

LOCTITE ECCOBOND EN 3871

September 2017

PRODUCT DESCRIPTION

LOCTITE ECCOBOND EN 3871 provides the following product characteristics:

Technology	Epoxy
Appearance	Clear liquid
Product Benefits	• One component • Good transparency • No yellowing • Good moisture protection
Cure	Heat cure
Application	Semiconductor, Encapsulant
Typical Package Application	OLED packaging

LOCTITE ECCOBOND EN 3871 optically clear epoxy encapsulant is designed for OLED encapsulation and other electronic applications requiring humidity protection. It is formulated with anti UV protection to withstand yellowing over time.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	22,900
Work Life @ 25°C, (25% increase in viscosity), hours	8
Shelf Life @ -20°C (from date of manufacture), days	180
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

120 minutes @ 85°C

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.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Coefficient of Thermal Expansion, ppm/°C:	
Below Tg	77
Above Tg	156
Glass Transition Temperature (Tg) by TMA, °C	117
Refractive Index	1.5
Storage Modulus, DMA @ 25 °C	N/mm ² 2,246
	(psi) (325,754)

Water Vapor Permeability Coefficient, g.mil/100 in ² .day:	
@ 50°C/100% RH	6.9

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

Die Shear Strength:	
4 x 4mm, Glass to Glass, kg-f	14.5

Miscellaneous

Transmittance, 100 µm Glass/glass laminate, %:	
UV-VIS @ 400 nm	>95
UV-VIS @ 450 nm	>97

GENERAL INFORMATION

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

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.

DIRECTIONS FOR USE

1. LOCTITE ECCOBOND EN 3871 adhesive shipped at about -40°C to prevent excessive temperature exposure during shipping.

STORAGE:

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

Optimal Storage: -20°C. Storage below -40°C or above 30°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

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

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

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

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

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

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

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

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

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

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

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

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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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