

#### PRODUCT DESCRIPTION

LOCTITE® Product 598 is a non-slumping, non-corrosive, low odour, low volatile, single component, room temperature vulcanising (RTV) silicone adhesive/sealant.

#### TYPICAL APPLICATIONS

Designed primarily for flange sealing with good oil resistance and to withstand high joint-movement requirements. For example, stamped sheet metal covers (timing covers and oil sumps).

#### PROPERTIES OF UNCURED MATERIAL

	Typical Value	Range
Chemical Type	Oxime	
Appearance	Metallic Black	
Specific Gravity @ 20°C	1.30	
Viscosity @ 25°C	Thixotropic Paste	
Extrusion Rate gm/min: (3mm nozzle, 6 bar, 25°C)	225	
Flash Point (COC), °C	>100	

#### TYPICAL CURING PERFORMANCE

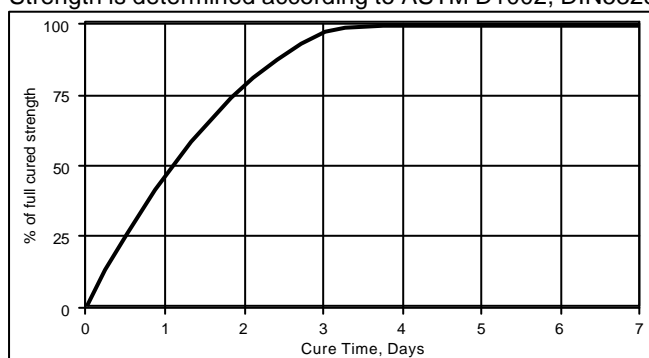
##### Skin Over Time

The surface of this adhesive becomes dry to touch on exposure to atmospheric moisture within 10 minutes at 23°C, 60%RH.

##### Cure speed

The graph below shows shear strength developed with time on grit blasted mild steel lapshears at a bond gap of 0.5mm. Cure condition 23°C, 60%RH.

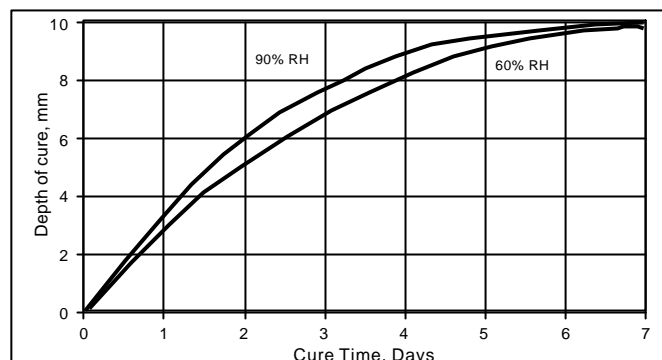
Strength is determined according to ASTM D1002, DIN53283



##### Depth of Cure

The depth of cure depends on temperature and humidity. Depth of cure was measured on strip pulled from a ramped Teflon mould (maximum depth 10mm).

The graph below shows the increase in depth of cure with time at 23°C with increase in humidity.



#### TYPICAL PROPERTIES OF CURED MATERIAL

##### Electrical Properties

Dielectric Constant, ASTM D150 - 100 Hz	3.0
10kHz	3.8
10MHz	3.8
Volume resistivity, ASTM D257, ? .cm:	10 <sup>15</sup>
Surface resistivity, ASTM D257, ? .:	10 <sup>15</sup>

Hardness, Shore A: 28 - 36

##### PERFORMANCE OF CURED MATERIAL

(After 14 days @ 23°C, 60%RH at 0.5mm gap)

	Typical Value	Range
Shear Strength, ASTM D1002, DIN53283, N/mm <sup>2</sup>		
Aluminium	0.2	0.1 to 0.3
(psi)	(29)	(15 to 116)
Zinc Dichromate	0.5	0.4 to 0.7
(psi)	(73)	(58 to 102)
Grit Blasted Mild steel	1.2	0.9 to 1.5
(psi)	(174)	(131 to 218)
Abraded Aluminium	0.5	0.4 to 0.6
(psi)	(73)	(58 to 87)
Tensile strength, ASTM D412, N/mm <sup>2</sup> :	1.6	1.2 to 2.0
(psi)	(230)	(170 to 300)
% Elongation to break, ASTM D412:	340	250 to 430

NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.

