

LOCTITE ABLESTIK 104 MOD3

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PRODUCT DESCRIPTION

LOCTITE ABLESTIK 104 MOD3 provides the following product characteristics:

Technology	Epoxy
Technology (Part B)	Anhydride
Appearance, Resin (Component A)	Black liquid
Appearance, Hardener (Component B)	White powder
Components	Two components - requires mixing
Mixing Ratio, by weight Component A: Component B	100 : 64
Product Benefits	• Non-conductive
Cure	Heat cure
Application	Electronic Adhesives & Solder, Component assembly adhesives
Key Substrates	Aluminum, Stainless steel, Carbon steel, Brass, Ceramic, Glass and Thermoset plastic
Operating Temperature	230°C

LOCTITE ABLESTIK 104 MOD3 is a two-part epoxy adhesive which exhibits outstanding physical and dielectric properties at service temperatures up to °C. It may be used at temperatures up to °C for short periods or intermittent use.

LOCTITE ABLESTIK 104 MOD3 contains no solvents or volatile matter and is suitable for bonding a wide variety of porous or non-porous materials. The resistance of LOCTITE ABLESTIK 104 MOD3 to a wide variety of solvents and chemicals is substantially better than can be obtained with more conventional adhesives.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Mixed Properties

Viscosity, mPa·s (cP):	
Speed 7/10 rpm	50,000
Speed 7/100 rpm	25,000
Density, g/cm ³	1.5
Shelf Life @ below 25°C, days	180

TYPICAL CURING PERFORMANCE

Cure Schedule

- 1 hour @ 200°C or
- 2 hours @ 180°C or
- 3 hours @ 150°C or
- 6 hours @ 120°C

For optimum performance at temperatures above 200°C, a post cure of 12 hours at 260°C is recommended.

The above cure profiles are guideline recommendations. Cure 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

Hardness, Shore D	90
Heat Distortion Temperature, °C	260
Coefficient of Linear Thermal Expansion, K ⁻¹	50×10 ⁻⁶

Electrical Properties

Volume Resistivity, ohm-cm :	
@ 25°C	1,015
@ 180°C	1,013
Dielectric Strength, 3 mm thick sample	15

Adhesion Properties

Tensile Lap Shear Strength, Al to Al, MPa:	
@ 25°C	11
@ 150°C	10
@ 230°C	6
@ 290°C	0.3

Chemical Resistance

Typical Solvent and Chemical Resistance % Weight Change After 7 days Immersion @ 25°C

Chemical	% Weight Change	Chemical	% Weight Change
30% H ₂ SO ₄	+ 0.19	10% NaCl	+ 0.21
3% H ₂ SO ₄	+ 0.26	5% Phenol	+ 0.23
10% NaOH	+ 0.11	Distilled H ₂ O	+ 0.20
1% NaOH	+ 0.22	10% HNO ₃	+ 0.23
95% C ₂ H ₅ OH	+ 0.7	10% HCl	+ 0.22
50% C ₂ H ₅ OH	+ 0.18	5% CH ₃ COOH	+ 0.24
Acetone	+ 0.06	10% NH ₄ OH	+ 0.76
Ethyl Acetate	+ 0.00	2% Na ₂ CO ₃	+ 0.22
CCl ₄	+ 0.04	3% H ₂ O ₂	+ 0.23
Toluene	+ 0.04	10% Citric Acid	+ 0.22
Heptane	+ 0.02	Oleic Acid	+ 0.09
JP-4	+ 0	JP-5	0

TYPICAL PERFORMANCE OF CURED MATERIAL**Shear Strength**

Tensile Lap Shear Strength :

Aluminum to aluminum:

Tested @ 25 °C	N/mm ²	12.4
	(psi)	(1,800)
Tested @ 150 °C	N/mm ²	11.7
	(psi)	(1,700)
Tested @ 230 °C	N/mm ²	9.7
	(psi)	(1,400)

GENERAL INFORMATION

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

Directions for Use

1. Part A is a medium viscosity black syrup which should be mixed to an uniform consistency before removing from the container. Part B is a white finely divided powder.
2. Weight out the required amount of Parts A and B.
3. Blend Part A and Part B to a uniform consistency. Modest heating of Part A, up to about 60°C will make blending easier. Heating above 60°C is not recommended as the pot life will be reduced substantially. The pot life of the blended material at room temperature is at least 12 hours.
4. Clean surfaces to be bonded. Roughening with emery paper and a wash with acetone or methyl ethyl ketone is recommended for optimum adhesion.
5. Apply the prepared LOCTITE ABLESTIK 104 MOD3 to both surfaces - join them and squeeze out excess material. Only contact pressure is required.

Storage

Store in original, tightly covered containers in clean, dry areas. 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 Henkel Representative.

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.

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

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