

LOCTITE ABLESTIK 517

April 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 517 provides the following product characteristics:

Technology	Epoxy Film
Appearance	Pink
Cure	Heat cure
Product Benefits	• Tack-free • Non-conductive • Low temperature cure
Application	Assembly
Adhesive Film Thickness	3 mil
Carrier Type	Glass fabric
Carrier Thickness	1mil
Typical Assembly Applications	Microelectronic assemblies and Mounting substrates into ceramic packages

LOCTITE ABLESTIK 517 epoxy film adhesive is developed for microelectronic applications. This adhesive is not recommended for gold plated packages.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life by Consistency @ 25°C, hours	24
Shelf Life @ -40°C (from date of manufacture), days	365

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minutes @ 150°C

Alternative Cure Schedule

1hour @ 125°C

2hours @ 95°C

3hours @ 75°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	70
Above Tg, ppm/°C	40
Glass Transition Temperature (Tg), °C	101
Weight Loss @ 150°C, %	0.2
Thermal Conductivity @ 121°C, W/(m-K)	0.28

Electrical Properties

Volume Resistivity, ohm-cm	2.5×10 ¹³
Dielectric Strength, volts/mil	1,000
Dielectric Constant @ 1KHz	4.3
Dissipation Factor @ 1KHz	0.003

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

Lap Shear Strength @ 25°C:

Al to Al	N/mm ²	17.24
	(psi)	(2,500)
Au to Au	N/mm ²	8.97
	(psi)	(1,300)

GENERAL INFORMATION

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

THAWING:

1. Allow container to reach room temperature before use.
2. DO NOT open the container before contents reach 25°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.
3. DO NOT re-freeze. Once thawed, the adhesive should not be re-frozen.

DIRECTIONS FOR USE

1. Place ceramic package on a hot plate maintained at approximately 80°C.
2. Apply pre-cut adhesive to package.
3. At 80°C, adhesive will remain tacky for approximately 30 minutes. The tackiness of the film will hold the assembly in place through most normal handling.
4. Place assembly in a preheated oven and cure at the recommended cure schedule.

AVAILABILITY

1. LOCTITE ABLESTIK 517 adhesive film is available in 12 x 12 inch sheet stock or die cut preforms dimensioned to customer drawings.

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

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

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