



LOCTITE® SI 5612™

July 2025

Product description

LOCTITE® SI 5612™ provides the following product characteristics:

Technology	Silicone
Chemical type	Silicone
Appearance, Resin (Component A)	Red paste ^{LMS}
Appearance, Hardener (Component B)	White paste ^{LMS}
Appearance (mixture)	Red paste
Components	Two components - requires mixing
Mix ratio, by volume (Component A : B)	4:1
Viscosity	Thixotropic
Cure	Room temperature cure and atmospheric moisture
Application	Bonding and sealing

LOCTITE® SI 5612™ is a two part, fast cure silicone with excellent bond strength to glass, metals and Ceran®. The product adheres well to glass and metal and can be exposed to a temperature of 140°C after complete cure. LOCTITE® SI 5612™ is used for bonding/sealing applications in the heating engineering industry.

Typical properties of uncured material

Part A properties

Density @ 25°C	1.35 to 1.65
Viscosity, plate & plate, mPa*s (cP): PP40, @20 (1/s) mPas	30,000 to 85,000
Flash Point - See SDS	

Part B properties

Density @ 25°C	1.5 to 1.7
Viscosity, plate & plate, mPa*s (cP): PP40, @20 (1/s) mPas	10,000 to 70,000

Mixed properties

Pot life, minutes	6
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Typical curing performance

The mix of part A and part B initiates the reaction. There is a secondary cure with atmospheric moisture that promotes full cure over 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	15
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Tack free time

TACK-FREE TIME is the time the surface of the adhesive shows no more tack upon exposure to atmospheric moisture at 25 ± 2 °C, 50 ± 5% RH.

Tack free time, minutes	18
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Typical properties of cured material

Cured for 7 days @ 22°C / 50% RH

Elongation, at break, ISO 527-3, %	147
Tensile strength, ISO 527-3, N/mm²	1,81
Shore hardness, ISO 868, Durometer A	44
Lap shear strength, ISO 4587	
GKS Alulegierung Al230, N/mm²	
GKS Alulegierung Al231, N/mm²	1,32
Aluminum (Alclad)	1,31
Stainless steel, N/mm²	1,61

Physical properties after 1,000 hours of heat aging @140°C

Elongation, at break, ISO 527-3, %	172
Tensile strength, ISO 527-3, N/mm²	2,12
Shore hardness, ISO 868, Durometer A	46
Lap shear strength, ISO 4587	
GKS Alulegierung Al230, N/mm²	2,12
GKS Alulegierung Al231, N/mm²	2,22

Physical properties after 1,000 hours heat and dampness aging @ 85°C, 85% RH

Elongation, at break, ISO 527-3, %	142
Tensile strength, ISO 527-3, N/mm²	1,11
Shore hardness, ISO 868, Durometer A	43
Lap shear strength, ISO 4587	
GKS Alulegierung Al230, N/mm²	1,06
GKS Alulegierung Al231, N/mm²	1,13

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).



Direction for use

1. For best performance the mating surface should be clean and free of grease.
2. Best results are achieved utilizing a helix 8 mm diameter, 24 element mix nozzle.
3. After dispense, mate parts immediately to ensure maximum bond strength.
4. **Dual Cartridges:** Insert the cartridge into the application gun and start the plunger into the cylinders using light pressure on the trigger. Next, remove the cartridge cap and expel a small amount of adhesive to be sure both sides are flowing evenly and freely. Attach the static mixing nozzle to the end of the cartridge and begin dispensing the adhesive. Purge and dispose of the first 3-5 cm from the end of the mix nozzle, as it may not be sufficiently mixed.
5. **Bulk Containers:** Utilize volumetric dispense system to ensure proper mix ratio and utilize mix nozzle to obtain adequate mixing.

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 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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