

LOCTITE ABLESTIK ICP 8311

June 2018

PRODUCT DESCRIPTION

LOCTITE ABLESTIK ICP 8311 provides the following product characteristics:

Technology	Acrylate
Appearance	Silver
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> • One component • Snap curable • Excellent flexibility • Electrically conductive • Sn compatible • High dispense and print speeds
Application	Component assembly Electrically Conductive Adhesive
Typical Package Application	Flexible interconnects in photovoltaic shingle applications

LOCTITE ABLESTIK ICP 8311 is an electrically conductive adhesive designed for applications where fast cure is required. It is ideally suited for high throughput photovoltaic dispense and print processes and applications where high adhesion strength is required. Low and stable contact resistance is achieved on substrates containing Sn during reliability testing.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity@ Shear rate of 15 s ⁻¹ , mPa·s (cP)	14,600
Thixotropic Index	4.2
Specific Gravity, g/cc	4.4
Shelf Life @ -25 to -18°C, days	180
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

10 to 15 seconds @ 150°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

Storage Modulus, DMA :

@ 0°C N/mm² 4,500
(psi) (653,000)

@ 25°C N/mm² 2,600
(psi) (377,000)

Electrical Properties

Volume Resistivity, ohm-cm:

Sample cured 15 minutes @ 150°C 3.9×10⁻⁰⁴

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

Die Shear Strength, 2 x 2 mm die, Kg 11

Sample cured 35 seconds @ 150°C (Hot plate)

Tensile Lap Shear Strength N/mm² 11.4
(psi) (1,650)

Sample cured 15 minutes @ 150°C

GENERAL INFORMATION

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

THAWING:

1. Thaw times depend on syringe size.
2. Consult handling guide for more information.

DIRECTIONS FOR USE

The rheology of this material makes it suitable for use in high speed needle dispense, jet and print applications.

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: -25 to -18°C. Storage below -25°C or greater than -18°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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Reference 1