

LOCTITE® ECCOBOND EN UV9701

August 2021

PRODUCT DESCRIPTION

LOCTITE® ECCOBOND EN UV9701 provides the following product characteristics:

Technology	Acrylate
Appearance	Translucent light blue
Product Benefits	<ul style="list-style-type: none"> • Fast cure • One component • Cures in shadowed areas • Easy dispensability without stringing • Fluorescent under UV light • Low sensitization
Cure	Ultraviolet (UV)/ moisture
Application	Electronic Encapsulants, Circuit Board Encapsulant
Typical Package Application(s)	Encapsulate components on PCB

LOCTITE® ECCOBOND EN UV9701 UV/moisture cure encapsulant is designed for local circuit board protection applications. This material exhibits both good initial and final adhesion to various substrates and is fluorescent when viewed under ultraviolet (black) light.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Rheometer, Cone and Plate @ 25°C, mPa·s (cP):

Cone 40 mm, Angle 2° @ Shear rate 2 s⁻¹ 16,800

Thixotropic Index (2/20 s⁻¹) 5.9

Pot life @ 25 °C, based on syringe in foil package, 3 days

Shelf Life @ 5°C, days 180

TYPICAL CURING PERFORMANCE

Recommended UV Cure

Light Source and Condition:

LED lamp:

Light Intensity, mW/cm² 500

UV Wavelength, nm 365

Light Dose, seconds 15

Cures at depths of at least 0.2 inch under optimum conditions.

LOCTITE® ECCOBOND EN UV9701 can be cured by exposure to UV and/or visible light of sufficient intensity. Surface cure is enhanced by exposure to UV light in the 220 to 260 nm range. Cure rate and ultimate depth of cure

depend on light intensity, spectral distribution of light source, exposure time and light transmittance of the substrate through which the light must pass.

Moisture cures occurs at ambient temperature and humidity.

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.

TYPICAL PROPERTIES OF CURED MATERIAL

DMA and TMA tests conducted on samples cured UV + 7 days moisture (RT, 50% RH) .

Hardness, Tg and modulus increases with additional moisture cure.

CTE decreases with additional moisture cure.

Physical Properties

Hardness, Shore D, After initial UV dose of 3.2 J/cm² , moisture cure condition of 50%RH @ room temperature:

Initial, after UV Cure 65

+ 1 day moisture cure 70

+ 3 days moisture cure 75

+ 7 days moisture cure 80

Coefficient of Thermal Expansion, TMA, ppm/°C:

Below Tg 75

Above Tg 175

Glass Transition Temperature (Tg) by TMA, °C 55

Storage Modulus, DMA:

@ 25 °C N/mm² 2,480
(psi) (359,400)

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 °C temperature. Any moisture that collects on the warmed up container should be removed prior to opening the container.
2. Set syringes to stand vertically while thawing.
3. Voids can form in the syringes if syringes are repeatedly re-refrigerated.
4. Typical thaw/warm-up times for different package sizes are shown below:

@ 25°C, 30 cc syringes, minutes	45 to 60
@ 25°C, 55 cc syringes, hours	2

Directions for Use

1. Use cotton gloves to handle syringe. Touching the syringe with bare hands may induce thaw voids between the adhesive and inside walls of the syringe.
2. Handle the syringes by the end or, if packaged in bags, by the corner. A warm hand holding a cold syringe can sometimes cause formation of freeze/thaw voids.
3. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part.
4. Usable shelf life may vary depending on method of application and storage conditions.

Storage

Store in original, tightly covered containers in clean, dry areas. Storage information may be indicated on the product container labeling.

Optimal Storage: 5°C. Storage below 2°C or above 8°C can adversely affect product properties.

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 Henkel representative for assistance and recommendations on the specifications of 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**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.

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Reference 1