



LOCTITE® 5399™

November 2004

PRODUCT DESCRIPTION

LOCTITE® 5399™ provides the following product characteristics:

Technology	Silicone
Chemical Type	Acetoxy silicone
Appearance (uncured)	Red paste
Components	One component - requires no mixing
Thixotropic	Reduced migration of liquid product after application to substrate
Cure	Room temperature vulcanizing (RTV)
Application	Bonding or Sealing

LOCTITE® 5399™ is generally used for sealing applications, but also for bonding and for high temperature protection. It is primarily used in industrial bonding/sealing applications, heating engineering, industrial ovens, household electrical and industrial heating equipment. This product is typically used in applications up to 350 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 20 °C	1.04
Extrusion Rate, g/min:	
Pressure 0.6 MPa, temperature 25 °C:	
3 mm Nozzle	250
Flash Point - See MSDS	

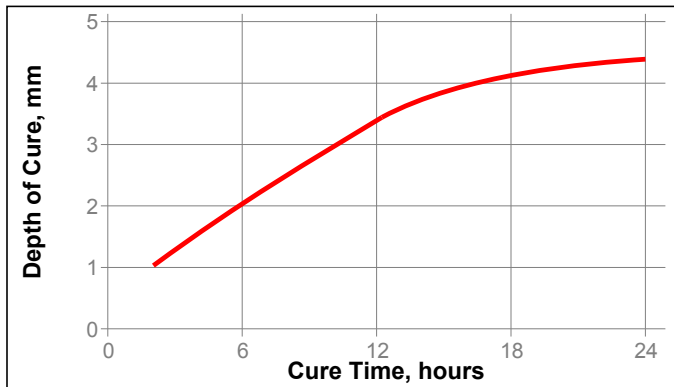
TYPICAL CURING PERFORMANCE

Surface Cure

LOCTITE® 5399™ becomes tack free on exposure to atmospheric moisture within 5 minutes at 23±2°C / 50±5%RH.

Depth of Cure

The graph below shows the increase in depth of cure with time at 23±2°C / 50±5% RH.



TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 1 week @ 25 °C

Physical Properties:

Tensile Strength, ASTM D 412	N/mm ² 3.3 (psi) (475)
Tensile Modulus, ASTM D 412	N/mm ² 0.8 (psi) (120)
Elongation, at break, ASTM D 412, %	500
Shore Hardness, ISO 868, Durometer A	33

Electrical Properties:

Dielectric Constant, IEC 60250:	
1 MHz	2.4
Dielectric Breakdown Strength, ASTM D 149, kV/mm	23.3
Volume Resistivity, IEC 60093, Ω·cm	7.3×10 ¹⁵

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

After 14 days @ 25 °C

Lap Shear Strength, ISO 4587:	
AG3 Aluminum test pieces(1 mm thick bondline)	N/mm ² 2.5 (psi) (360)
AG3 Aluminum test specimen(1 mm thick gasket)	N/mm ² 1.7 (psi) (250)
Alclad	N/mm ² 1.6 (psi) (230)

TYPICAL ENVIRONMENTAL RESISTANCE

Typical Fluid Immersion Properties

Aged @ 150°C for 70 hours:

Engine Oil:

Physical Properties:

Volume Swell, %	21
Shore Hardness, ISO 868, Durometer A	14
Tensile Modulus, ASTM D 412	N/mm ² 0.4 (psi) (60)
Tensile Strength, ASTM D 412	N/mm ² 1.65 (psi) (240)
Elongation, at break, ASTM D 412, %	590

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 Material Safety Data Sheet (MSDS).

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.

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

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

Note

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