Technical Data Sheet

LOCTITE ABLESTIK ICP 8220

June 2021

PRODUCT DESCRIPTION

LOCTITE ABLESTIK ICP 8220 provides the following product characteristics:

Technology	Epoxy
Appearance	Silver
Cure	Heat cure
Product Benefits	• One component • Snap curable • Electrically conductive • High print speeds
Application	Electronic Adhesives & Solder, Component assembly
Typical Package Application(s)	Flexible interconnects in photovoltaic shingle applications

LOCTITE ABLESTIK ICP 8220 is an electrically conductive adhesive designed for applications where fast cure is required. It is ideally suited for high throughput photovoltaic print processes and applications where high adhesion strength is required. Low and stable contact resistance is achieved on noble metallization during reliability testing.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity@ Shear rate of 15 s^{-1}, mPa·s (cP)	35,000
Thixotropic Index	6.0
Specific Gravity, g/cc	3.3
Shelf Life @ -40°C, days	270
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

90 seconds @ 180°C

Alternate Cure Schedule

15 minutes @ 150°C

The above cure profile(s) are guideline recommendation(s). These conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Storage Modulus, DMA :

Sample cured 15 mins @ 150ºC:

@ 0°C	N/mm²	6,000
	(psi)	(870,000)
@ 25°C	N/mm²	4,600
	(psi)	(667,000)

Electrical Properties

Volume Resistivity, ohm-cm:

Sample cured 15 mins @ 150ºC in box oven 4.0×10^{-4}

Adhesion Properties

Die Shear Strength , kg-f:

Sample cured 90 secs @ 180ºC on hot plate:

2 x 2 mm die on ceramic substrate 4.2

Tensile Lap Shear Strength, N/mm² :

Sample cured 15 mins @ 150ºC in box oven:

10 x 2.5 x 0.16 cm Al to Al 9.1

Aluminum lap shear panel grade 6061 (etched per ASTM D 2651C)

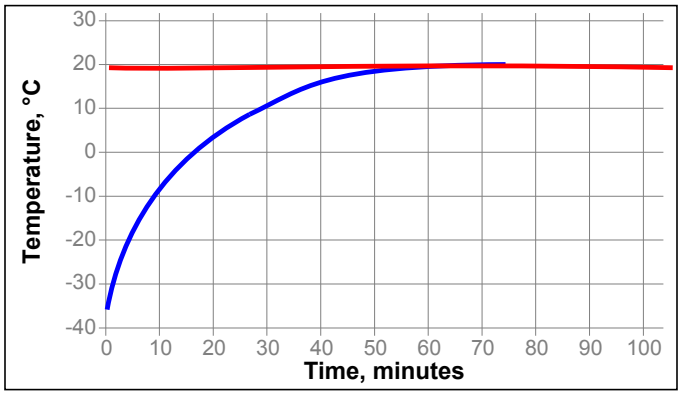
GENERAL INFORMATION

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

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be used with chlorine or other strong oxidizing materials unless otherwise specifically stated.

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. Thaw times depend on syringe size. Please refer to the Syringe Thaw time chart for the thaw time recommendation for a 55cc syringe
4. Consult handling guide for more information.
5. 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.
6. DO NOT re-freeze. Once thawed to 25°C, the adhesive should not be re-frozen.



Directions for Use

1. Thawed material should immediately be placed on dispense equipment for use.
2. The rheology of this material makes it suitable for use in high speed print applications.
3. 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.
4. Adhesive must be completely used within the product's recommended work life.
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.

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 -40°C or greater than -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 Henkel Representative.

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

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

Disclaimer

Note:

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