PLEASE CONTACT LOCTITE CORPORATION QUALITY DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS ON SPECIFICATIONS FOR THIS PRODUCT.

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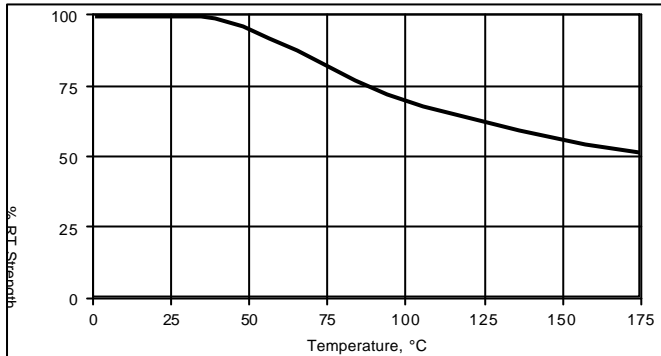
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**TYPICAL ENVIRONMENTAL RESISTANCE**

Test Procedure : Shear Strength ASTM D1002, DIN53283  
 Substrate: Grit blasted mild steel lapshears  
 Cure procedure: 14 days 23°C/60%RH

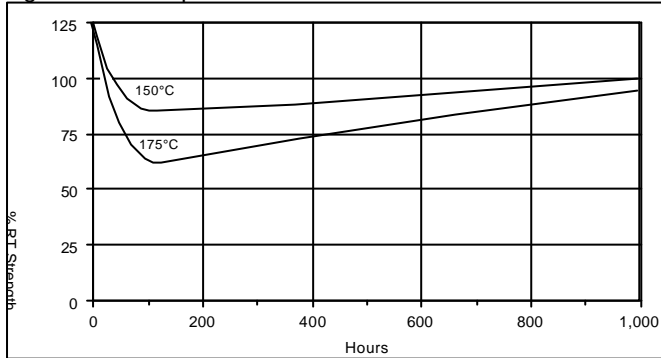
**Hot Strength**

Tested at temperature.



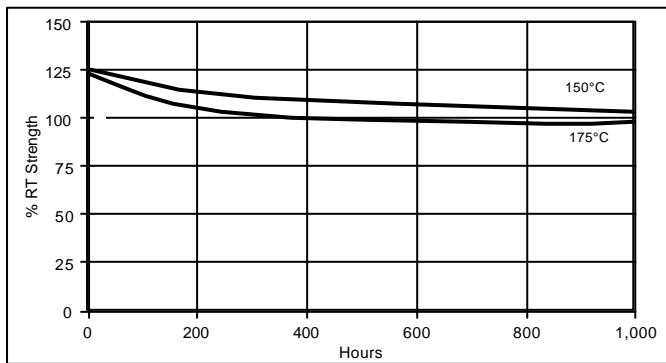
**Heat Ageing**

Aged under temperature indicated and tested at 22°C.



**Heat Ageing**

Test Procedure : Tensile strength at break, ASTM D412  
 Film thickness: 2mm  
 Cure procedure: 14 days 23°C/60%RH  
 Test temperature: 22°C



**Chemical/Solvent Resistance**

Aged under conditions indicated and tested at 22°C.

Solvent	Temp.	%Initial strength retained at	
		100 hr	500 hr
Multi-grade (15W50)	120°C	89	84
Multi-grade (15W50)	150°C	72	68
Water/glycol 50/50	100°C	61	59

This product is not recommended for immersion in petrol.

## **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 oxidising materials.**

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

### **Directions for use**

Product 598 should be applied as a bead to clean surface. Assemble parts within 5 minutes. When joint is assembled pressure should be applied to spread the adhesive out and fill the joint completely. The bond should be allowed to cure (e.g. seven days), before subjecting to heavy service loads.

### **Storage**

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8?-21?C (46? - 70?F) unless otherwise labelled. The shelf life period for up to a 85gm tube is 24 months based upon date of manufacture. To prevent contamination of unused material, do not return any product to its original container. For specific shelf life information on other pack sizes, contact your local technical service centre.

### **Data Ranges**

The data contained herein may be reported as a typical value and/or range (based on the mean value ?2 standard deviations). Values are based on actual test data and are verified on a periodic basis.

### **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, Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite 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 licence under any Loctite 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.