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LOCTITE

Technical Data Sheet

LOCTITE ABLESTIK 561

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PRODUCT DESCRIPTION

LOCTITE ABLESTIK 561 provides the following product characteristics:

Technology	Epoxy Film
Appearance	Amber
Cure	Heat cure
Product Benefits	• Thermally conductive • Flexible • Reworkable
Application	Assembly
Carrier Type	Glass fabric
Carrier Thickness	1 mil

LOCTITE ABLESTIK 561 is designed for bonding materials with mismatched coefficients of thermal expansion. In many bonding applications, components may be repaired. Component joined with LOCTITE ABLESTIK 561 adhesive can be debonded by heating the assembly to 150°C and sliding a thin blade, such as a razor blade, between the bonded surfaces. This adhesive is also available in a low temperature cure version.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, (25% increase in viscosity), days	90
Shelf Life (from date of qualification in original seal):	
@ 25ºC, days	91
@ -40ºC, days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minutes @ 150°C

Alternate Cure Schedule

2 hours @ 125°C

Percent Volatiles

10 x 10cm sample @ 120°C for 30 minutes, %	0.16

Curing film adhesives under pressure to ensure proper wetting of the adherend surfaces is recommended. Pressure requirements will vary from (2 to 200 psi) depending on the severity of the adherends warpage and the stiffness of the adherends. Temperatures are recommended are at the bondline.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Weight Loss @ 300ºC, %	0.71
Coefficient of Thermal Expansion, TMA expansion mode, ppm/°C:	
Below Tg	85
Above Tg	300
Glass Transition Temperature, TMA penetration mode, °C	50
Thermal Conductivity @ 121°C, W/(m-K)	0.3

Electrical Properties

Volume Resistivity, ohms-cm	5×10^{12}
Dielectric Strength, volts/mil	1,000
Dielectric Constant / Dissipation Factor:	
@ 1 KHz	7.0/0.17

TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength :

Al to Al @ 25°C	N/mm² (psi)	11.03 (1,600)
Au to Au @ 25°C	N/mm² (psi)	11.03 (1,600)

GENERAL INFORMATION

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

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.

AVAILABILITY

1. LOCTITE ABLESTIK 561 adhesive film is available in sheet stock or die cut preforms dimensioned to customer drawings.
2. LOCTITE ABLESTIK 561 adhesive can be die cut to customer specifications.
3. Tolerances are as close as 0.005 inch in length or width and 0.001 inch in thickness.

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.

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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
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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Reference 0.1