

LOCTITE DSP 3331

September 2018

PRODUCT DESCRIPTION

LOCTITE DSP 3331 provides the following product characteristics:

Technology	Acrylate
Appearance	Colorless to yellowish liquid
Product Benefits	<ul style="list-style-type: none"> • Fast UV cure • Excellent flexibility • Good moisture resistance • High adhesion to PI
Cure	UV LED
Application	Encapsulation
Typical Assembly Applications	OLED or LCD module assembly

LOCTITE DSP 3331 encapsulant is designed for LCD module or micro patterned PI substrate for OLED module assembly applications. It is formulated with excellent flexibility properties to improve crack/fracture resistance and delamination for overall improvement of package reliability.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity by Rheometer, mPa·s (cP):

Plate 20 mm, 2 inch gap @ Shear rate 15 s⁻¹ 1,464

Density, gm/cc 1.04

Solids Content, % 100

Shelf Life @ 25°C (from date of manufacture) (estimated), days 180

Flash Point - See SDS

TYPICAL CURING PERFORMANCE

Recommended UV Cure Condition

Mercury Vapor lamp

Electrodeless lamp

UV LED

Irradiance, mJ/cm² 1,500

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.

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

Glass Transition Temperature (T _g) by DMA, °C	38.1
Tensile Modulus @ 25°C, Texture analyzer, 60 mm/min, MPa	87.8
Elongation at break, Texture analyzer, %	247.5

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Tensile Lap Shear Strength, PC substrate, crosshead speed, 25 mm/min, N/mm ²	9
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GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Clean all surfaces to be bonded.
2. This product is light sensitive; exposure to daylight, UV light or artificial lighting should be kept to a minimum during storage and handling.
3. The product should be dispensed from application with black feedlines.
4. 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.
5. Cooling should be provided for temperature sensitive substrates such as thermoplastics.
6. Crystalline and semi-crystalline thermoplastics should be checked for risk of stress cracking when exposed to liquid adhesive.
7. Excess uncured adhesive can be wiped away with organic solvent (e.g. Acetone).
8. Bonds should be allowed to cool before subjecting to any service loads.

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: 18 to 25°C. Storage below 18°C or above 25°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 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.

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