

LOCTITE® SI EV 9910

May 2025

Product description

LOCTITE® SI EV 9910 provides the following product characteristics:

Technology	1C Silicone
Chemical type	Alkoxy-Silicone
Appearance (uncured)	Black paste
Components	One component - requires no mixing
Thixotropic	Paste
Cure	Room temperature vulcanizing (RTV)
Application	EV battery housing gasketing
Specific benefits	<ul style="list-style-type: none">Reliable sealing performanceMulti-substrate sealingLong open time

LOCTITE® SI EV 9910 is a one-component silicone battery housing sealant both skin formation and curing times are dependent on humidity and temperature. The cure time may vary depending on the joint depth. By increasing the temperature and humidity, the reaction time can be reduced. Low temperature and low humidity each slow down the curing process.

LOCTITE® SI EV 9910 has excellent adhesion to steel, aluminum and various composites typically used for battery pack housings, as well as painted surfaces in connection with primer/activator. Typical applications include EV battery housing sealing.

Typical properties of uncured material

Specific Gravity @ 23°C	1.38 to 1.44
Flash Point - See SDS	
Extrusion rate, g/min	
Pressure 0.62 MPa, time 15 seconds, temperature 25°C:	
Semco cartridge	40 to 80

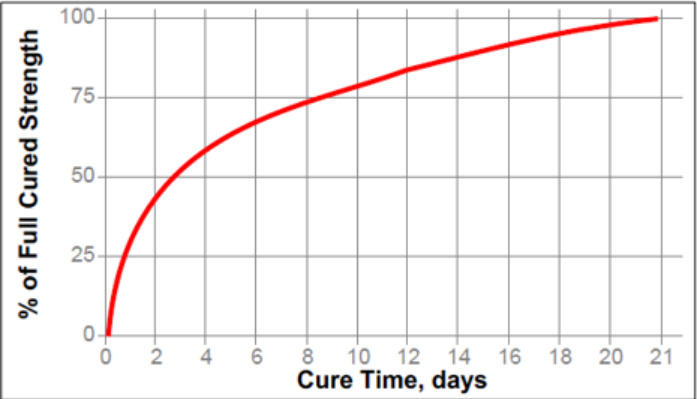
Typical curing performance

Surface cure

LOCTITE® SI EV 9910 becomes tack free on exposure to atmospheric moisture within 25 minutes at 23±2°C / 50±5%RH.

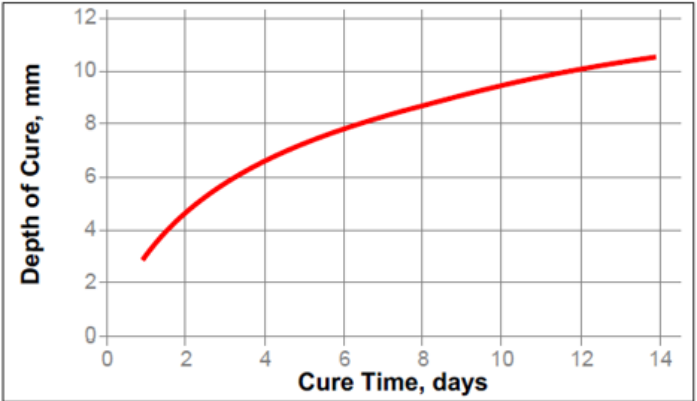
Cure speed

The graph below shows shear strength developed with time on aluminum lapshears at a bond gap of 0.5 mm. Cure condition 23±2 °C, 60±5% RH. Strength is determined according to ISO 4587.



Depth cure

The depth of cure depends on temperature and humidity. Depth of cure was measured on strip pulled from a ramped PTFE mold (maximum depth 10 mm). The graph below shows the increase in depth of cure with time at 23±2 °C / 50±5 % RH.



Typical performance of cured material

Physical properties

Shore hardness, ISO 868, Durometer A	44
Elongation, ISO 37, %	≥200
Tensile strength, ISO 37	N/mm² (>1.5)
	(psi) (>278)



Adhesive properties

Cured for 21 days @ 23 °C / 50±5 % RH and 0.5 mm gap

Tensile lap shear strength:

Mild steel	N/mm ² (psi)	1.3 to 2.0 (190 to 290)
Aluminum 2024-T3	N/mm ² (psi)	0.7 to 1.3 (100 to 190)
Alclad	N/mm ² (psi)	1.0 to 1.8 (145 to 260)
Zinc dichromate	N/mm ² (psi)	1.5 to 2.0 (220 to 290)
Thermoset plastic (novalac resin based)	N/mm ² (psi)	0.8 to 1.5 (120 to 220)
Nylon 66 (30% glass filled)	N/mm ² (psi)	0.1 to 0.2 (15 to 30)
Polyphenylene sulphide	N/mm ² (psi)	0.8 to 1.1 (120 to 160)

Environmental aging - effect on bulk properties

Cured for 21 days @ 23±2 °C / 50±5% RH, tested @ 22 °C, 2 mm thick film

Tensile strength, ISO 37, N/mm² (elongation, at break, %):

Environment	100 h	500 h	1000 h
22°C	2.0 (225)	2.0 (230)	2.0 (225)

Environmental aging

Alclad

Environment	°C	% of initial strength		
		100 h	500 h	1000 h
Air	150	130	170	170

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**Pre-treatment**

1. The substrate to be bonded must be dry and free from oil, dust, grease, and other contaminations.
2. Check the flange for damage or scratches and make sure it fits.
3. To obtain an optimal adhesion on the new battery cover flanges (or one without previous sealant adhered) we recommend TEROSON® VR 10 or TEROSON® SF 7063.

Solvent-based cleaning process:

- Wipe off surface with a lint free cloth and TEROSON® VR 10.
- Abrade bond line with a smooth abrasive pad or wetted TEROSON® BOND SPONGE
- Wipe off surface again with a lint-free cloth and TEROSON® VR 10 and let dry approximately 5 minutes.

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.

Product specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Approval and Certificate

Please contact Henkel representative for related approval or certificate of this product.

Data ranges

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

Temperature/Humidity Ranges: 23°C / 50% RH = 23±2°C / 50±5% RH

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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Reference 1