



LOCTITE® SI 5904

February 2025

Product description

LOCTITE® SI 5904 provides the following product characteristics:

Technology	Silicone
Chemical type	Oxime silicone
Appearance (uncured)	Black paste
Thixotropic	Reduced migration of liquid product after application to substrate
Components	One component - requires no mixing
Cure	Room temperature vulcanizing (RTV)
Application	Sealing
Specific benefits	Excellent resistance to automotive engine oils

LOCTITE® SI 5904 is a non-slumping, non-corrosive, low odour, low volatile, single component, room temperature vulcanising (RTV) silicone adhesive / sealant. Typical applications include stamped or casting flange parts (timing covers, bedplates, oil seal covers and oil sumps) where good oil resistance and the ability to withstand high joint-movement is required. It withstands on line, low pressure tests carried out before product begins to cure.

Typical properties of uncured material

Specific gravity @ 20°C	1.27
Extrusion rate, gm/min: (3mm nozzle, 6 bar, 25°C)	50
Flash point - see SDS	

Typical curing performance

Surface cure

Tack free time, minutes:	8
Cured @ 23±2°C, 60±5%RH.	

Cure through volume

Cure depth, mm/day:	2.6
Cured @ 23±2°C, 60±5%RH.	

Typical properties of cured material

Cured for 7 days @23±2°C, 60±5%RH

Elongation, at break, ISO 527-3, %	440
Tensile strength, ISO 527-3, N/mm ²	2.2
Shore hardness, ISO 868, Durometer A	40

Typical performance of cured material

Cured for 7 days @23±2°C, 60±5%RH

Adhesive properties

Lap shear strength, ISO 4587, N/mm ² Aluminium / Aluminium 1.0 mm gap	1.7
Lap shear strength, ISO 4587, N/mm ² Aluminium / Steel 1.0 mm gap	1.6
Lap shear strength, ISO 4587, N/mm ² Steel / Steel 1.0 mm gap	1.7
All substrates are grit-blasted Aluminium: Aluminium 2024 T3	

Typical environmental resistance

Cured for 7 days @ 23±2°C, 60±5% RH

Lap shear strength, ISO 4587: Grit blasted Aluminium 2024 T3 / Aluminium 2024 T3 @1mm bond gap
Elongation at break, ISO 527-3
Shore hardness, ISO 868, Durometer A

Typical fluid immersion properties

Tested 23°C

% Initial Value retained at				
Motor oil 5W20 @150°C				
	100h	300h	500h	1000h
Hardness Shore A	68	70	62	47
Elongation	86	92	91	100
Tensile strength	132	130	129	114
Lap shear strength	132	134	115	96

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. For best performance bond surfaces should be clean and free from grease.
2. This product is moisture cure. Exposure to environmental moisture should be kept to a minimum during storage and handling.
3. 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.
4. The bond should be allowed to cure (e.g. seven days), before subjecting to heavy service loads.
5. Excess material can be easily wiped away with non-polar solvents.



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 21°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 Henkel representative.

Data Ranges

The data contained herein may be reported as a typical value and/or range. Values are based on actual test data and are verified on a periodic basis.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\mu\text{m} / 25.4 = \text{mil}$

$\text{N} \times 0.225 = \text{lb}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{N/mm}^2 \times 145 = \text{psi}$

$\text{MPa} \times 145 = \text{psi}$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

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