Technical Data Sheet

LOCTITE® SI 5972 FC

July 2025

Product description

LOCTITE® SI 5972 FC provides the following product characteristics:

Technology	Silicone
Chemical type	Tin free alkoxy silicone
Appearance (uncured)	White paste
Components	One component - requires no mixing
Thixotropic	Reduced migration of liquid product after application to substrate
Cure	Room temperature vulcanizing (RTV)
Application	Gasketing/sealing electronic components
Specific benefits	Fast curing, good initial blowout resistance, and reach compliant

LOCTITE® SI 5972 FC has been designed specifically for gasketing and sealing applications in automotive components and other harsh environments. The material shows excellent blow out resistance and is capable of passing inline pressure test up to 5 psi. Typical applications include various substrates such as metals, plastics, and nylon where the ability to withstand high joint-movement is required.

Typical properties of uncured material

Specific Gravity @ 25°C	1.33 - 1.40
Extrusion rate, g/min	
Pressure 0.62 MPa, @ 25°C: Semco cartridge	30 - 60
Flash point	>100°C
Blow out resistance, seconds: 6.5 mm Flange, 1 - 2 mm gap @0.021 MPa	≥100
Si volatility (%D4 – D10)	0.2

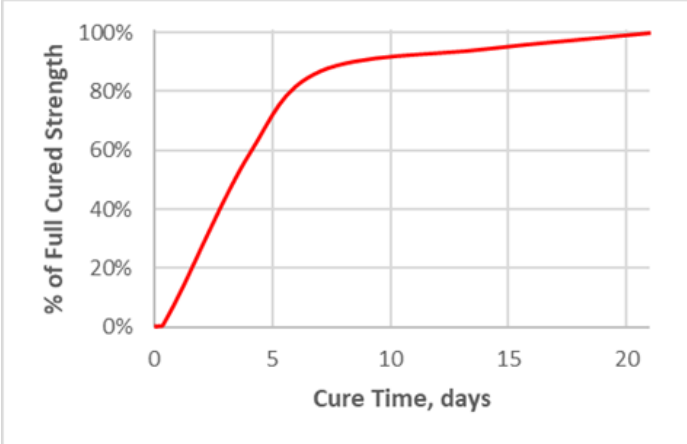
Typical curing performance

Surface cure

LOCTITE® SI 5972 FC becomes tack free on exposure to moisture within 10 - 18 minutes at 25°C / 50% RH RH.

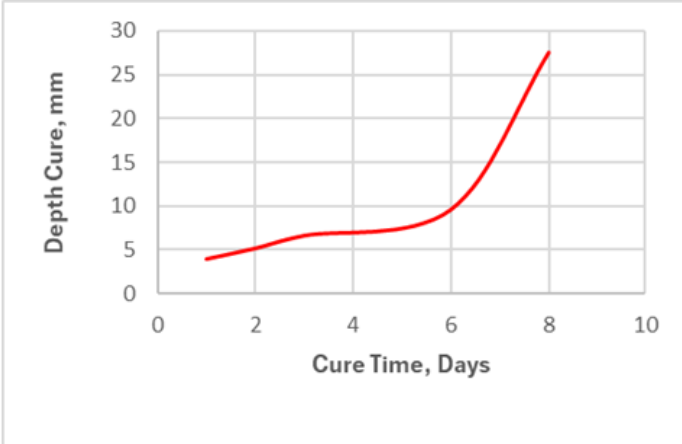
Cure speed

The graph below shows shear strength developed with time on Aluminum lapshears at a bond gap of 1.0 mm. Cure condition 23±2°C, 50±5% RH. Strength is determined according to ISO 4587.



Depth cure

The depth of cure depends on temperature and humidity. The graph below shows the increase in depth of cure with time at 10.



