

# LOCTITE ABLESTIK ECF 571

April 2014

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK ECF 571 provides the following product characteristics:

<b>Technology</b>	Epoxy Film
<b>Appearance</b>	Gray
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>High purity</li> <li>Electrically conductive</li> </ul>
<b>Application</b>	Assembly
<b>Carrier Type</b>	None

LOCTITE ABLESTIK ECF 571 unsupported epoxy adhesive film is ideal for bonding "hot" devices onto heat sinks in applications where electrical insulation is not required.

## MIL-STD-883C

LOCTITE ABLESTIK ECF 571 meets the requirements of MIL-STD-883C, Method 5011.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, days	2
Storage Life (from date of manufacture):	
@ -10°C, days	183
@ -40°C, days	365

## TYPICAL CURING PERFORMANCE

### Cure Schedule

45 minutes @ 175°C

### Alternate Cure Schedule

1 minute @ 250°C or  
2 hours @ 160°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	20
Above Tg, ppm/°C	45
Glass Transition Temperature (Tg), °C	142
Weight Loss @ 300°C, %	0.16
Extractable Ionic Content, ppm:	
Chloride (Cl-)	10
Sodium (Na+)	5
Potassium (K+)	ND
Thermal Conductivity @ 121°C, BTU ft <sup>-1</sup> hr <sup>-10</sup> °F <sup>-1</sup>	3.9
pH	5.6

Water Extract Conductivity, μmhos/cm	5
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## Electrical Properties

Electrical Resistance Measured through gold joints, ohm/ 0.002 0.5 sq. in.

## TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength @ 25°C:

Au to Au	N/mm <sup>2</sup> 12
	(psi) (1,750)

## 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. LOCTITE ABLESTIK ECF 571 adhesive film is unsupported.
2. Handle carefully to avoid any stretching or flexing when frozen.
3. It may be helpful during handling to keep at least one sheet of release paper attached.
4. Preheat surface to be bonded to 45°C.
5. Remove release paper from one side of the adhesive film.
6. Apply film to one of the bonding surfaces.
7. Remove any trapped air by pressing on the surface.
8. Allow device to cool to room temperature.
9. Remove the release paper from the other side of the adhesive film. Attach the remaining adherend.
10. Apply spring loaded clamp to provide continuous pressure of at least 10 psi during cure cycle.
11. Place assembly in a preheated oven and cure at the recommended cure schedule.
12. This adhesive is not recommended for use on bare aluminum surfaces. Poor ohmic contact will result.

## AVAILABILITY

1. LOCTITE ABLESTIK ECF 571 adhesive is available in sheet stock or die cut preforms.
2. LOCTITE ABLESTIK ECF 571 adhesive can be die cut to customer specifications.
3. Tolerances are as close as ±0.005inch in length or width and ±0.001inch 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**

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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