

# LOCTITE ECCOBOND E 3230

September 2012

## PRODUCT DESCRIPTION

LOCTITE ECCOBOND E 3230 provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Appearance</b>	White to yellow paste
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Fast and low temperature cure</li> <li>• Sag resistant paste</li> <li>• Resilient</li> <li>• Long pot life</li> <li>• Flexible epoxy</li> <li>• Excellent chemical and humidity resistance</li> <li>• Non-conductive</li> </ul>
<b>Application</b>	Assembly
<b>Surfaces</b>	Polyimide, Polyphenylene oxide, Polybutylene terephthalate, Polysulfone, Silicon, Copper and Gold

LOCTITE ECCOBOND E 3230 chemically resistant, fast and low temperature heat curing adhesive is formulated for bonding dissimilar engineering substrates commonly used in ink jet applications and other MEMS devices.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (1/10)	1.6
Casson Viscosity @ 25 °C, mPa·s (cP) :	
Shear Gradient: 10 s <sup>-1</sup>	45,200
Shear Gradient: 50 s <sup>-1</sup>	39,400
Specific Gravity	1.1
Shelf Life @ -20°C, months	4
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Cure Schedule

- Gel @ 80°C
- 20 minutes @ 100°C or
- 10 minutes @ 110°C or
- 5 minutes @ 120°C

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.

## Differential Scanning Calorimetry

Temperature Program from 220 °C at 10 °C/minute

Curing Exotherm, J/g	173
Peak Maximum, °C	94.9
Peak Onset, °C	67.3

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties :

Glass Transition Temperature, DMA, °C	58.4
Tensile Modulus @ 25°C, MPa	1,598

## GENERAL INFORMATION

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

### THAWING:

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.

### DIRECTIONS FOR USE

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part
2. Apply adhesive to all surfaces to be bonded and join together
3. In most applications only contact pressure is required

### 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 : -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 Technical Service Center or Customer Service Representative.

### Conversions

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

N·mm x 0.142 = oz·in

mPa·s = cP

**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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