

LOCTITE ABLESTIK 282

December 2016

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 282 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat cure
Product Benefits	• One component • High thermal conductivity • Silk screenable • Viscous • Fast cure • Long pot life • Good heat dissipation
Application	Assembly
Operating Temperature	-40 to 180 °C
Typical Assembly Applications	Heat sink bonding
Substrates	Ceramic and Metals

LOCTITE ABLESTIK 282 is recommended for bonding metals and ceramics in conjunction with high temperature generating components such as semiconductor devices. It is a good choice for high speed production lines.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity Brookfield, mPa (cP) 1 rpm, #7	550,000 to 700,000
Thixotropic Index	<3.5
Specific Gravity	2.23 to 2.33
Gel Time @ 125 °C, minutes	<15
Fineness, micron	<100
Shelf Life:	
@ 0 to 8°C, days	183
@ 18 to 25°C, days	91
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE Cure Schedule

4 hours @ 100°C or

1 hour @ 125°C or

30 minutes @ 150°C or

15 minutes @ 175°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 , K ⁻¹	30×10 ⁻⁶
Glass Transition Temperature (Tg) by TMA, °C	105
Thermal Conductivity , W/(m-K)	1.3
Tensile Modulus, DMTA :	
@ 25 °C	N/mm ² 9,293 (psi) (1,347,485)
@ 50 °C	N/mm ² 8,701 (psi) (1,261,645)
@ 100 °C	N/mm ² 7,347 (psi) (1,065,315)
@ 150 °C	N/mm ² 179 (psi) (25,955)
@ 200 °C	N/mm ² 103 (psi) (14,935)

Hardness, Shore D 85

Electrical Properties:

Dielectric Breakdown Strength IEC 60243-1, kV/mm	17
Volume Resistivity, ohm-cm @ 25°C	≤1×10 ¹⁵
Dielectric Constant @ 1MHz	5.4
Dissipation Factor @ 1MHz	0.02

TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength :

Aluminum:

Tested @ 25 °C	N/mm ²	10.7
	(psi)	(1,550)
Tested @ 125 °C	N/mm ²	13.1
	(psi)	(1,900)
Tested @ 150 °C	N/mm ²	7.7
	(psi)	(1,117)
Tested @ 180 °C	N/mm ²	3.6
	(psi)	(522)

PBT:

Tested @ 25 °C	N/mm ²	6.8
	(psi)	(986)
Tested @ 125 °C	N/mm ²	3.81
	(psi)	(553)
Tested @ 150 °C	N/mm ²	2.4
	(psi)	(348)
Tested @ 180 °C	N/mm ²	1.2
	(psi)	(174)

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 oil, grease, scale, mold release and loose foreign matter. Vinyl surfaces should be cleaned by wiping with clean cloth saturated with methyl ethyl ketone.
2. Apply adhesive to all surfaces to be bonded and join together.
3. In most applications only contact pressure is required.

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: 0 to 8°C. Storage greater than or below 0 to 8°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

(°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

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