

# LOCTITE<sup>®</sup> MR Flex 80 Putty

Known as LOCTITE<sup>®</sup> Fixmaster<sup>®</sup> Flex 80 Putty  
October 2014

## PRODUCT DESCRIPTION

LOCTITE<sup>®</sup> MR Flex 80 Putty provides the following product characteristics:

<b>Technology</b>	Urethane
Appearance (uncured)	Thick black liquid
Mix Ratio, by volume - Resin : Hardener	2.5 : 1
Mix Ratio, by weight - Resin : Hardener	2.6 : 1
<b>Cure</b>	Room temperature cure
<b>Application</b>	Belt repair
Specific Benefit	<ul style="list-style-type: none"> <li>• Resists abrasion</li> <li>• Impact resistant</li> <li>• Corrosion resistant</li> <li>• Easy to mix and use</li> <li>• Unaffected by oil, grease and water</li> </ul>

LOCTITE<sup>®</sup> MR Flex 80 Putty combines the properties of rubber and urethane in a trowelable repair compound. It is ideal for repairing metal, rubber, and urethane surfaces that are subject to wear and impact. Typical applications include pump liners, pulleys, conveyor belts, rubber and urethane parts or sheeting, and couplings. This product is typically used in applications with an operating range of -29 °C to +82 °C.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Coverage	604 cm <sup>2</sup> @ 6 mm thick/0.45 kg (94 in <sup>2</sup> @ 0.25 inch thick/1 lb)
----------	---

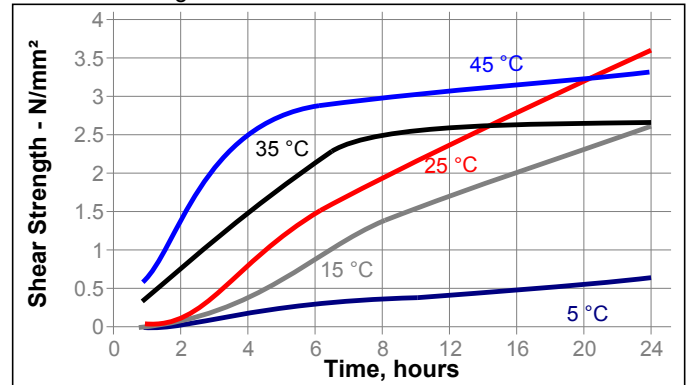
## TYPICAL CURING PERFORMANCE

### Curing Properties

Cure Time @ 25 °C, hours	8
Gel Time @ 21 °C, minutes	10 to 15
Working life, minutes	10

## Cure Speed vs. Temperature

The graph below shows the shear strength developed with time on grit blasted steel lap shears at different temperatures and tested according to ISO 4587.



## TYPICAL PROPERTIES OF CURED MATERIAL

Cured @ 25 °C except where noted

### Physical Properties:

Abrasion Resistance, ASTM D4060: mg 1 Kg load, CS-10 wheels, Weight of Material Lost	36
Shore Hardness, ISO 868, Durometer A	88
Elongation, ISO 527-2, %	350
Coefficient of Thermal Conductivity ASTM F 433, W/(m·K)	0.18
Glass Transition Temperature, ASTM E 1640, °C	<-50
Coefficient of Thermal Expansion, ISO 11359-2 K <sup>-1</sup>	185×10 <sup>-06</sup>

### Electrical Properties:

Volume Resistivity, IEC 60093, ohm-cm	20×10 <sup>12</sup>
Surface Resistivity, IEC 60093, ohms	690×10 <sup>12</sup>

