

# LOCTITE ABLESTIK C130

October 2014

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK C130 provides the following product characteristics:

<b>Technology</b>	Proprietary Hybrid Chemistry
<b>Appearance</b>	Silver
<b>Filler Type</b>	Silver
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>Electrically conductive</li> <li>Thermally conductive</li> <li>Controlled flow</li> <li>Good wetting</li> <li>High die shear strength</li> </ul>
<b>Adhesive Thickness</b>	30µm
<b>Application</b>	Die attach

LOCTITE ABLESTIK C130 die attach adhesive film is suitable for tight geometry (<100µm) leadframe packages where high electrical performance is required. This material was originally sampled as development product CDA1155-33A.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Shelf Life @ 5°C (from date of manufacture), days 183

## TYPICAL PROCESS DATA

### Wafer Backside Lamination

Temperature, °C	90
Pressure, Bar	1.0 to 2.5
Speed, mm/sec	5

### Chip Attach (for Leadframes)

Temperature, °C	125
Attach Duration, seconds	0.5
Force, kg-f	1

## TYPICAL CURING PERFORMANCE

### Cure Schedule

#### Leadframes:

30 minute ramp to 200°C + 1 hour @ 200°C

#### Laminate Substrates:

30 minute ramp to 150°C + 1 hour @ 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

Glass Transition Temperature (Tg) by TMA, °C 38.7

### Coefficient of Thermal Expansion, ppm/°C:

Below Tg	47.2
Above Tg	119.8

### Thermal Conductivity, Laser Flash, W/(m-K)

1.0

### Tensile Modulus, DMTA :

@ -65 °C	N/mm²	11,240
	(psi)	(1,630,224)
@ 25 °C	N/mm²	8,666
	(psi)	(1,256,897)
@ 250 °C	N/mm²	1,479
	(psi)	(214,510)

## Electrical Properties

Volume Resistivity, ohms-cm 0.0003

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Die Shear Strength @ 260 °C, kg-f:

4.2 x 4.2 mm Si die on Ag/Cu LF	17
3 x 3 mm Si die on Ag/Cu LF	9

## 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.

## DIRECTIONS FOR USE

1. Ensure all surfaces to be bonded are free from surface contamination.
2. Adhesive must be completely used within the product's recommended work life.
3. Remove the tape reel from the moisture-resistant package and load into the tape application machine.
4. Store unused adhesive film in the original sealed moisture-resistant package until needed.

## 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: 5°C. Storage below -5°C or greater than 5°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.

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#### Conversions

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

Reference 0.4

#### 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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