

# LOCTITE ABLESTIK NCA 2280LV

October 2015

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK NCA 2280LV provides the following product characteristics:

<b>Technology</b>	Acrylated Epoxy
<b>Appearance</b>	Black
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Non-conductive</li> <li>• One component</li> <li>• Dual cure system</li> <li>• High thixotropic index</li> <li>• Fast cure at low temperature</li> <li>• Low transmittance</li> <li>• Good adhesion to LCP</li> <li>• Black in color to prevent light penetration</li> </ul>
<b>Cure</b>	Ultraviolet (UV) light followed by heat cure
<b>Application</b>	Assembly
<b>Key Substrates</b>	Ceramics and LCP
<b>Typical Assembly Applications</b>	Image sensor module assemblies

LOCTITE ABLESTIK NCA 2280LV dual cure adhesive is designed for use in the assembly of temperature sensitive electronic components.

LOCTITE ABLESTIK NCA 2280LV is black in color to prevent light penetration into the final assembled device. This product is formulated to temporarily cure when exposed to UV light, followed with a secondary thermal cure at low temperature. Temporarily curing the material allows for any necessary adjustments to the final device configuration.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Rheometer, Cone and Plate @ 25 °C, mPa·s (cP):	
Cone 20 mm, Angle 2° @ Shear rate 10 s <sup>-1</sup>	32,800
Thixotropic Index (1/10 s <sup>-1</sup> )	4.8
Specific Gravity, g/cm <sup>3</sup>	1.3
Pot Life @ 25°C, days	3
Shelf Life @ -20°C (from date of manufacture), days	180
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Recommended UV Cure

Light Source and Condition	
High pressure mercury lamp:	
UV Wavelength, nm	220 to 400
Light Intensity, mW/cm <sup>2</sup>	100
Exposure Time, seconds	2

### Recommended Heat Cure Schedule

30 minutes @ 80°C

## Depth of Cure

Sample tested using High pressure mercury lamp with light intensity of 100 mW/cm<sup>2</sup>

Exposure Time, mm:	
@ 2 seconds	0.4
@ 10 seconds	0.8
@ 20 seconds	0.9
@ 30 seconds	0.9

With all curing systems, the time required for cure depends on the rate of heating. Cure rate depends on the mass of material to be heated and intimate contact with the heat source. Use suggested cure conditions as general guidelines. Other cure conditions may yield satisfactory results.

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

Sample cured at the recommended cure conditions

### Physical Properties

Hardness, Shore D	75
Coefficient of Thermal Expansion, ppm/°C:	
Below Tg	54
Above Tg	160
Glass Transition Temperature (Tg) by TMA, °C	75
Modulus @ 25°C	GPa 3.0
	(N/mm <sup>2</sup> ) (3,000)
	(psi) (435,113)

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Shear Strength

Die Shear Strength:	
LCP, SiN Chip	N/mm <sup>2</sup> 20
	(psi) (2,900)

## GENERAL INFORMATION

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

### 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.

## DIRECTIONS FOR USE

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part.
2. Apply adhesive to all surfaces to be bonded and join together.

**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 Technical Service Center or Customer Service Representative.

**Conversions**

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{N/mm}^2 \times 145 = \text{psi}$

$\text{MPa} = \text{N/mm}^2$

$\text{MPa} \times 145 = \text{psi}$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

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