Technical Data Sheet

LOCTITE ABLESTIK 55

April 2015

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 55 provides the following product characteristics:

Technology	Epoxy
Appearance (Resin)	White liquid
Product Benefits	• General purpose • Low viscosity • Can be used with a variety of catalysts • Unfilled • Good wetting • Good chemical, solvent and water resistance
Application	Assembly
Substrates	Glass, ceramic, metals, plastics and wood

LOCTITE ABLESTIK 55 adhesive applications include electronic component assembly, staking, tamperproofing of adjustment and calibration screws, anchoring inserts, end filling, hermetic sealing, and others.

LOCTITE ABLESTIK 55 can be used with LOCTITE CAT 9, LOCTITE CAT 11 or LOCTITE CAT 23LV.

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 : 13.5
Mix Ratio, by Volume - Material:Catalyst	100 : 15.5
Operating Temperature	-40 to 130ºC

LOCTITE CAT 11 provides the following product characteristics:

Product Benefits	• Long pot life • Excellent chemical resistance • Good physical and chemical properties at elevated temperatures
Cure	Heat cure
Mix Ratio, by weight - Material:Catalyst	100 : 16
Mix Ratio, by Volume - Material:Catalyst	100 : 17
Operating Temperature	-55 to 155ºC

LOCTITE CAT 23LV provides the following product characteristics:

Product Benefits	• Low color • Low viscosity • Long pot life • Excellent thermal shock and impact resistance • Excellent low temperature properties • Excellent adhesion to glass
Cure	Room temperature cure
Mix Ratio, by weight - Material:Catalyst	100 : 28
Mix Ratio, by Volume - Material:Catalyst	100 : 32
Operating Temperature	-65 to 105ºC

TYPICAL UNCURED PROPERTIES

LOCTITE ABLESTIK 55	
Brookfield Viscosity , mPa·s (cP)	16,000
Density, g/cm³	1.18
Shelf Life @ 25°C (from date of manufacture), days	365
LOCTITE CAT 9	
Viscosity @ 25 °C, mPa·s (cP)	90
Flash Point - See SDS	
LOCTITE CAT 11	
Viscosity @ 65 °C, mPa·s (cP)	70
Flash Point - See SDS	
LOCTITE CAT 23LV	
Viscosity @ 25 °C, mPa·s (cP)	25
Flash Point - See SDS	

TYPICAL UNCURED PROPERTIES AS MIXED

LOCTITE ABLESTIK 55 with LOCTITE CAT 9	
Density, g/cm³	1.14
Brookfield Viscosity ,	8,000
Work Life @ 25 °C, 100 g, minutes	45
LOCTITE ABLESTIK 55 with LOCTITE CAT 11	
Density, g/cm³	1.15
Brookfield Viscosity , mPa·s (cP)	7,100
Work Life @ 25 °C, 100 g, hours	>4
LOCTITE ABLESTIK 55 with LOCTITE CAT 23LV	
Density, g/cm³	1.12
Brookfield Viscosity , mPa·s (cP)	3,300
Work Life @ 25 °C, 100 g, minutes	60

TYPICAL CURING PERFORMANCE

Cure Schedule

LOCTITE ABLESTIK 55 with LOCTITE CAT 9

16 to 24 hours @ 25°C or
4 to 6 hours @ 45°C or
1 to 2 hours @ 65°C

LOCTITE ABLESTIK 55 with LOCTITE CAT 11

8 to 16 hours @ 80°C or
2 to 4 hours @ 100°C or
30 to 60 minutes @ 120°C

LOCTITE ABLESTIK 55 with LOCTITE CAT 23LV

24 hours @ 25°C or
4 to 6 hours @ 45°C or
2 to 4 hours @ 65°C

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

Alternate cure schedules may also be possible. Contact your Henkel representative for further information.

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 55 with LOCTITE CAT 9

Physical Properties	
Coefficient of Thermal Expansion , ppm/°C	59
Electrical Properties	
Dielectric Strength , kV/mm	17
Dielectric Constant / Dissipation Factor:	
@ 1 MHz	3.3/0.02
Volume Resistivity, ohms-cm:	
@ 25 °C	1×10^{15}
@ 93 °C	1×10^{11}
Outgassing Properties	
Outgassing , ASTM E 595, %:	
TML	0.45
CVCM	0.02

TYPICAL PERFORMANCE OF CURED MATERIAL

LOCTITE ABLESTIK 55 with LOCTITE CAT 11

Shear Strength		
Tensile Lap Shear Strength :		
Al to Al @ 25ºC	N/mm²	12.4
	(psi)	(1,700)
Miscellaneous		
Flexural Strength	N/mm²	100
	(psi)	(14,500)

GENERAL INFORMATION

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

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 gently but thoroughly mixed prior to use .
3. Power mixing is preferred to ensure a homogeneous product.
4. Accurately weigh resin and hardener into a clean container in the one of the recommended ratios. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.
5. 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.
6. Scrape the bottom and sides of the mixing container frequently to produce a uniform mixture.
7. If possible, power mix for an additional 2 to 3minutes. Avoid high mixing speeds. This can entrap excessive amounts of air. It can also cause overheating of the mixture, resulting in reduced working life.
8. Apply adhesive to all surfaces to be bonded and join together.
9. 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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