

# LOCTITE ECCOBOND EN 3942

November 2021

**PRODUCT DESCRIPTION**

LOCTITE ECCOBOND EN 3942 provides the following product characteristics:

|                                       |                                                                                                                                                          |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Technology</b>                     | Epoxy                                                                                                                                                    |
| <b>Appearance</b>                     | Black liquid                                                                                                                                             |
| <b>Cure</b>                           | Heat cure                                                                                                                                                |
| <b>Product Benefits</b>               | <ul style="list-style-type: none"><li>• One component</li><li>• Thixotropic</li><li>• Fluorescent</li><li>• Fast cure at moderate temperatures</li></ul> |
| <b>Application</b>                    | Encapsulation, Glob top                                                                                                                                  |
| <b>Typical Package Application(s)</b> | BGA, CSP, connectors                                                                                                                                     |

LOCTITE ECCOBOND EN 3942 is designed to provide a flexible, low Tg material for encapsulating components on a PCB. Once the material is fully cured this material provides physical protection and stable electronic performance and protection in temperature/humidity/bias testing.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):

|                              |        |
|------------------------------|--------|
| Speed 10 rpm                 | 13,000 |
| Thixotropic Index (1/10 rpm) | 1.5    |
| Work Life @ 25°C, days       | 3      |
| Shelf Life @ -20°C, days     | 365    |
| Flash Point - See SDS        |        |

**TYPICAL CURING PERFORMANCE****Recommended Cure Condition**

30 minutes @ 150°C

The above cure profile is a guideline recommendation. These cure conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

**TYPICAL PROPERTIES OF CURED MATERIAL****Physical Properties**

|                                              |     |
|----------------------------------------------|-----|
| Glass Transition Temperature (Tg) by TMA, °C | 90  |
| Coefficient of Thermal Expansion, ppm/°C:    |     |
| Below Tg                                     | 55  |
| Above Tg                                     | 194 |

Storage Modulus, N/mm<sup>2</sup>

2,740

**GENERAL INFORMATION**

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

**THAWING:**

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.
3. DO NOT re-freeze. Once thawed, the adhesive should not be re-frozen

**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**

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.

**Conversions**

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



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