

**LOCTITE HHD 3583UV**

October 2018

**PRODUCT DESCRIPTION**

LOCTITE HHD 3583UV provides the following product characteristics:

<b>Technology</b>	Polyurethane Hot Melt
<b>Appearance</b>	Yellow
<b>Product Benefits</b>	<ul style="list-style-type: none"><li>• Dual cure</li><li>• Long open time</li></ul>
<b>Solids Content, %</b>	100
<b>Cure</b>	Ultraviolet (UV) light and Moisture
<b>Application</b>	Device assembly, Structural adhesive

LOCTITE HHD 3583UV dual cure adhesive is formulated to initially cure when exposed to UV light and moisture. This product has long open time for automatic or manual assembly line and after curing shows good flexibility.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

Viscosity, Brookfield - Thermosel, 100 °C, mPa·s (cP):  
Spindle 27 5,250  
Density @ 25°C, ±0.05 g/cm<sup>3</sup> 1.1  
Flash Point - See SDS

**TYPICAL CURING PERFORMANCE**

Open Time @ 25 °C, minutes, without UV 15 to 20  
Open Time @ 25 °C, minutes, with UV 8 to 10  
Preheating Schedule:  
20 to 30 minutes @ 100°C  
Application Temperature, °C 90 to 110

**Recommended UV Cure Condition**

UVA Wavelength, nm 375  
Light Intensity, mW/cm<sup>2</sup> 25 to 75  
UV Lamps type UVA  
LED  
Flood System

Open time is the bonding range of a 1 mm bead of molten adhesive on substrate. It is based on room temperature environment. Higher temperature will lengthen the open time while lower environmental temperatures will shorten the open time.

LOCTITE HHD 3583UV cures exclusively by UV and moisture and gains its final strength in 1-5 days. This material, however, exhibits high handling strength instantly after bonding.

Curing is a chemical reaction depending on the following parameters:

- UV type / wavelength / intensity
- Humidity in the rooms of application and storage
- Moisture content on the substrates
- Permeability of the substrates to be bonded
- Application volume / layer of the adhesive film

The above cure profile is a guideline recommendation. 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.

**GENERAL INFORMATION**

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

**Pretreatment:**

1. The bonding surfaces must be clean, dry and free of oil and grease.
2. Substrate temperature should not fall below 20°C during application.
3. Lower temperatures will lead to early solidification of the adhesive and to a reduced open time, the adhesive might even flake off.
4. The substrates may be preheated if necessary.

**Application:**

LOCTITE HHD 3583UV can be applied from heating cartridge guns, from usual syringe type melting equipment.

At longer rest periods, melting and application temperatures should be decreased. Longer exposure to higher temperatures can lead to a viscosity increase.

**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 25 °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**

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

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