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LOCTITE

Technical Data Sheet

LOCTITE ABLESTIK 2143D

October 2012

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 2143D provides the following product characteristics:

Technology	Epoxy
Color	Amber
Cure	Room temperature cure or Heat cure
Operating Temperature	-60 to 100 °C
Product Benefits	• Good toughness • Easy mixing • Low-temperature electrical properties • Low-temperature mechanical properties • Low-temperature impact resistance • Excellent thermal shock resistance • Low permeability to gases and vapors • Good dimensional stability • Excellent environmental resistance
Mix Ratio, by weight - Resin : Hardener	100 : 100
Application	Assembly
Typical Assembly Applications	Industrial bonding and Sealing
Substrates	Most metals, Rigid plastics, Ceramic, Glass, Leather, Rubber, Wood and Concrete

LOCTITE ABLESTIK 2143D medium viscosity adhesive is recommended for industrial bonding and sealing applications where toughness, impact resistance and superior mechanical properties are required

TYPICAL PROPERTIES OF UNCURED MATERIAL AS MIXED

Thixotropic Index	1.0
Mixed Viscosity @ 25 °C, mPa·s (cP)	38,000
Specific Gravity, mixed	1.12
Pot Life:	
@ 25 grams, hours	1
@ 100 grams, minutes	30
Work Life:	
@ 25 grams, hours	1.5
@ 100 grams, minutes	30

TYPICAL CURING PERFORMANCE

Cure Schedule

24 to 72 hours @ 25°C

Alternative Cure Schedule

4 hours @ 65°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 Expansion, cm/cm/ºC	6.4×10^{-5}
Glass Transition Temperature (Tg), °C, ultimate	65
Hardness, Shore D	77
Reactive solids contents, %	100
Water Absorption, after 24 hours, %	0.004
Izod Impact Strength, ft-lb/in. of notch	1.14

Electrical Properties

Volume Resistivity @ 25ºC, ohm-cm	1×10^{14}
Dielectric Strength, volts/mil	460
Dielectric Constant / Dissipation Factor @ 25ºC: @ 1 KHz	3.35/0.01

TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength :		
Aluminum to Aluminum:		
1 hour @ 65ºC	N/mm² (psi)	15 (2,200)

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Carefully clean and dry all surfaces to be bonded
2. Remove clamp and thoroughly mix the LOCTITE ABLESTIK 2143D epoxy adhesive system components in the handy BIPAX mixing-dispenser package until color is uniform throughout
3. Apply this completely mixed adhesive to the prepared surfaces, and gently press these surfaces together. Contact pressure is adequate for strong, reliable bonds; however, maintain contact until adhesive is completely cured
4. Some ingredients in this formulation provided in BIPAX, TRA-PAX and bulk packaging may crystallize when subjected to low temperature storage. A gentle warming cycle of 52ºC for 30 minutes prior to mixing components may be necessary. Crystallized epoxy components do not react as well as liquid components and should be redissolved prior to use for best results

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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:
The expiration date is based upon dry storage conditions at or below 27ºC, unless specified otherwise on the packaging, in the original, sealed and unopened containers for BIPAX, TRA-PAX and bulk packaged materials. The expiration date for pre-mixed and frozen materials is based upon dry storage conditions at or below the temperature indicated on each package. Contents may separate during storage. Resin or hardener in bulk containers (e.g., quarts, gallons) should be thoroughly mixed prior to combining them to obtain all the benefits of the properties designed into the formulation.

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

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Note:
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