

LOCTITE HHD 3583UV

October 2018

PRODUCT DESCRIPTION

LOCTITE HHD 3583UV provides the following product characteristics:

Technology	Polyurethane Hot Melt
Appearance	Yellow
Product Benefits	• Dual cure • Long open time
Solids Content, %	100
Cure	Ultraviolet (UV) light and Moisture
Application	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/cm³ 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/cm² 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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