

# LOCTITE ECCOBOND EN 3838FL

December 2019

**PRODUCT DESCRIPTION**

LOCTITE ECCOBOND EN 3838FL 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><li>• Low Tg</li><li>• Low modulus</li></ul>
<b>Application</b>	Encapsulation, Glob top
<b>Typical Package Application</b>	CSP and BGA

LOCTITE ECCOBOND EN 3838FL 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 20 rpm	5,800
Thixotropic Index	5.6
Pot Life @ 25 °C, days	3
Shelf Life @ -20°C, days	270
Flash Point - See SDS	

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

>8 minutes @ 130°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**

Hardness, Shore D	25
Glass Transition Temperature (Tg) by TMA, °C	2

Coefficient of Thermal Expansion, ppm/°C:

Below Tg	60
Above Tg	205

Storage Modulus, DMA @ 25 °C	N/mm <sup>2</sup>	536
	(psi)	(77,700)

**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. Storage below -40°C or above -15 °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**

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

## 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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