

LOCTITE ABLESTIK ECF 506

April 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK ECF 506 provides the following product characteristics:

Technology	Epoxy Film
Appearance	Gray
Cure	Heat cure
Product Benefits	• Flexible • Reworkable • Uniform bondline control • Custom preforms available • Bonds to a wide variety of substrates
Application	Assembly
Carrier Type	Glass fabric

LOCTITE ABLESTIK ECF 506 is designed for bonding materials with mismatched coefficients of thermal expansion.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, hours	24
Shelf Life @ -40°C (from date of manufacture), days	183

TYPICAL CURING PERFORMANCE

Cure Schedule

1 hour @ 150°C

Alternative Cure Schedule

1.5 hours @ 125°C or

3 hours @ 100°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, TMA:	
Below Tg, ppm/°C	55
Above Tg, ppm/°C	400
Glass Transition Temperature (Tg), °C	2
Thermal Conductivity @ 121°C, W/(m-K)	1.0
Weight Loss, TGA, %:	
@ 150°C	0.1
@ 200 °C	0.2

Electrical Properties

Electrical Resistance, measured through joints, ohms/0.5 sq. inch	0.005
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TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

Lap Shear Strength

Al to Al @ 25°C	N/mm ²	7
	(psi)	(1,000)
Au to Au @ 25°C	N/mm ²	5
	(psi)	(700)

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Packages removed from storage should be allowed to return to ambient temperature before use.
2. While cleaning of substrates is not mandatory, an organic solvent (e.g. Isopropanol) wipe is recommended to remove any oils that might interfere with the bonding process or electrical interface.
3. This adhesive film is slightly tacky. Components may be assembled and cured without using holding fixtures.
4. This tack will last for approximately 16 hours after removal from frozen storage.

Rework Procedure

1. Components joined with LOCTITE ABLESTIK ECF 506 may be de-bonded easily by heating the component to 125°C and sliding a thin blade between the bonded surfaces.

AVAILABILITY

1. LOCTITE ABLESTIK ECF 506 adhesive is available in sheet stock or die cut preforms.
2. LOCTITE ABLESTIK ECF 506 adhesive can be die cut to customer specifications.

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.

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. Storage below minus (-)40 °C or greater than minus (-)40 °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 Technical Service Center or Customer Service Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{psi} \times 145 = \text{N/mm}^2$
 $\text{MPa} = \text{N/mm}^2$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

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