TEROSON

Technical Data Sheet

Teroson MS 939NA

Formerly known as Loctite 5512
June 2016

PRODUCT DESCRIPTION

Teroson MS 939NA provides the following product characteristics:

Technology	MS® - Polymer
Chemical Type	Modified silane polymer
Appearance (uncured)	Black, White and Gray
Smoothness	Smooth[LMS]
Components	One part - requires no mixing
Viscosity	Paste
Cure	Atmospheric moisture
Application	Sealing or Bonding

Teroson MS 939NA is a high strength, high elongation adhesive used for elastic bonding and sealing on various substrates. It is a one component adhesive/sealant based on a modified silane polymer, which cures by reaction with moisture to an elastomeric thermoset product. The skin formation and curing times are dependent on humidity, temperature, and joint depth. By increasing the exposure to moisture these times can be reduced. Teroson MS 939NA is sag-resistant leading to high initial tack. It is non-corrosive and free of solvents, isocyanates, silicones, PVC, and is odorless. It demonstrates good adhesion without primer to a wide variety of substrates and is compatible with suitable paint systems. The adhesive/sealant also demonstrates good UV resistance and can therefore be used for interior and exterior applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Density, ISO 2811-1 @ 22 °C, g/ml	1.3 to 1.6
Flash Point - See SDS	
Extrusion Rate @ 23°C, D=3.5mm, 3 bar, 15 s, g	5 to 40[LMS]

TYPICAL CURING PERFORMANCE

Under normal conditions, the atmospheric moisture initiates the curing process. The product develops functional strength in 24 hours and fully cures in 7 days.

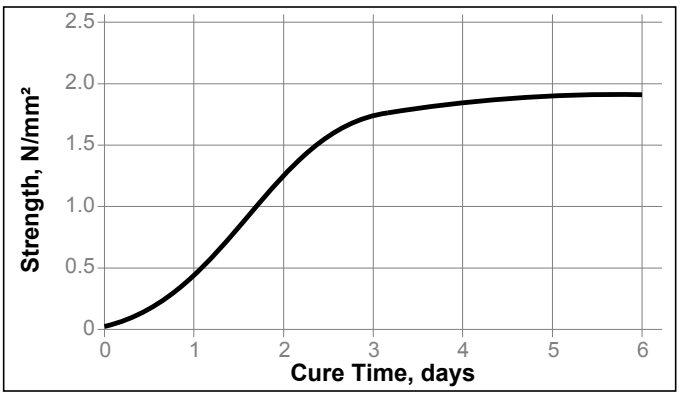
Skin Over Time

Skin over time is the time the surface of the adhesive forms a skin upon exposure to atmospheric moisture at 25 ± 2 °C, 50 ± 5% RH.

Skin Over Time, minutes	3 to 12[LMS]

Cure Speed vs. Time

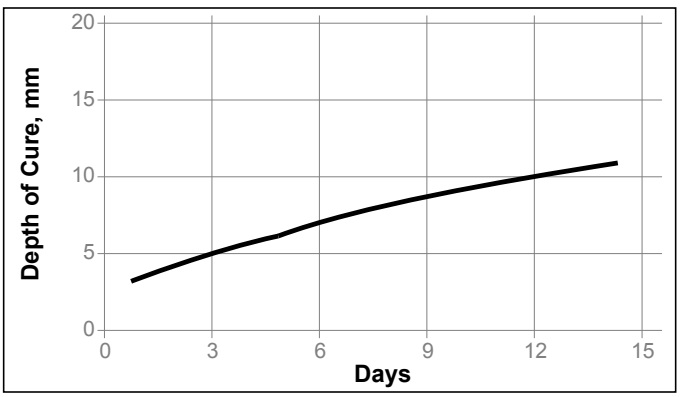
The graph below shows the shear strength developed over time at 22 °C / 50 % RH on mild steel (grit blasted) and tested according to ISO 4587.



Depth of Cure

The depth of cure depends on temperature and humidity. Depth of cure was determined by filling a 51 mm deep cup and removing the cured film of material. The cured section of product is measured to determine depth of cure.

