

LOCTITE ABLESTIK 104 MOD3

April 2021

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	<ul style="list-style-type: none"> 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% H2so4	+ 0.19	10% NaCl	+ 0.21
3% H2so4	+ 0.26	5% Phenol	+ 0.23
10% NaOH	+ 0.11	Distilled H2O	+ 0.20
1% NaOH	+ 0.22	10% Hno3	+ 0.23
95% c2h5oh	+ 0.7	10% HCl	+ 0.22
50% c2h5oh	+ 0.18	5% ch2cooh	+ 0.24
Acetone	+ 0.06	10% nh4oh	+ 0.76
Ethyl Acetate	+ 0.00	2% Na2CO3	+ 0.22
CCl4	+ 0.04	3% h2o2	+ 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

Disclaimer

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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1