



LOCTITE® ABLESTIK ABP 8600NP

July 2025

PRODUCT DESCRIPTION

LOCTITE® ABLESTIK ABP 8600NP provides the following product characteristics:

Technology	Acrylate
Appearance	Silver
Cure	Snap cure or heat cure
Product benefits	<ul style="list-style-type: none">• Thermally conductive• Electrically conductive• Low bleed• Improved JEDEC performance• Compatible for use with Ag, PPF and Cu
Application	Die attach
Filler type	Silver
Typical package application	Small SO and QFN type packages

LOCTITE® ABLESTIK ABP 8600NP die attach adhesive is designed for high reliability package applications with medium thermal and electrical requirements. This material is not recommended for high density matrix lead frames with greater than 500 pads. LOCTITE® ABLESTIK ABP 8600NP is a non PFAS version of LOCTITE® ABLESTIK 8600.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51 @ 25°C, mPa-s (cP)	
Speed 5 rpm	7,500
Thixotropic index, (0.5/5 rpm)	5.1
Work life @ 25°C, hours	24
Shelf life @ -40°C, days	365

TYPICAL CURING PERFORMANCE

Recommended snap cure schedule

Temp per zone: 150°C, 160°C, 180°C, 220°C, 220°C, 220°C, 220°C Total time: 60 seconds N2 Temp: 150°C

Recommended snap cure schedule

30 minutes ramp to 175°C and hold 15 minutes, in N2 or Air

Weight loss on cure

Weight loss on cure, %	2.5
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The above cure profiles are guideline recommendations. These 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

Glass transition temperature (Tg), TMA expansion, °C	112
Coefficient of thermal expansion, TMA expansion (ppm/°C):	
Below Tg	49
Above Tg	106
Thermal conductivity, laser flash, W/(m-K)	>4
Storage modulus, DMTA	
@ 25°C, Mpa	9,956
@ 250°C, Mpa	2,133
Extractable ionic content, ppm	
Sodium (Na+)	<10
Potassium (K+)	<10
Chloride (Cl-)	<10
Volume resistivity, oven cure, ohm-cm	0.000065

Adhesion properties

Die shear strength	
2x2mm Ag BSM die, kg/f @RT	
Post cure + PMB:	
PPF LF	16
Roughened Cu LF	8.2
3x3mm Si die, kg/f @RT	
Post cure:	
Ag LF	18
PPF LF	18
Roughened Cu LF	12
2x2mm Ag BSM die, kg/f @260°C	
Post cure + PMB:	
PPF LF	3.7
Roughened Cu LF	3.2
5x5mm Ag BSM die, kg/f @260°C	
Post cure + PMB 4hour @175°C:	
PPF LF	11.4
Roughened Cu LF	12.4

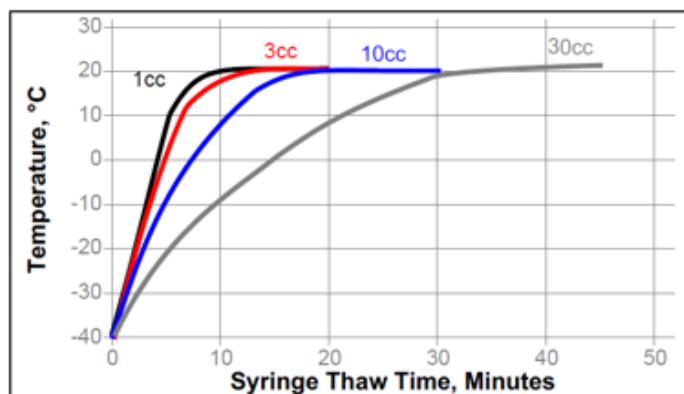
GENERAL INFORMATION

Please consult the Safety Data Sheet (SDS) for safe handling information of this product.



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. Thaw times depend on the syringe size.
4. Consult handling guide for more information.
5. 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.
6. 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.
4. Alternate dispense amounts may be used depending on the application requirements.
5. Star or crossed shaped dispense patterns will yield fewer bondline voids than the matrix style of dispense pattern.

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 greater than -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 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.

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 the specifications of this product.

Conversions

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

Disclaimer

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Reference 1