

# LOCTITE ECCOBOND EN 3710F

May 2021

## PRODUCT DESCRIPTION

LOCTITE ECCOBOND EN 3710F provides the following product characteristics:

<b>Technology</b>	Acrylic
<b>Appearance</b>	Yellowish opaque liquid
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Low modulus</li> <li>• Fluorescent</li> <li>• Cures in shadowed areas with heat</li> </ul>
<b>Cure</b>	Ultraviolet (UV) light with optional heat cure
<b>Application</b>	Encapsulation, Glob top

LOCTITE ECCOBOND EN 3710F is primarily designed for bonding electronic components on a PCB. Upon exposure to suitable UV light, the material cures in seconds with no need for post heat cure. This product also contains a secondary thermal cure mechanism for applications with shadowed areas where light is unable to penetrate.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP40, 25 °C, mPa·s (cP):	
Speed 10 rpm	2,025
Thixotropic Index (1/10 rpm)	1.82
Specific Gravity @ 25°C	0.94
Pot Life @ 25°C, days	3
Shelf Life @ -25 to -15°C, days	270
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Recommended UV Cure Condition

Light Source and Condition:	
Ultraviolet (UV) light	
Light Intensity, mJ/cm <sup>2</sup>	2,500
Wavelength, nm	365

*Sample cured using high pressure mercury lamp @ 100 mW/cm<sup>2</sup>*

UV Tack-Free Time, seconds	10
UV depth of cure, mm	13

### Recommended Additional Heat Cure

8 minutes @ 130°C

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

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties :

Hardness, Shore A	42
Coefficient of Thermal Expansion, TMA:	
Below Tg, ppm/°C	82
Above Tg, ppm/°C	260
Glass Transition Temperature, °C:	
TMA	-40
DMA, Tangent Delta	-18
Storage Modulus, DMA tension:	
@ 25°C	N/mm <sup>2</sup> 2.5 (psi) (362)

## GENERAL INFORMATION

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

### THAWING:

1. DO NOT open the container before contents reach 25 °C temperature. Any moisture that collects on the warmed up container should be removed prior to opening the container.
2. Syringes should be positioned tip down when stored vertically.
3. Once material has reached room temperature, the adhesive should not be re-refrigerated.
4. 30 to 50 cc packages take about 1 to 2 hours to thaw.

### Directions for Use

1. This product is light sensitive; exposure to daylight, UV light or artificial lighting should be kept to a minimum during storage and handling.
2. The product should be dispensed from application with black feedlines.
3. For best performance, bond surface should be clean and free from grease.
4. Apply film to one of the bonding surfaces and assemble immediately.
5. Cure rate is dependent on lamp intensity, distance from light source, depth of cure needed or bondline gap and light transmittance of the substrate through which the radiation must pass.
6. Cooling should be provided for temperature sensitive substrates such as thermoplastics.
7. Crystalline and semi-crystalline thermoplastics should be checked for risk of stress cracking when exposed to liquid adhesive.
8. Excess uncured adhesive can be wiped away with organic solvent (e.g. Acetone).
9. Bonds should be allowed to cool before subjecting to any service loads.

**Storage**

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

**Optimal Storage : -25 to -15 °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 Henkel Representative

**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.

**Conversions**

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

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

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

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

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

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

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

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

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

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

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

**Disclaimer**

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**Reference 2**