

# LOCTITE ABLESTIK 104 MOD2

April 2018

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK 104 MOD2 provides the following product characteristics:

<b>Technology</b>	Epoxy
Appearance - Part A	Black
Appearance - Part B	White powder
Components	Two components - requires mixing
Mix Ratio by weight: Part A: Part B	100 : 64
Operating Temperature	up to 230°C
<b>Cure</b>	Heat cure
<b>Application</b>	Component assembly, NCA
Key Substrates	<ul style="list-style-type: none"> <li>• Aluminum</li> <li>• Stainless steel</li> <li>• Carbon steel</li> <li>• Brass</li> <li>• Ceramics</li> <li>• Glass</li> <li>• Thermoset plastic</li> </ul>

LOCTITE ABLESTIK 104 MOD2 contains no solvents or volatile matter and is suitable for bonding a wide variety of porous or non-porous materials. It may be used at temperatures up to 290°C for short periods or intermittent use.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

### Mixed Properties Part A + Part B

Viscosity @ 25 °C, mPa·s (cP):	
Speed 1 rpm	300,000
Speed 10 rpm	90,000
Density, g/cm <sup>3</sup>	1.5
Shelf Life @ 25°C, days	180
Pot Life @ 25°C, hours	12
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Cure Schedule

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

For optimum performance at temperatures above 205°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 their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties :

Coefficient of Linear Thermal Expansion , K <sup>-1</sup>	10 x 10 <sup>-6</sup>
Heat Distortion Temperature, °C	260

### Electrical Properties:

Dielectric Strength, kV/mm	15.6
Volume Resistivity, ohm-cm:	
@ 25°C	10 <sup>15</sup>
@ 180°C	10 <sup>13</sup>

### Chemical Resistance:

Typical Solvent and Chemical Resistance %  
Weight Change  
After 7 days Immersion @ 24°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 % CH3COOH	+ 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

Lap Shear Strength , Al to Al, MPa:	
@25°C	17
@150°C	12
@230°C	6.8
@290°C	0.3

**GENERAL INFORMATION**

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

**DIRECTIONS FOR USE**

1. Clean all surfaces to be bonded.
2. Roughening with emery paper and a wash with acetone or methyl ethyl ketone is recommended for optimum adhesion.
3. Apply the prepared LOCTITE ABLESTIK 104 MOD2 to both surfaces - join them and squeeze out excess material.
4. 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.

**Maximum 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.

**Conversions**

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 $\text{kV/mm} \times 25.4 = \text{V/mil}$   
 $\text{mm} / 25.4 = \text{inches}$   
 $\text{N} \times 0.225 = \text{lb}$   
 $\text{N/mm} \times 5.71 = \text{lb/in}$   
 $\text{psi} \times 145 = \text{N/mm}^2$   
 $\text{MPa} = \text{N/mm}^2$   
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$   
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$   
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$   
 $\text{mPa}\cdot\text{s} = \text{cP}$

**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.

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, Resin Technology Group, Inc., 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 and/or registered trademarks of Henkel and its affiliates in the U.S. and elsewhere.

## Reference 1