

LOCTITE ABLESTIK 506

April 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 506 provides the following product characteristics:

Technology	Epoxy Film
Appearance	white
Cure	Heat cure
Product Benefits	- Thermally conductive - Flexible epoxy - Reworkable - Flexible for Bonding Mismatched Adherends
Application	Assembly
Adhesive Film Thickness	3 mil
Carrier Type	Glass fabric
Surfaces	Plastics, Ceramics and Difficult-to-bond metals

LOCTITE ABLESTIK 506 slightly tacky flexible adhesive film is designed for bonding materials with severely mismatched coefficients of thermal expansion. Components may be assembled and cured without using holding fixtures. The tack will last for approximately 16 hours after removal from frozen storage.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, hours	24
Shelf Life @ -40°C, days	183
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

60 minutes @ 150°C

Alternate Cure Schedule

90 minutes @ 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 ppm/°C:

Below Tg	45
Above Tg	350
Glass Transition Temperature, °C	3
Thermal Conductivity @ 121°C, W/(m-K)	0.9

Electrical Properties

Volume Resistivity, ohms-cm	0.7×10^{13}
Dielectric Strength, volts/mil	1,190
Dielectric Constant @ 1kHz	5.7
Dissipation Factor @ 1kHz	0.03

TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength :

Al to Al @ 25°C, psi	1,200
Au to Au @ 25°C, psi	750

GENERAL INFORMATION

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

THAWING:

1. Allow material to reach room temperature before use.
2. DO NOT open the package before contents reach ambient temperature.
3. Any moisture that collects on the thawed package should be removed prior to opening the package.

DIRECTIONS FOR USE

1. Place precut adhesive film between clean surfaces to be bonded.
2. Assemble components.
3. Apply spring loaded clamp or dead weight to provide continuous pressure of at least 2 to 10 psi during cure cycle.
4. Place assembly in a preheated oven and cure at the recommended cure schedule.

Rework Procedure

1. Heat component to 125°C.
2. Slide a thin blade between bonded surfaces.

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

LOCTITE ABLESTIK film products can be stored at -40°C for up to one year. The shelf life of the film is only valid when the material has been stored at the specified storage conditions. Incorrect storage conditions will degrade the performance of the material in final cured properties. Avoid flexing film when frozen.

Conversions

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

Disclaimer

Note:

The information provided in this Technical Data Sheet (TDS) including

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