

LOCTITE ECCOBOND LUX OGR150THTG

June 2016

PRODUCT DESCRIPTION

LOCTITE ECCOBOND LUX OGR150THTG provides the following product characteristics:

Technology	Acrylate
Color	Colorless
Cure	Ultraviolet (UV) light
Product Benefits	<ul style="list-style-type: none"> • Non-conductive • Single component • Photocurable • High Tg • Fast UV cure • Cures in shadowed areas • Low temperature cure
Application	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/cm² 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 ² 2,200 (psi) (320,000)
@ 25 °C	N/mm ² 1,300 (psi) (190,000)
@ 100 °C	N/mm ² 380 (psi) (54,000)
@ 150 °C	N/mm ² 75 (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/cm² 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

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

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

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

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

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

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

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

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

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

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

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

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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada, Inc. the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results

obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1