

LOCTITE ABLESTIK GA2W

August 2012

PRODUCT DESCRIPTION

LOCTITE ABLESTIK GA2W provides the following product characteristics:

Technology	Acrylic
Appearance	Off-white
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> • Non-conductive • Ultra-low modulus • Low stress • Low chip warpage • Improved viscosity • Thixotropic • Good dispensability
pH	3.9
Application	Die attach
Filler Type	Silica
Typical Assembly Applications	CCD/CMOS and Optoelectronic assembly

LOCTITE ABLESTIK GA2W single component adhesive is designed for CCD/CMOS die attach bonding applications. This adhesive can be cured using directed heat energy or hot plate curing techniques.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	5.4
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	10,000
Work Life @ 25°C, hours	48
Shelf Life @ -40°C, days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE Weight Loss on Cure

Weight Loss on Cure, %	0.4
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Cure Schedule

30 minute ramp to 175°C + 15 minutes @ 175°C
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Alternative Cure Schedule

1 minute @ 150°C on hot plate

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 :	
Below Tg, ppm/°C	58
Above Tg, ppm/°C	164
Glass Transition Temperature, Tan Δ Max, °C	25
Tensile Modulus, DMTA :	
@ 25 °C	N/mm ² 70 (psi) (10,590)
@ 50 °C	N/mm ² 20 (psi) (2,800)
@ 100 °C	N/mm ² 10 (psi) (1,280)
@ 150 °C	N/mm ² 8 (psi) (1,160)
@ 200 °C	N/mm ² 9 (psi) (1,300)

Extractable Ionic Content, @ 100°C ppm:	
Chloride (Cl-)	<5
Sodium (Na+)	<1
Potassium (K+)	N/D
Water Extract Conductivity, μmhos	47.3
Moisture Absorption @ Saturation, wt.% @ 85°C/85%RH	0.1

TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength :

5 X 5 mm Si die, kg-f/mm²,

Substrate	@150°C	@175°C
BT & AUS-5 Solder Mask	0.27	0.78

Chip Warpage, μm:

15 X 15 mm Si die
@ 25°C after cure, 25μm BLT

Substrate	@ 120°C in hot plate	@ 150°C in oven
0.52, BT & AUS-5 Solder Mask	23	24

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. 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.

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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