

LOCTITE® ABLESTIK NCA 2286AE

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PRODUCT DESCRIPTION

LOCTITE® ABLESTIK NCA 2286AE provides the following product characteristics:

Technology	Acrylate
Appearance	Black liquid
Product benefits	<ul style="list-style-type: none"> One component Dual cure system Low transmittance High dispense aspect ratio Fast UV cure High reliability Good adhesion to LCP, PC, PA, SUS, Anodized aluminum
Cure	Ultraviolet (UV) light followed by heat cure
Application	Electronic adhesives & solder, component assembly
Typical application	Active alignment for camera module assembly

LOCTITE® ABLESTIK NCA 2286AE dual cure adhesive is designed for use in active alignment applications in camera module assembly. It has been formulated to a high viscosity and thixotropy to enable higher aspect ratios of dispensed adhesive, thus allowing for easier adjustments for the final assembly.

LOCTITE® ABLESTIK NCA 2286AE is a modified version of LOCTITE® ABLESTIK NCA 2286, redeveloped to provide lower transmittance and higher adhesion after full cure. This material also provides better toughness and reliability performance after 85°C/85% aging.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Rheometer, Cone and Plate @ 25°C, mPa·s (cP):

Angle 2° @ shear rate 20 s ⁻¹	46,000
Thixotropic index (2/20 s ⁻¹)	5.7
Work life @ 25°C, <25% viscosity increase, days	3
Shelf life @ -20°C, days	270

TYPICAL CURING PERFORMANCE

Recommended cure condition

UV Light (LED Lamp)

UV Wavelength, nm	220 to 405
Light intensity, mW/cm ²	1,500
Exposure time, seconds	2 to 3

Secondary heat cure

1 hour @ 80°C in conventional oven

Depth of cure

Cure depth after UV cure, mm	
2 seconds @ 365nm	0.4

Shrinkage on cure

Cure shrinkage, %	
Volume, after UV + thermal cure	4.6

The above cure profile is a guideline recommendation. Cure rate and ultimate depth of cure depend on light intensity, spectral distribution of light source, exposure time and the light transmittance of the substrate.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Sample cured UV 2 seconds @ 365nm, UV intensity 1500 mW/cm² plus thermal cure 60 minutes @ 80°C.

Coefficient of thermal expansion, ppm/°C	
Below Tg	58
Above Tg	201
Glass transition temperature, °C	
by TMA	43
by DMA	45
Elongation at break, %	49
Modulus @ 25°C, N/mm ²	3,200
Transmittance, 200 um film thickness, %	
@ 400 to 700 nm	<10

Adhesion properties

Sample cured UV 2 seconds @ 365nm, UV intensity 1100 mW/cm² plus thermal cure 60 minutes @ 80°C.

Adhesion strength	
PA to LCP, four 9.5 mm lines in a square:, kg-f	
After UV	2.82
After UV+thermal cure	24.6
After 85°C/85 RH, 120 hrs, UV+thermal cure	20.07

Sample cured 60 minutes @ 80°C

5 x 5 mm die, kg-f,

NTB982 on PC1225	28.3
NTB982 on LCP E525T	23.59
NTB982 on SUS304	30.92
LCP E525T on LCP E525T	31.81
LCP E525T on SUS304	21.99
PC1225 on Anodized Aluminum	30.16

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. 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 product is light sensitive; exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling.
2. Thawed material should immediately be placed on dispense equipment for use.
3. 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.
4. Adhesive must be completely used within the product's recommended work life.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: -20°C. Storage below -20°C or greater than -20°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

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

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