

# LOCTITE ECCOBOND LUX AA50T

February 2018

## PRODUCT DESCRIPTION

LOCTITE ECCOBOND LUX AA50T provides the following product characteristics:

<b>Technology</b>	Acrylate
<b>Appearance</b>	Opaque white
<b>Cure</b>	Ultraviolet (UV) light & heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>Fast light cure</li> <li>High viscosity</li> <li>Low shrinkage</li> <li>Good mechanical stability</li> </ul>
<b>Application</b>	Die attach
<b>Typical Package Application</b>	Optoelectronic devices, LED mounting, Laser diode packaging, Fiber pigtailling and Transceiver active alignment and potting

LOCTITE ECCOBOND LUX AA50T die attach adhesive is formulated to enhance productivity in the assembly of optical, fiber optic and optoelectronic devices. This adhesive cures in seconds when exposed to the appropriate intensity of visible (blue) or UV light. It also contains a secondary thermal cure mechanism for applications with shadowed areas.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield Cup 6R/S14, 25 °C, mPa·s (cP):	
Speed 5 rpm	96,000
Shelf Life (from date of manufacture):	
@ 5°C, days	183
@ 25°C, days	91

## TYPICAL CURING PERFORMANCE

### Cure Schedule

UV or visible light

### Secondary Thermal Cure

60 minutes @ 100°C

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties

Coefficient of Thermal Expansion, :	
Below T <sub>g</sub> , ppm/°C	36
Above T <sub>g</sub> , ppm/°C	98
Glass Transition Temperature (T <sub>g</sub> ) by TMA, °C	163
Tensile Modulus @ 25 °C, DMTA	N/mm <sup>2</sup> 3,500 (psi) (509,000)
Hardness, Shore D	82
Water Absorption, 24-hours, %	0.86

## TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength @ 25 °C:

2 x 2 mm Si die on Ag/Cu LF, psi 3,990

## GENERAL INFORMATION

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

### THAWING:

1. Allow container to reach room temperature before use.
2. Safe yellow light is recommended for visible light initiated grades during handling prior to curing. Dimmed light may be used if adhesive is only being handled for short periods of time.

### DIRECTIONS FOR USE

1. This adhesive is formulated to cure upon exposure to visible (Blue) or UV light. Curing with visible light allows curing of highly filled (up to 80% by weight) grades and curing through UV opaque substrates (such as polycarbonate and aluminis). Additionally, use of visible light provides increased operator safety by eliminating exposure to potentially harmful UV radiation. However, UV curing is particularly advantageous where a rapid cure or curing of a section is required.
2. For visible light curing, a light source with a peak output at 470 nm is most important. For example, a Luxor 2 or 3 curing lamp delivers an output in excess of 150 mW/cm<sup>2</sup> at this wavelength, curing in less than a minute to a depth of 6 mm.
3. For UV cure, a wide range of commercially available lamp systems are available, permitting curing of bond profiles in seconds coupled with a tack-free surface.

### 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.

### STORAGE:

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

**Optimal Storage: 5°C. Storage below 5°C or greater than minus 5 °C can adversely affect product properties.**

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

(°C x 1.8) + 32 = °F  
 kV/mm x 25.4 = V/mil  
 mm / 25.4 = inches  
 N x 0.225 = lb  
 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  
 N·mm x 0.142 = oz·in  
 mPa·s = cP

#### Disclaimer

##### Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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