

# LOCTITE® ABLESTIK NCA 01UV

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## Product description

LOCTITE® ABLESTIK NCA 01UV provides the following product characteristics:

<b>Technology</b>	UV curable epoxy
<b>Appearance</b>	Milky white
<b>Product benefits</b>	<ul style="list-style-type: none"> <li>• Full one step UV cure adhesive</li> <li>• High Tg, low CTE</li> <li>• Low shrinkage</li> <li>• SVHC free and Antimony free</li> </ul>
<b>Cure</b>	Ultraviolet (UV) light
<b>Application</b>	Assembly
<b>Typical assembly applications</b>	ADAS optical modules

LOCTITE® ABLESTIK NCA 01UV one step cure adhesive is specifically designed for automotive Camera Module bonding applications such as lens barrel-to-housing and lens housing-to-circuit board. The ultimate performance of this material is already achieved by exposure to UV light of adequate intensity and does not require a thermal post-cure. This adhesive can be applied by dispensing.

## Typical properties of uncured material

Property	Method	Typical value
Viscosity@25°C, (mPas.s)	@ 15 s <sup>-1</sup>	27700
Shear thinning index	1.5/15 s <sup>-1</sup>	5.6
Density, (g/cm <sup>3</sup> )	25 °C	1.8
Shelf Life @ -40°C, (mos)		6
Pot life @ 23°C, h		24

## Typical curing performance

### Required UV cure

Light source and condition:

LED	
UV wavelength, nm	365
Irradiance at bond line, mW/cm <sup>2</sup>	1000
Recommended time, seconds	3

Cure rate and depth of cure will depend on the UV intensity measured at the product surface, wavelength, exposure time and the light transmittance of the substrate. Conditions may vary based on customers' experience and their application requirements as well as customer curing equipment.

## Typical properties of cured material

Sample cured 3 secs @ 1000 mW/cm<sup>2</sup> with 365 nm.

## Physical properties

Property	Typical
Glass transition temperature, tan δ, DMA, °C	134
Storage modulus @ 25°C, DMA, Single Cantilever, MPa	7100
CTE 1 (-30 to 70°C), TMA, ppm/K	20.2
Hardness, Shore D, Durometer	94
Dimensional change, %	0.4
Cure depth, mm	8
Residual enthalpy, J/g	<10

## Performance properties

Property	Method	Typical
Adhesion strength	Die Shear after plasma	
After UV cure		
Aluminum to aluminum	N/mm <sup>2</sup> (psi)	10.1 (1395)

## Outgassing properties

Passes micro-VCM test	
Total mass loss, %	0.27 (0.01)
Recovered mass loss, %	0.17 (0.00)
Collected volatile condensable material, %	0.00 (0.00)

## General information

**For safe handling information on this product, consult the Material Safety Data Sheet.**

## Conditioning

Allow container to reach room temperature before use.

Recommended thawing time:

- 10 cc: 30 minutes
- 30/55 cc: 2 h
- 6 Oz: 2 h

Do not touch the syringe during thawing to avoid freeze-thaw voids.

## Direction for use

The rheology of this material makes it suitable for use in dispensing applications. The product needs to be cured according to the cure parameters described above.

## Storage

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

**Optimal storage: at -40°C.** Under this condition the shelf life is 6 mos (preliminary).

Storage for longer periods below -40°C or higher than 30°C can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return products 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.

**Note:**

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