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LOCTITE

Technical Data Sheet

LOCTITE ECCOBOND EN 3707F

June 2023

PRODUCT DESCRIPTION

LOCTITE ECCOBOND EN 3707F provides the following product characteristics:

Technology	Epoxy
Appearance	Light yellow liquid
Product Benefits	• Dual cure • Fast UV cure • One component • Cures in shadowed areas with heat • Easy dispensability without stringing • Fluorescent under UV light
Cure	Ultraviolet (UV) light or Heat cure
Application	Encapsulation
Typical Assembly Applications	Local protection of WLCSP and BGA on circuit board

LOCTITE ECCOBOND EN 3707F no flow encapsulant is designed for local circuit board protection. This adhesive cures in seconds when exposed to the appropriate intensity of UV light. In addition to light cure, this adhesive contains a secondary thermal cure initiator.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 20 rpm	3,480
Pot Life @ 25ºC, days	3
Shelf Life @ 2 to 8°C, days	180
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended UV Cure Condition

Light Source and Condition:	
UVA or UVB light	
Light Intensity, mW/cm²	100
Exposure Time	>30

Depth of Cure

Medium Pressure Hydrargyrum Light:	
100, mW/cm² for 30 seconds, mm	≥10

Recommended Heat Cure

30 minutes @ 80°C
5 minutes @ 100°C
1 to 2 minutes @ 130°C

The above cure profiles are guideline recommendations. 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, TMA:		
Below Tg, ppm/°C		50.3
Above Tg, ppm/°C		162.2
Glass Transition Temperature (Tg) by TMA, °C		36.8
Storage Modulus, DMA:		
@ 25°C	N/mm² (psi)	4,400 (638,000)

GENERAL INFORMATION

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

THAWING:

1. DO NOT open the container before contents reach 25 °C temperature. Any moisture that collects on the warmed up container should be removed prior to opening the container.
2. Syringes should be positioned tip down when stored vertically.
3. Once material has reached room temperature, the adhesive should not be re-refrigerated.

DIRECTIONS FOR USE

1. This product is light sensitive; exposure to daylight, UV light or artificial lighting should be kept to a minimum during storage and handling.

STORAGE

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

Optimal Storage: 2 to 8°C. Storage below 2°C or above 8 °C can adversely affect product properties.

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

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Not for product specifications
The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb/F
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
N/mm² = MPa
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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