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LOCTITE

Technical Data Sheet

LOCTITE ECCOBOND F 113

September 2012

PRODUCT DESCRIPTION

LOCTITE ECCOBOND F 113 provides the following product characteristics:

Technology	Epoxy
Appearance	clear
Cure	Room Temperature or Heat Cure
Product Benefits	• Low viscosity • Optically clear • Resistant to mechanical impact • Excellent wettability • Excellent thermal shock resistance
Mix Ratio, by weight - Resin : Hardener	100 : 30
Surfaces	Glass, Glass fibers, Ceramics, Many metals and Most rigid plastics
Operating Temperature	-60 to 100 °C
Application	Assembly
Typical Package Application	Optical components and LED displays

LOCTITE ECCOBOND F 113 is an optically clear adhesive developed for bonding and small volume potting of plastic or glass optical fibers, lenses and prisms, LED displays and other optical components. LOCTITE ECCOBOND F 113 bonds offer resistance to weather, water, gasses, petroleum products and mild acids and alkalis.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index	1.0
Mixed Viscosity, cps @ 25 ºC	180
Specific Gravity	1.22
Pot Life , hours	2
Work Life, hours	3
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

24 hours @ 25°C or
1 to 2 hours @ 65°C

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 :

Coefficient of Thermal Expansion, ppm/ºC	55
Glass Transition Temperature, DMA, °C	45
Hardness, Shore D	78
Refractive Index	1.55
Spectral transmittance (3,200 to 9,000 Å), %	97

Electrical Properties:

Dielectric Constant @ 25ºC :	
1kHz	4.8
Dielectric Strength, volts/mil	430
Volume Resistivity, ohm-cm @ 25ºC	9×10^{08}

TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength, :	
Aluminum/Aluminum	
2 hours @ 65°C, psi	4,000

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Carefully clean and dry all surfaces to be bonded
2. Remove clamp and thoroughly mix the LOCTITE ECCOBOND F 113 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

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.

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Storage
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.

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
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