

LOCTITE ECCOBOND DC0114

October 2019

PRODUCT DESCRIPTION

LOCTITE ECCOBOND DC0114 provides the following product characteristics:

Technology	Epoxy
Appearance	blue
Product Benefits	<ul style="list-style-type: none"> • High viscosity • Thixotropic • Excellent wettability • Compatible for use with typical surfaces • High reliability
Filler Weight, %	12.5
Components	One-component
Cure	Heat cure
Application	Underfill
Typical Applications	Die edge coating on flip chips using non-contact dispensing

LOCTITE ECCOBOND DC0114 epoxy underfill is suitable for high reliability applications due to its combination of properties. It can be applied to ceramic or organic substrates, including solder masks and polyimide.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield - Cone & Plate, 25 °C, mPa·s (cP):	
Spindle 52, speed 2 rpm	160,000
Thixotropic Index	11
Specific Gravity	1.1
Pot life@ 25°C, hours:	
(Time required to double viscosity)	12
Gel Time, DSC @ 130°C, minutes	10
Particle Size, μ, maximum	<5
Shelf Life @ -40°C, months	9
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE Recommended Cure Schedule

30 minutes @ 165°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 :

Coefficient of Thermal Expansion, ppm/°C:	
Below Tg (40 to 90°C)	68
Above Tg (190 to 220°C)	175
Glass Transition Temperature(Tg), °C	140

GENERAL INFORMATION

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

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

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. Frozen packages must be completely thawed before use.
2. Allow container to reach room temperature before use, normally 60 to 90 minutes.
3. DO NOT thaw in an oven.
4. Preheat of the substrate is not required with this material.

DIRECTIONS FOR USE

1. Conditions where a hot plate or heat sink is used are optimum for fastest cure.
2. Cure rates depends on the mass of material to be heated and intimate contact with the heat source.

STORAGE:

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage : -40 °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

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

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

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

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

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

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

$$\text{MPa} = \text{N/mm}^2$$

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

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

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

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

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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