

LOCTITE ECCOBOND EO1080

December 2016

PRODUCT DESCRIPTION

LOCTITE ECCOBOND EO1080 provides the following product characteristics:

| | |
|-----------------------------|--|
| Technology | Epoxy |
| Appearance | Black |
| Product Benefits | <ul style="list-style-type: none"> • Excellent shelf stability • Fast curing capability at moderate temperature • Excellent handling properties |
| Components | One-component |
| Cure | Heat cure |
| Application | Encapsulation |
| Typical Applications | IC's, transistors and similar semiconductors |

LOCTITE ECCOBOND EO1080 epoxy encapsulant is designed for use as a casting compound in applications requiring excellent handling properties. The cured material survives severe thermal shock and offers continuous service to 177 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

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

| | |
|---------------------------|--------|
| Spindle 7., speed 4 rpm | 60,000 |
| Specific Gravity @ 25 °C | 1.56 |
| Gel Time @ 121°C, minutes | 3.1 |
| Shelf Life @ 4°C, months | 12 |
| Flash Point - See SDS | |

TYPICAL CURING PERFORMANCE Recommended Cure Schedule

20 minutes @ 150°C

Alternative Cure Schedule

90 minutes @ 140°C or
2 hours @ 110°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 | 35 |
| Above Tg | 125 |
| Glass Transition Temperature (Tg), °C | 121 |
| Shore Hardness, ISO 868, Durometer D | 86 |

| | | |
|-------------------------------|-------------------|-------------|
| Flexural Modulus , ASTM D790 | N/mm ² | 9,200 |
| | (psi) | (1,288,000) |
| Flexural strength , ASTM D790 | N/mm ² | 135 |
| | (psi) | (18,900) |
| Water Absorption, ISO 62, %: | | |
| 24 hours immersion @ 25°C | | 0.05 |
| 24 hours immersion @ 50°C | | 0.16 |

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.

Directions for use

1. LOCTITE ECCOBOND EO1080 should not be used for casting masses larger than 50 grams.
2. Mix thoroughly each time it is used.
3. Heating to 32 to 43°C will lower viscosity and aid in mixing and pouring.

STORAGE:

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

Optimal Storage : 4 °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

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

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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