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Shear Strength

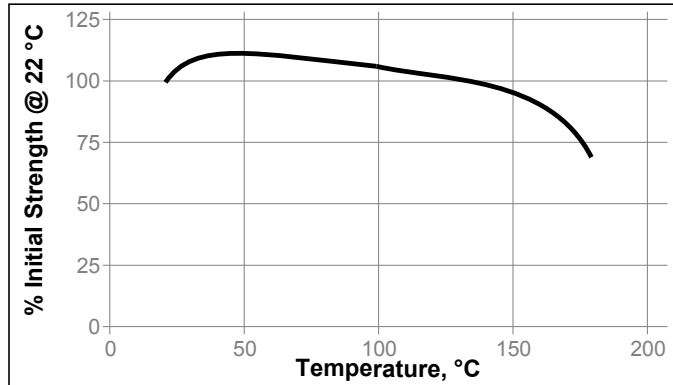
Lap Shear Strength, ISO 4587: Grit Blasted Mild Steel (GBMS)	N/mm <sup>2</sup> 3.3 (psi) (480)
---	--------------------------------------

**TYPICAL ENVIRONMENTAL RESISTANCE**

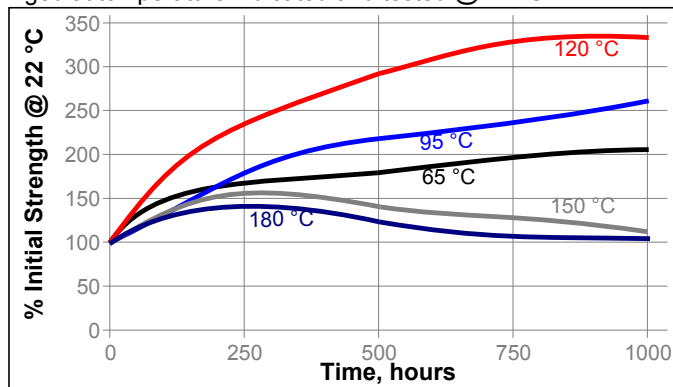
Cured for 72 hours @ 21 °C  
Lap Shear Strength, ISO 4587:  
Grit Blasted Mild Steel (GBMS)

**Hot Strength**

Tested at temperature

**Heat Aging**

Aged at temperature indicated and tested @ 22 °C

**GENERAL INFORMATION**

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

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

**Directions for use:**

1. Aggressively clean surfaces to be repaired with Loctite® Fixmaster® Flex Cleaner and abrasive pad. If possible, use wire brush with cleaner.
2. On natural rubber, SBR, and butadiene rubber surfaces, proper surface preparation requires the use of Loctite® Fixmaster® Etching Agent. Allow Loctite® Fixmaster® Etching Agent to dry for 30 minutes at 25°C or 60 minutes at 10°C.
3. Urethane, Nitrile and PVC surfaces require cleaning and abrasion only.
4. Metal surfaces require the surface to be ground or sandblasted to provide a profile.

5. Shake hardener container thoroughly to mix contents.
6. Add hardener to resin. Mix material thoroughly using a circular lifting motion being sure to mix along the bottom and sides. Avoid whipping air into the mixture.
7. Trowel material onto prepared surface.
8. At 25°C, the working time is 10 minutes and functional cure time is 8 hours.

**Technical Tips for Working With Urethanes**

Working time and cure depends on temperature and mass:

- The higher the temperature, the faster the cure.
- The larger the mass of material mixed, the faster the cure.

To speed the cure of urethanes at low temperatures:

- Store urethane at room temperature.
- Pre-heat repair surface until warm to the touch.

To slow the cure of urethanes at high temperatures:

- Mix urethane in small masses to prevent rapid curing.
- Cool resin/hardener component(s).

**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**

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

**Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.** 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**

(°C x 1.8) + 32 = °F  
kV/mm x 25.4 = V/mil  
mm / 25.4 = inches  
µm / 25.4 = mil  
N x 0.225 = lb  
N/mm x 5.71 = lb/in  
N/mm<sup>2</sup> x 145 = psi  
MPa x 145 = psi  
N·m x 8.851 = lb·in  
N·m x 0.738 = lb·ft  
N·mm x 0.142 = oz·in  
mPa·s = cP

**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 0.4