

# LOCTITE® ABLESTIK NCA 2286AE

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## PRODUCT DESCRIPTION

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

<b>Technology</b>	Acrylate
<b>Appearance</b>	Black liquid
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• One component</li> <li>• Dual cure system</li> <li>• Low transmittance</li> <li>• High dispense aspect ratio</li> <li>• Fast UV cure</li> <li>• High reliability</li> <li>• Good adhesion to LCP, PC, PA, SUS and Anodized Aluminum</li> </ul>
<b>Cure</b>	Ultraviolet (UV) light followed by heat cure
<b>Application</b>	Electronic Adhesives & Solder, Component assembly
<b>Typical Assembly Applications</b>	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 <sup>-1</sup>	46,000
Thixotropic Index (2/20 s <sup>-1</sup> )	5.7
Work Life @ 25°C, <25% viscosity increase, days	3
Shelf Life @ -20°C, days	180

## TYPICAL CURING PERFORMANCE

### Recommended Cure Condition

#### UV Light

UV Wavelength, nm	220 to 405
Light Intensity, mW/cm <sup>2</sup>	1,500
Exposure Time, seconds	2 to 3

### Secondary Heat Cure

1 hour @ 80°C in conventional oven

### Depth of Cure

Depth of Cure, after UV 2 seconds @ 365 nm, 0.4 mm

### Shrinkage on Cure

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

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/cm<sup>2</sup> plus Thermal cure 60 minutes @ 80°C.**

Coefficient of Thermal Expansion, ppm/°C:	
Below Tg	58
Above Tg	201
Glass Transition Temperature, °C:	
(Tg) by DMA	45
(Tg) by TMA	43
Elongation @ break, %	49
Modulus @ 25°C, N/mm <sup>2</sup>	3,200
Transmittance @ 400 to 700 nm, 200 um film thickness, %	<10

### Adhesion Properties

**Sample cured UV 2 seconds @ 365nm, UV intensity 1100 mW/cm<sup>2</sup> plus Thermal cure 60 minutes @ 80°C.**

Adhesion Strength:	
PA to LCP, four 9.5 mm lines in a square:	
After UV Cure, kg-f	2.82
After UV cure + thermal cure, kg-f	24.6
After 85%/85RH, 120 hours, UV plus Thermal cure, kg-f	20.07

**Sample cured 60 minutes @ 80°C**

Adhesion Strength:	
5 x 5 mm die, % coverage:	
NTB982 on PC1225, kg-f	28.3

NTB982 on LCP E525T, kg-f	23.59
NTB982 on SUS304, kg-f	30.92
LCP E525T on LCP E525T, kg-f	31.81
LCP E525T on SUS304, kg-f	21.99
PC1225 on Anodized Aluminum, kg-f	30.16

N·mm x 0.142 = oz·in  
mPa·s = cP

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### Reference 1

## GENERAL INFORMATION

**For safe handling information on this product, consult the Safety Data Sheet, (SDS).**

### THAWING: (if applicable)

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 warmed up 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. 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. This product is light sensitive; exposure to daylight, UV light or artificial lighting should be kept to a minimum during storage and handling.

### Storage

Store in original, tightly covered containers in clean, dry areas. Storage information may be indicated on the product container labeling.

### Optimal Storage : -20 °C

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 Henkel Representative.

### Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

### Conversions

(°C x 1.8) + 32 = °F  
kV/mm x 25.4 = V/mil  
mm / 25.4 = inches  
N x 0.225 = lb/F  
N/mm x 5.71 = lb/in  
psi x 145 = N/mm<sup>2</sup>  
MPa = N/mm<sup>2</sup>  
N·m x 8.851 = lb·in  
N·m x 0.738 = lb·ft