



# ECCOBOND 2332

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## PRODUCT DESCRIPTION

ECCOBOND 2332 provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Appearance</b>	Black
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• One component</li> <li>• Excellent adhesion</li> <li>• Non-conductive</li> <li>• Low temperature cure</li> <li>• High strength</li> </ul>
<b>Application</b>	Non-conductive adhesive
<b>Operating Temperature</b>	-40 to 150 °C
<b>Surfaces</b>	Copper, Aluminum, Nickel, FRP and Rigid plastics

ECCOBOND 2332 is a solventless epoxy adhesive that develops high bond strength when cured at temperatures as low as 100°C. This product combines toughness at low temperatures plus high peel and tensile shear strengths over a very broad temperature range.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity @ 25 °C, mPa·s (cP)	65,000 to 85,000
Specific Gravity	1.17 to 1.23
Shelf Life @ 0 to 8°C, months	6
Flash Point - See MSDS	

## TYPICAL CURING PERFORMANCE

### Cure Schedule

1 hour @ 120°C

### Alternative Curing Conditions

- 90 minutes @ 100°C or
- 30 minutes @ 120°C or
- 20 minutes @ 150°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.

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties:

Coefficient of Thermal Expansion, K <sup>-1</sup>	100×10 <sup>-6</sup>
Glass Transition Temperature (T <sub>g</sub> ) by TMA, °C	105
Hardness Shore D	
@ 25°C	75
@ 120°C	30

### Tensile Modulus, DMTA :

@ 50 °C	N/mm <sup>2</sup>	1,043
	(psi)	(151,235)
@ 100 °C	N/mm <sup>2</sup>	508
	(psi)	(73,660)
@ 150 °C	N/mm <sup>2</sup>	20
	(psi)	(2,900)
@ 200 °C	N/mm <sup>2</sup>	10
	(psi)	(1,450)

Linear Shrinkage, % 2.3

### Electrical Properties:

Volume Resistivity, ohm/cm @ 25°C 6×10<sup>14</sup>

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Lap Shear Strength :

#### Aluminum:

Tested @ 25 °C	N/mm <sup>2</sup>	20.4
	(psi)	(2,960)
Tested @ 90 °C	N/mm <sup>2</sup>	15.3
	(psi)	(2,220)
Tested @ 125 °C	N/mm <sup>2</sup>	12.5
	(psi)	(190)
Tested @ 150 °C	N/mm <sup>2</sup>	4.9
	(psi)	(710)

#### PBT:

Tested @ 25 °C	N/mm <sup>2</sup>	6.0
	(psi)	(870)
Tested @ 125 °C	N/mm <sup>2</sup>	3.1
	(psi)	(450)
Tested @ 150 °C	N/mm <sup>2</sup>	1.2
	(psi)	(175)

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

1. Carefully clean and dry all surfaces to be bonded
2. Some separation of components is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use

## 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: 0 to 8°C. Storage greater than or below 0 to 8°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

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

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

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

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

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

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

$\text{MPa} \times 145 = \text{psi}$

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

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

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

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

## Note

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Reference 0.2