
15	27

Bond Joint Resistance:

Cu to Cu, 25 µm BLT, ohms	0.0035
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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, the adhesive should not be re-frozen.

DIRECTIONS FOR USE

1. This adhesive is designed for pin transfer, dot dispensing and/or syringe applications.
2. Dispense the desired amount of material and place slider/die/crystal into deposit using downward force to achieve desired bondline.
3. Thawed adhesive should immediately be placed on dispense equipment for use.
4. Adhesive must be completely used within the product's recommended work life.

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

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

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Reference 1