Technical Data Sheet

LOCTITE ABLESTIK 83CJ

January 2015

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 83CJ provides the following product characteristics:

Technology	Epoxy
Appearance (Resin)	Silver paste
Product Benefits	• Silver-filled • Thixotropic • Thermally conductive • Electrically conductive • Can be used with a variety of catalysts • Ease of use
Application	Assembly
Key Substrates	Metals , Glass, Ceramics, Plastics

LOCTITE ABLESTIK 83CJ adhesive is designed to make electrical connections where hot soldering is impractical or to make electrical connections to conductive plastics at locations which cannot be subjected to high temperatures.

LOCTITE ABLESTIK 83CJ can be used with a variety of catalysts. For more information on mixed properties when used with other available catalysts, please contact your local technical service representative for assistance and recommendations.

CATALYST DESCRIPTION

LOCTITE CAT 9 provides the following product characteristics:

Product Benefits	• General purpose • Good chemical resistance • Good physical strength
Cure	Room temperature cure
Mix Ratio, by weight - Material:Catalyst	100 : 3.5

LOCTITE CAT B97 provides the following product characteristics:

Product Benefits	• High temperature resistant • Long work life • Good chemical resistance • Good physical properties at elevated temperatures
Cure	Heat cure
Mix Ratio, by weight - Material:Catalyst	100 : 1.0

TYPICAL UNCURED PROPERTIES

LOCTITE ABLESTIK 83CJ

Density, ASTM-D-792, g/cm³	3.0
Shelf Life @ 25°C (from date of manufacture), days	183
Flash Point - See SDS	

LOCTITE CAT 9M

Viscosity @ 25 °C, mPa·s (cP)	92.5
Flash Point - See SDS	

LOCTITE CAT B97

Viscosity @ 25 °C, mPa·s (cP)	6,000
Flash Point - See SDS	

TYPICAL UNCURED PROPERTIES AS MIXED

LOCTITE ABLESTIK 83CJ with LOCTITE CAT 9M

Density, g/cm³	2.95
Work Life, 100 grams, @ 25ºC, minutes	45

LOCTITE ABLESTIK 83CJ with LOCTITE CAT B97

Density, ASTM-D-792, g/cm³	2.27
Work Life, 100 grams, @ 25ºC, hours	24

TYPICAL CURING PERFORMANCE

Cure Schedule

LOCTITE ABLESTIK 83CJ with LOCTITE CAT 9M

60 minutes @ 65°C
30 minutes @ 100°C

LOCTITE ABLESTIK 83CJ with LOCTITE CAT B97

2 hours @ 100°C
30 minutes @ 125°C

For optimum performance, follow the initial cure with a post cure of 2 to 4 hours at the highest expected use temperature.

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

LOCTITE ABLESTIK 83CJ with LOCTITE CAT 9M

Physical Properties

Coefficient of Thermal Expansion , TMA, ppm/°C	45
Operating temperature range, ºC	-40 to +130
Thermal Conductivity, , W/(m-K)	2.6

Electrical Properties

Volume Resistivity @ 25 °C, ohm-cm	0.0004

Outgassing Properties

Outgassing , per NASA Reference Publication 1124:	
Sample cured 1 hour @ 66ºC	
TML, %	0.64
CVCM, %	0.02

LOCTITE ABLESTIK 83CJ with LOCTITE CAT B97

Physical Properties

Coefficient of Thermal Expansion , TMA, ppm/°C	45
Operating temperature range, ºC	-55 to +155
Thermal Conductivity, , W/(m-K)	2.6

Electrical Properties

Volume Resistivity @ 25 °C, ohm-cm	0.0004

TYPICAL CURED PERFORMANCE AS MIXED

LOCTITE ABLESTIK 83CJ with LOCTITE CAT 9M

Shear Strength

Tensile Lap Shear Strength:

Al to Al @ 25 °C	N/mm²	6.8
	(psi)	(1,000)

LOCTITE ABLESTIK 83CJ with LOCTITE CAT B97

Shear Strength

Tensile Lap Shear Strength:

Al to Al @ 25 °C	N/mm²	9.6
	(psi)	(1,400)

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part.
2. Some separation of components is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use.
3. Accurately weigh resin and hardener into a clean container in the recommended ratio. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.
4. Blend components by hand, using a kneading motion, for 2 to 3 minutes and scrape the bottom and sides of the mixing container frequently to produce a uniform mixture.
5. Apply adhesive to all surfaces to be bonded and join together.
6. In most applications only contact pressure is required.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage : 25 °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.

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.

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
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

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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