

# LOCTITE ECCOBOND LUX OGR150THTG

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## PRODUCT DESCRIPTION

LOCTITE ECCOBOND LUX OGR150THTG provides the following product characteristics:

|                         |                                                                                                                                                                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Technology</b>       | Acrylate                                                                                                                                                                                                                             |
| <b>Color</b>            | Colorless                                                                                                                                                                                                                            |
| <b>Cure</b>             | Ultraviolet (UV) light                                                                                                                                                                                                               |
| <b>Product Benefits</b> | <ul style="list-style-type: none"> <li>• Non-conductive</li> <li>• Single component</li> <li>• Photocurable</li> <li>• High Tg</li> <li>• Fast UV cure</li> <li>• Cures in shadowed areas</li> <li>• Low temperature cure</li> </ul> |
| <b>Application</b>      | Assembly                                                                                                                                                                                                                             |

LOCTITE ECCOBOND LUX OGR150THTG photocurable adhesive is designed for high throughput optoelectronic assembly operations. This product also contains a secondary thermal cure mechanism for applications that contain shadowed areas where light is unable to penetrate. The secondary thermal cure can be done in conventional box or convection conveyor ovens.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield SPD#27, 25 °C, mPa·s (cP):

Speed 10 rpm 1,000

Work Life @ 25°C, days 91

Shelf Life @ -5 to +5°C (from date of manufacture), days 183

Flash Point - See SDS

## TYPICAL CURING PERFORMANCE

### Recommended UV Cure Condition

UV 365 nm with 110 mW/cm<sup>2</sup> at the bondline

### Secondary Thermal Cure Condition

1 hour @ 100°C or

2 hours @ 85°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

Hardness, Shore D 76

Refractive Index:

@ 589 nm 1.5202

@ 830 nm 1.5123

@ 1,320 nm 1.5061

@ 1,550 nm 1.5038

Coefficient of Thermal Expansion :

|                                                     |                                            |
|-----------------------------------------------------|--------------------------------------------|
| Below Tg, ppm/°C                                    | 61                                         |
| Above Tg, ppm/°C                                    | 157                                        |
| Glass Transition Temperature (Tg) by DMTA, °C       | 145                                        |
| Tensile Modulus, DMTA :                             |                                            |
| @ -65 °C                                            | N/mm <sup>2</sup> 2,200<br>(psi) (320,000) |
| @ 25 °C                                             | N/mm <sup>2</sup> 1,300<br>(psi) (190,000) |
| @ 100 °C                                            | N/mm <sup>2</sup> 380<br>(psi) (54,000)    |
| @ 150 °C                                            | N/mm <sup>2</sup> 75<br>(psi) (11,000)     |
| Moisture Absorption @ Saturation, wt.% @ 85°C/85%RH | @ 1.62                                     |

## TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength:

2 X 2 mm Alumina Die to Glass, kg-f/die

Post Cure

| @25°C | @25°C with Silane |
|-------|-------------------|
| 3.8   | 19                |

## GENERAL INFORMATION

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

## SHIPMENT AND UNPACKING

1. LOCTITE ECCOBOND LUX OGR150THTG adhesive is packed and shipped at room temperature.
2. Transfer the syringes from the shipping container to a 0 to 5°C freezer without ANY delays. Freeze-thaw voids can form if the syringes are repeatedly thawed and re-frozen.

## DIRECTIONS FOR USE

1. This adhesive is designed to cure upon exposure to UV light. UV curing is particularly advantageous where a very rapid cure or curing of a thin section of the assembly is required.
2. Dispense the desired amount of material and place the head into deposit using downward force to achieve desired bondline.
3. Adhesive must be completely used within the product's recommended work life.
4. A light source with a minimum output of 500 mW/cm<sup>2</sup> at 365 nm wavelength is recommended. Wide ranges of light systems are available for UV cure, 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 to +5 °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**

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

**Disclaimer****Note:**

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## Reference 1