Typical properties of cured material

Cured for 1 week @ 23°C / 50% RH

Physical properties

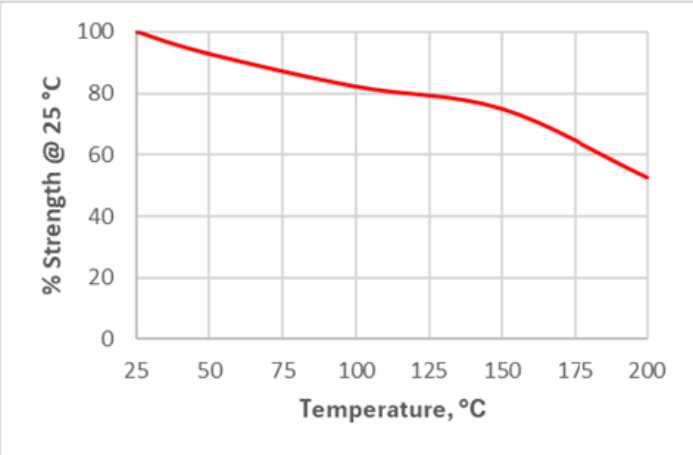
Shore hardness, ISO 868, Durometer A		40 - 55
Elongation, ISO 37, %		≥200
Tensile strength, ISO 37	N/mm^2 (psi)	≥2 (≥290)
Shrinkage of cure, %		<0.5

Adhesive properties
Cured for 1 week @ 23°C / 50% RH
25.4 x 12.7 mm overlap with 1 mm gap

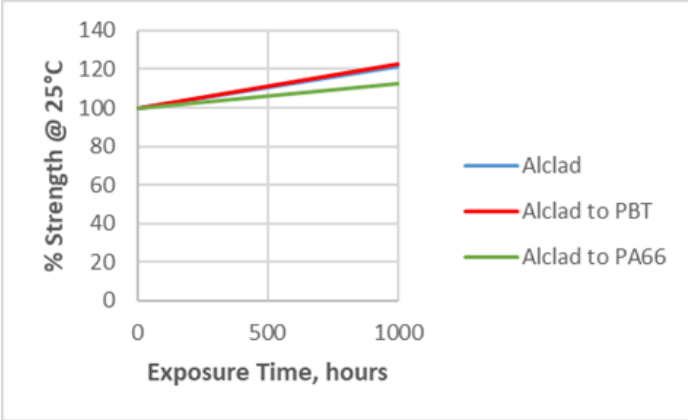
Lap Shear Strength, ISO 4587: Aluminum (Alclad)	N/mm^2 (psi)	≥1.5; 100%CF (≥220)
Aluminum (Alclad) to PBT (30% glass filled, plasma treated)	N/mm^2 (psi)	≥1.7; 100%CF (≥250)
Aluminum (Alclad) to Nylon 66 (30% glass filled, plasma treated)	N/mm^2 (psi)	≥1.7; 100%CF (≥250)
Nylon 66 (30% glass filled, plasma treated)	N/mm^2 (psi)	≥1.5; 100%CF (≥220)
PBT (30% glass filled, plasma treated)	N/mm^2 (psi)	≥1.7; 100%CF (≥250)
Electrogalvanized steel (plasma treated)	N/mm^2 (psi)	≥1.4; 100%CF (≥200)
Hot-dip galvanized steel (plasma treated)	N/mm^2 (psi)	≥1.0; 100%CF (≥145)
Casted aluminum (plasma treated)	N/mm^2 (psi)	≥1.4; 100%CF (≥200)

Typical environmental resistance
Cured for 1 week @ 23°C / 50% RH
25.4 x 12.7 mm overlap with 1 mm gap
Lap Shear Strength, ISO 4587:
Aluminum (Alclad)

Hot strength
Tested at temperature



Aging
Aged at 85°C / 85% RH
Tested on Aluminum (Alclad), PBT (30% glass filled, plasma treated), and Nylon 66 (30% glass filled, plasma treated)



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. 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.
5. For full automatic applications a volumetric dispensing system is recommended.

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

Optimal storage: 8 to 21°C. Storage below 8°C or greater than 28°C can adversely affect product properties.
Storage conditions are for long term product storage. Transit and interim storage situations (i.e. receiving) are not encompassed by Henkel's storage requirements. It should be noted however that all efforts should be made to store material as required, as soon as possible.

Material removed from the package may be contaminated during use. Do not return product to the original package. 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

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