The graph below shows the increase in depth of cure with time at @ 22 °C / 40 to 60% RH



TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 3 days @ 22 °C / 50±5 % RH

Physical Properties:

Shore Hardness, ISO 868, Durometer A		52 to 62[LMS]
Elongation, at break, ISO 527-3, %		500
Tensile Strength, ISO 527-3	N/mm²	2.7
	(psi)	(390)

Henkel

Electrical Properties:

Dielectric Constant / Dissipation Factor, IEC 60250:	
1kHz	7.73
100 kHz	7.37
1 MHz	7.1
Volume Resistivity, IEC 60093, Ω·cm	2.2×10^{10}
Surface Resistivity, IEC 60093, Ω	7.2×10^{11}

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 21 days @ 22 °C

Lap Shear Strength, ISO 4587:		
Steel (grit blasted)	N/mm²	1.9
	(psi)	(270)
Stainless Steel	N/mm²	2.0
	(psi)	(290)
Galvanized Steel	N/mm²	2.7
	(psi)	(390)
Aluminum	N/mm²	1.8
	(psi)	(255)
Zinc dichromate	N/mm²	2.1
	(psi)	(300)
Wood (Pine)	N/mm²	1.9
	(psi)	(275)
Glass	N/mm²	2.2
	(psi)	(325)
Polycarbonate	N/mm²	1.9
	(psi)	(270)
PVC	N/mm²	2.2
	(psi)	(320)
ABS	N/mm²	1.7
	(psi)	(240)
"T" Peel Strength, ISO 11339:		
Aluminum	N/mm	3.5
	(lb/in)	(20.1)
Impact Strength, ISO 9653, J:		
Aluminum		2.4

TYPICAL ENVIRONMENTAL RESISTANCE

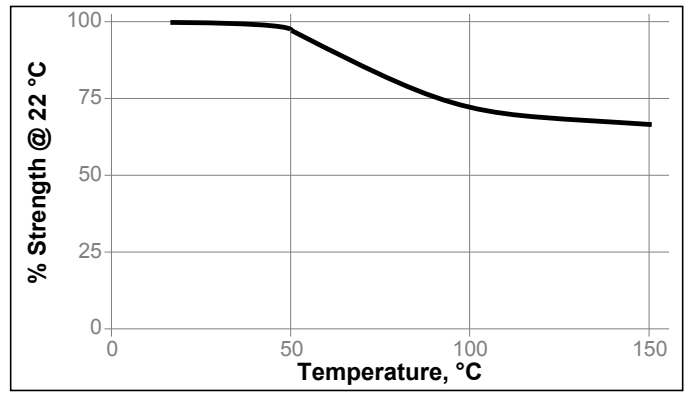
Hot Strength

Tested at temperature

Cured for 21 days @ 22 °C / 40 to 60% RH

Lap Shear Strength, ISO 4587:

Mild Steel (grit blasted)



Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 22 °C

		% of initial strength	
Environment	**°C**	**500 h**	**1000 h**
Motor oil	40	116	115
Gasoline	22	62	28
Isopropanol	22	51	8
Salt fog, 95% RH	49	80	87
85% RH	85	98	111

Heat Aging

Cured for 21 days @ 22 °C / 40 to 60% RH:	
Aged @ 50 °C for 168 hours:	
Change in Durometer, Points (Initial = 52)	-1
Change in Tensile Strength, %	7
Change in Elongation, %	-9
Aged @ 100 °C for 168 hours:	
Change in Durometer, Points (Initial = 52)	-4
Change in Tensile Strength, %	-3
Change in Elongation, %	-32

GENERAL INFORMATION

When bonding and sealing PMMA, e.g. Plexiglas® and polycarbonate, e.g. Makrolon® or Lexan®, under tension, stress cracking may occur.

In such cases the product should not be utilized.

There is no adhesion to polyethylene, polypropylene and PTFE (e.g. Teflon®).

Substrates not mentioned above should be subject to trials.

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. For best performance bond surfaces should be clean and free from grease.
2. Moisture curing begins immediately after the product is exposed to the atmosphere, therefore parts to be assembled should be mated within a few minutes after the product is dispensed.
3. The bond should be allowed to cure (e.g. seven days), before subjecting to heavy service loads.
4. Excess material can be easily wiped away with non-polar solvents.

Loctite Material Specification[LMS]

LMS dated February 22, 2006. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.

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/mm² 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 and/or registered trademarks of Henkel and its affiliates in the U.S. and elsewhere.

This document was created and digitally signed by tdx.henkel.com at 2025-11-28T16:05:45.453Z