

LOCTITE ECCOBOND FP4654

September 2012

PRODUCT DESCRIPTION

LOCTITE ECCOBOND FP4654 provides the following product characteristics:

Technology	Epoxy and Anhydride
Appearance	Black
Product Benefits	• High purity • Low stress • Self-leveling • Excellent chemical resistance • Jettable • Excellent thermal stability
Filler Weight, %	80
Cure	Heat cure
Application	Encapsulation, Damming or Filler
Typical Applications	Cavity fill or dam and fill
Temperature Range, °C	-45 to 150

LOCTITE ECCOBOND FP4654 encapsulant is designed for larger cavity-fill or dam-and-fill applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

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

Spindle 52, speed 20 rpm 32,000

Pot Life @ 25°C (time to double viscosity), days >3

Gel Time @ 121°C, minutes 11

Shelf Life @ -40°C, days 274

Specific Gravity @25°C 1.85

Flash Point - See SDS

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

30 minutes @ 125°C Plus

90 minutes @ 165°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

Physical Properties :

Coefficient of Thermal Expansion, ppm/°C:

Below Tg (<55°C) 13

Above Tg (190 to 220°C) 53

Glass Transition Temperature (Tg), °C 146

Tensile Modulus, By DMA N/mm² 16,900
(psi) (2,451,000)

Extractable Ionic Content, :

Chloride (Cl-) 10

Sodium (Na+) 5

Potassium (K+) 5

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. Allow container to reach room temperature before use.
2. Store tip down and warm at room temperature until no longer cool to the touch (normally 60 to 90 minutes).
3. DO NOT thaw in an oven.

Directions for use

1. For best flow rates dispense onto substrate warmed to approximately 80°C.

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 Henkel Representative.

Conversions

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

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

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

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

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

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

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

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

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

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

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

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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