

# LOCTITE ECCOBOND EN 3838T

September 2015

## PRODUCT DESCRIPTION

LOCTITE ECCOBOND EN 3838T provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Appearance</b>	Black liquid
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• One component</li> <li>• Thixotropic</li> <li>• Fast cure at moderate temperatures</li> <li>• Low Tg</li> <li>• Low modulus</li> <li>• Reworkable</li> <li>• Pb-free applications</li> </ul>
<b>Cure</b>	Heat cure
<b>Application</b>	Encapsulation
<b>Typical Package Application</b>	CSP and BGA

LOCTITE ECCOBOND EN 3838T is designed to provide an flexible, low Tg material for encapsulating components on a PCB. When 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	6,700
Thixotropic Index (2/20 rpm)	5.8
Specific Gravity	1.2
Pot Life @ 25°C, days	3
Shelf Life @ -20°C, days	270
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Recommended Cure Schedule

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	27
Coefficient of Thermal Expansion, , TMAppm/°C:	
Below Tg	57
Above Tg	217
Glass Transition Temperature, (Tg) by TMA, °C	2
Storage Modulus, DMA @ 25°C	N/mm <sup>2</sup> 466
	(psi) (67,590)
Thermal Conductivity , W/(m·K)	0.22

## 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.

### THAWING:

1. Allow container to reach room temperature before use.

### 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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Reference 0.3