

LOCTITE ECCOBOND UF 1175

December 2021

PRODUCT DESCRIPTION

LOCTITE ECCOBOND UF 1175 provides the following product characteristics:

Technology	Epoxy
Appearance	White liquid
Cure	Heat cure
Product Benefits	• Fast cure • One component • Controlled flow • Easy dispensability without stringing • Low CTE
Application	Electronic encapsulants, Circuit board underfill

LOCTITE ECCOBOND UF 1175 partial underfill is formulated for use on large chip sizes, providing good UPH and reliability.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):

Speed 5 rpm	35,295
Thixotropic Index (0.5/5 rpm)	1.05
Specific Gravity, g/cm ³	1.65
Work Life @ 25°C, viscosity, in syringe, day	1
Shelf Life @ -20°C, days	180

TYPICAL CURING PERFORMANCE

Cure Schedule

15 minutes @ 120°C

The above cure profile is a guideline recommendation. These cure conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Sample cured 15 minutes @ 120°C

Physical Properties

Coefficient of Thermal Expansion, TMA:

Below Tg, ppm/°C	19
Above Tg, ppm/°C	68
Glass Transition Temperature (Tg) by TMA, °C	154
Storage Modulus, @ 25°C, DMA, N/mm ²	13,984

Adhesion Properties

Die Shear Strength :

3 x 3 mm Si die on FR4, kg-f

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GENERAL INFORMATION

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

THAWING:

1. This product is packed and shipped in dry ice packs to prevent excessive temperature exposure during shipping.
2. Allow material to reach room temperature before use.
3. After removing from the freezer, set the syringes to stand vertically while thawing.
4. Once material has reached room temperature, the adhesive should not be re-refrigerated.

DIRECTIONS FOR USE

1. LOCTITE ECCOBOND UF 1175 can be applied by jet dispense.
2. When applied by jetting, nozzle heating of 50 to 60°C is recommended.
3. For faster flow, board should be heated to 70 to 100°C.

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 Henkel Representative.

Conversions

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

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

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