chanhvinh.com

LOCTITE

Technical Data Sheet

LOCTITE ECCOBOND FP0087

September 2016

PRODUCT DESCRIPTION

LOCTITE ECCOBOND FP0087 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Product Benefits	• Low stress • High glass transition • Low thermal expansion • Excellent moisture resistance • Excellent thermal shock resistance • Reduced warpage and cracking
Filler Weight, %	76
Components	One-component
Cure	Heat cure
Application	Encapsulation
Typical Applications	Encapsulant for potting stress sensitive devices

LOCTITE ECCOBOND FP0087 yields best results when used to encapsulate a device enclosed in a cavity or potting ring, which restricts the flow of the material. The unique combination of low stress and excellent resistance to moisture and process fluids provide excellent results in severe automotive environments.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 6, speed 20 rpm	20,000
Shelf Life @ -40°C, months	9
Gel Time @ 121ºC, minutes	20
Pot Life @ 25ºC, 200 grams mass, hours	24
Specific Gravity @ 25ºC gm/cc	1.78
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

1 hour @ 125°C plus
1 hour @ 180°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 ISO 11359-2,:	
Below Tg (40 to 120°C)	18
Glass Transition Temperature, ISO 11359-2 (Tg), °C	175
Shore Hardness, ISO 868, Durometer D	95

Electrical Properties

Dielectric Constant / Dissipation Factor, IEC 60250:	
1 kHz	3.34 / 0.003
10 kHz	3.32 / 0.006
100 kHz	3.2 / 0.014
Volume Resistivity, IEC 60093, Ω·cm	6.34×10^{14}
Surface Resistivity, IEC 60093, Ω	7.10×10^{15}

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.
3. Store tip down and warm at room temperature until no longer cool to the touch (normally 20 to 60 minutes).
4. DO NOT thaw in an oven.

Directions for use

1. For best results, dispense onto substrate warmed to 80°C.
2. Warm LOCTITE ECCOBOND FP0087 to 30 to 40°C for faster dispensing.
3. **NOTE:** Elevated temperatures reduce working life.

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.

Henkel

chanhvinh.com

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = 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.
Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:
In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:
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. 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.
Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:
The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage
Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1