



ABLESTIK ECF 3354

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PRODUCT DESCRIPTION

LOCTITE® ABLESTIK ECF 3354 provides the following product characteristics.

Technology	Epoxy Film
Appearance	Grey
Cure	Heat Cure
Filler Type	Silver
Thickness	4 mils (±0.5 mils)
Application	Assembly

LOCTITE® ABLESTIK ECF 3354 film adhesive is formulated for electrical, thermal and mechanical assembly applications. The combination of adhesive properties ensures reliable RF ground plane performance.

LOCTITE® ABLESTIK ECF 3354 passes NASA outgassing Standards.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Work life @25°C, days	7
Shelf life @5°C (from date of manufacture), months	3
Peak Exotherm Temperature, DSC, Ramp Rate=10°C/	190°C
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

60 minutes @ 150°C

Cure Pressure

10 to 80 psi

Cure pressure may vary depending on the materials being bonded and their size.

All temperatures are measured at the adhesive and do not include ramp-up time.

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:

Thermal Conductivity, W/(m·K):	20
Storage Modulus, DMA:	
@ -40 °C	N/mm ² 8,380 (psi) (1,215,416)
@ 0 °C	N/mm ² 6,700 (psi) (971,752)
@ 25 °C	N/mm ² 5,739 (psi) (832,516)

@ 100 °C	N/mm ² 1690 (psi) (245,113)
@ 150 °C	N/mm ² 979 (psi) (141,992)

Coefficient of Thermal Expansion, TMA:

Below Tg, 10 ⁻⁶ /°C	60
Above Tg, 10 ⁻⁶ /°C	166
Glass transition temperature, TMA, °C	73

Electrical Properties:

Volume Resistivity, ohm-cm @ 25°C	0.00005
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TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Tensile Lap Shear Strength (psi): 4 mil thickness, @ 25°C Aluminum to Aluminum,	1100
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GENERAL INFORMATION

Please consult the Safety Data Sheet (SDS) for safe handling information of this product

THAWING:

1. Allow container to reach room temperature before use.
2. DO NOT open the container before contents reach 22°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.

Surface Preparation:

1. Proper preparation of substrates is critical to optimize epoxy adhesive flow and adhesion. The substrate water contact angle (WCA) is a good indicator of the capillary forces that drive resin flow and adhesion. Henkel recommends industry standards of <50° for substrate WCA. This allows the epoxy resin to better wet the substrate. Users may want to establish the precise relationship between WCA and product performance for their specific application.
2. Substrate surface chemistry is impacted by the entire substrate supply chain including supplier manufacturing methods, packaging, handling, plasma treatment, storage conditions, exposure to environment, and subsequent cleaning steps.

Directions for use:

1. While substrate cleaning is not mandatory, wiping with an organic solvent (e.g. isopropanol) is recommended to remove any oils that might interfere with the bonding process.
2. Pressure needs to be applied during cure to promote proper wetting of substrate surfaces.
3. Common industry practices to apply pressure include the use of spring clamps, lamination presses, dead weights and vacuum bagging.
4. The technique to apply pressure will vary by application and customer preference.
5. For large surface area applications, a load distribution

material is recommended between one of the pressure plates and the bonding part in order to equalize the applied pressure over the entire area.

6. After fixturing, the parts are then cured at an elevated temperature.

7. The specified temperatures and times refer to the bondline values. It should be noted that large mass assemblies will take longer time to achieve bondline temperatures.

8. LOCTITE® ABLESTIK ECF 3354 becomes brittle at temperatures below -5°C. If material goes below this temperature, it should be handled gently. Entire package should be warmed to room temperature before opening. This will minimize the possibility of fracturing in the brittle state or allowing condensation to collect on the product.

9. Storage of uncured film at temperatures above optimal storage may reduce shelf life.

10. Storage below -5°C causes the uncured film to be brittle, and there is risk of cracking while handling at these low temperatures.

Storage

Store in original, tightly covered containers in clean, dry areas. Storage information may be indicated on the product container labeling. Usable shelf life may vary depending on method of application and storage conditions

Optimal Storage: 5°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.

Data Ranges

The data contained herein may be reported as a typical value and/or range. Values are based on actual test data and are verified on a periodic basis.

Note

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