

# LOCTITE M 2000RS MOD2 E&C

September 2016

## PRODUCT DESCRIPTION

LOCTITE M 2000RS MOD2 E&C provides the following product characteristics:

<b>Technology</b>	Thermosetting
<b>Appearance</b>	Black
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>One component</li> <li>Applicable with manual or semi automatic screen printing equipment</li> <li>Good screen residence time</li> <li>Can be mixed to produce accurately controlled resistance values</li> <li>Less than 5% resistance changes after soldering, humidity and thermal ageing exposure</li> </ul>
<b>Cure</b>	Heat cure
<b>Application</b>	Conductive Ink
<b>Typical Assembly Applications</b>	Printed resistors and Potentiometers
<b>Key Substrates</b>	FR-3, FR-4, CEM-1 and CEM-3 polyether sulphone and ceramic substrates

LOCTITE M 2000RS MOD2 E&C of products are specifically designed for printing potentiometers and resistors onto printed circuit boards. LOCTITE M 2000RS MOD2 E&C is the improved sliding version of the standard Minico M2000 RS Series.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity 35,000, ASTM D2393, mPa·s (cP)	35,000
Density, kg/cm <sup>3</sup>	1,300
Shelf Life @ 18 to 25°C (from date of qualification in 1 original seal), hour	
Flash Point , °C	78

## TYPICAL SCREEN PRINTING PROCESS

<b>Emulsion Thickness</b>	
Direct or indirect emulsion μm	25 to 50
<b>Printing Equipment Type</b>	
Manual	
Semi-automatic	
<b>Recommended Screen Type</b>	
Monofilament polyester & Stainless Steel threads/cm	77 to 100
<b>Recommended Squeegee</b>	
Polyurethane , Shore Hardness	70 to 80
Speed (not to exceed), cm/s	10
<b>Applied Dry Coating Thickness</b>	
Applied Dry Coating Thickness, μm	15 to 25

## TYPICAL DRYING CYCLE

5 to 10 minutes @ 120 °C:

## TYPICAL CURING PERFORMANCE

### Convection Box Oven

30 minutes @ 200°C

### Infrared Heat Source

6 minutes @ 200°C

If different resistors are applied on the same board, it is not advisable to cure each resistor type individually. It is recommended to dry each resistor after printing @ 120 °C. Full cure at 200°C should be performed after printing the last resistor type.

These cure schedules are a general guideline for additive circuitry. Other cure schedules can be utilized depending on laminates and processing parameters.

The above cure profile is a guideline recommendation. 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

As a cured coating

### Physical Properties

Adhesion, ASTM 3359 Method B, grade	5B
-------------------------------------	----

### Electrical Properties

Temperature Coefficient of Resistance (TCR), ppm	200
--	-----

Resistivity, ohms/square/25 μm ±15%:

M 2001 RS E&C	1
M 2010 RS MOD2 E&C	10
M 2012 RS MOD2 E&C	100
M 2013 RS MOD2 E&C	1,000
M 2014 RS MOD2 E&C	10,000
M 2015 RS MOD2 E&C	100,000

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

- LOCTITE M 2000RS MOD2 E&C should be thoroughly stirred prior to use. Avoid rapid stirring as this causes air entrapment..
- Should thinning become necessary, dilute (not to exceed)1% by weight with butyl carbitol.

**STORAGE:**

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Store in a cool, well ventilated area.

**Optimal Storage : 18 to 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.

**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.

**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 of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 2

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Loctite:](#)

[1239314](#) [1239316](#)