

LOCTITE ECCOBOND F 120

June 2016

PRODUCT DESCRIPTION

LOCTITE ECCOBOND F 120 provides the following product characteristics:

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| Technology | Epoxy |
| Appearance | Transparent |
| Components | Two component - requires mixing |
| Mix Ratio, by weight - Resin : Hardener | 100 : 93 |
| Product Benefits | <ul style="list-style-type: none"> • Fast cure • Solvent-free • Low shrinkage • Medium viscosity • Good electrical insulation • Excellent mechanical properties • Excellent chemical resistance |
| Cure | Room temperature cure or Heat cure |
| Application | Assembly |
| Operating Temperature | -60 to 115 °C |
| Typical Applications | Lens bonding, connector backfills, component assembly seals and PCB repairs |

LOCTITE ECCOBOND F 120 adhesive is designed for high performance fiber optic and optical bonding applications. This adhesive provides outstanding chemical resistance to a variety of ambient gases, solvents and solutions. LOCTITE ECCOBOND F 120 is recommended for bonding fiber optic, optical and laser industry specified materials including DuPont PIFAX plastic core or glass cables, single or multichannel terminations and connectors, and many other plastic or metals components.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity @ 25 °C, mPa·s (cP):

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|-------------------------|--------|
| Resin | 14,000 |
| Hardener | 35,000 |
| Thixotropic Index | 1.0 |
| Specific Gravity, mixed | 1.22 |
| Pot Life, minutes | 5 |
| Flash Point - See SDS | |

TYPICAL CURING PERFORMANCE

Cure Schedule

- 24 hours @ 25°C or
- 1 hour @ 65°C

LOCTITE ECCOBOND F 120 develops a high exotherm. **USE IMMEDIATELY AFTER MIXING.** The exothermic reaction begins within 2 minutes after initiating the mixing step, so have everything ready before removing BIPAX clamp.

LOCTITE ECCOBOND F 120 develops significant properties 1 hour after mixing. However, an extended cure of 4 to 6 hours at 25°C is required for fully matured bonds

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

| | |
|---|--------------------|
| Hardness, Shore D | 72 |
| Coefficient of Thermal Expansion , cm/cm/°C | 6×10 ⁻⁶ |
| Izod Impact Strength, ft-lb/in. of notch | 1.9 |
| Reactive solids contents, % | 100 |

Electrical Properties

| | |
|------------------------------------|-----|
| Dielectric Strength, volts/mil | 400 |
| Dielectric Constant @ 1 KHz, 25 °C | 4.4 |

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Carefully clean and dry all surfaces to be bonded
2. Remove clamp and thoroughly mix the LOCTITE ECCOBOND F 120 epoxy adhesive system components in the handy BIPAX mixing-dispenser package until color is uniform throughout
3. Apply this completely mixed adhesive to the prepared surfaces, and gently press these surfaces together. Contact pressure is adequate for strong, reliable bonds; however, maintain contact until adhesive is completely cured
4. Some ingredients in this formulation provided in BIPAX, TRA-PAX and bulk packaging may crystallize when subjected to low temperature storage. A gentle warming cycle of 125°C for 30 minutes prior to mixing components may be necessary. Crystallized epoxy components do not react as well as liquid components and should be redissolved prior to use for best results

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.

AVAILABILITY

This epoxy can be supplied in many different packages including 2 grams (or larger) BIPAX kits, pre-mixed or frozen syringes or 1gram MINIPAX.

Storage

The expiration date for pre-mixed and frozen materials is based upon dry storage conditions at or below the temperature indicated on each package. Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage : 27 °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. Contents may separate during storage. Resin or hardener in bulk containers (e.g., quarts, gallons) should be thoroughly mixed prior to combining them to obtain all the benefits of the properties designed into the formulation.

Conversions

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

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 1