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LOCTITE

Technical Data Sheet

LOCTITE ABLESTIK 8700E

October 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 8700E provides the following product characteristics:

Technology	Epoxy
Appearance	Silver
Cure	Heat cure
Product Benefits	• Electrically conductive • Thermally conductive • Excellent adhesion • Retains high shear strength after thermal cycling • Excellent dispensing and printing characteristics • No tailing or peaking
Application	Component attach
Typical Assembly Applications	Hybrid components
Surfaces	Gold / Gold-plated

LOCTITE ABLESTIK 8700E adhesive is designed for hybrid component attach.

MIL-STD-883

LOCTITE ABLESTIK 8700E meets the requirements of MIL-STD-883, Method 5011.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	3.0
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	18,000
Work Life @ 25°C, days	7
Shelf Life @ -40°C, days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

2 hours @ 160°C

Alternate Cure Schedule

15 minute ramp to 130°C + 1 hour @ 130°C +
15 minute ramp to 160°C + 1 hour @ 160°C

Weight Loss on Cure

Weight Loss on Cure, %	2.6

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		120
Glass Transition Temperature, °C		160
Thermal Conductivity @ 121°C, W/(m-K)		1.6
Tensile Modulus, DMTA :		
@ 25 °C	N/mm² (psi)	4,414 (640,000)
Extractable Ionic Content, @ °C ppm:		
Chloride (Cl-)		35
Sodium (Na+)		5
Potassium (K+)		None Detected
Moisture Absorption @ Saturation, wt.% @ 85°C/85°RH		0.62

Electrical Properties

Volume Resistivity, ohms-cm	0.0002

GENERAL INFORMATION

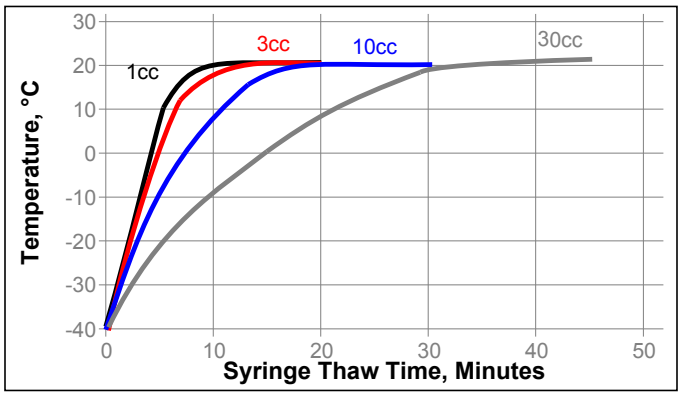
For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

THAWING:

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.
3. Refer to the Syringe Thaw time chart for the thaw time recommendation.
4. 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.
5. Any moisture that collects on the thawed package should be removed prior to opening the package.
6. DO NOT re-freeze. Once thawed to 22°C, the adhesive should not be re-frozen.

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DIRECTIONS FOR USE

1. Thawed adhesive should immediately be placed on dispense equipment for use.
2. If the adhesive is transferred to a final dispensing reservoir, care must be exercised to avoid entrapment of contaminants and/or air into the adhesive.
3. Adhesive must be completely used within the products recommended work life.
4. Apply enough adhesive to achieve a 25 to 50 µm wet bondline thickness, dispensed with approximately 25 to 50 % filleting on all sides of the die.
5. Alternate dispense amounts may be used depending on the application requirements.
6. Star or crossed shaped dispense patterns will yield fewer bondline voids than the matrix style of dispense pattern.

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

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
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa = N/mm²
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Disclaimer
Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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