

CSL-510 Technical Data Sheet

Self-Leveling Industrial Silicone Sealant/Adhesive

1. PRODUCT NAME

CSL-510 Self-Leveling Industrial Silicone Sealant/Adhesive

2. FEATURES

- Excellent sealant/adhesive for industrial use
- Provides permanently flexible bond or seal
- No tooling required

3. PRODUCT DESCRIPTION

CSL-510 is a one-part, moisture curing RTV (Room Temperature Vulcanizing) self-leveling silicone sealant designed for industrial use. It cures to a strong, silicone rubber that maintains long term durability and flexibility.

CSL-510 is a 100% silicone sealant, resisting weathering, moisture, vibration, ozone, ultraviolet and temperature extremes. It remains flexible from -62°C to 232°C (-80°F to 450°F).

CSL-510 is primarily used in applications where a free-flowing, self-leveling silicone sealant is required. Applications include

coating and sealing of outdoor mechanical and electrical junction and control boxes, cabinets and surface mounted hardware.

4. INSTALLATION

CSL-510 is ready-to-use and requires no mixing or additives. The cure mechanism begins as soon as the sealant comes in contact with air.

At 25°C (77°F) and 50% relative humidity (R.H.), the sealant will “skin” within 15 minutes and fully cure in 24 hours (1/8” bead), reaching its maximum adhesion in 7 days. Higher humidity accelerates cure, and curing time is increased with the thickness of the sealant. In applications where partial or total confinement of sealant is prevalent, the time required for proper cure is generally lengthened by the degree of confinement.

Tooling, if necessary, should be done before “skinning” takes place. Surfaces should be clean and dry. Apply sealant to prepared surface in a uniform thickness. A 15-30 mil glue line gives best adhesion. For sealing,

Typical Properties

These values are not intended for use in preparing specifications

Uncured	
Type	100% silicone, one-part RTV
Appearance	Smooth, thick liquid
Specific Gravity	1.02 - 1.03
Slump/Sag	Flowable
Extrusion Rate (3.2mm (1/8”) orifice, 90psi)	100 g/min.
Application Temperature Range	-18°C to 50°C (0°F to 120°F)
Cure System	Acetoxy, Moisture Cure
Skin-Over Time at Standard Conditions*	15 min.
Cure Time at Standard Conditions*	24 hr.
Cured	
	At Standard Conditions* for 7 Days
Durometer Hardness (ASTM D2240, Shore A)	20 points
Tensile Strength (ASTM D412)	11 kg/cm ² (150 psi)
Elongation at Break (ASTM D412)	400%
Tear Resistance (ASTM D624, Die B)	2.5 kN/m (14 ppi)
Thermal Expansion Coefficient (0°C to 100°C / 32°F to 212°F)	9.3 x 10 ⁻⁴ cm/°C
Useable Temperature Range	-62°C to 232°C (-80°F to 450°F)
Dielectric Strength (ASTM D149)	550 V/mil (217kV/cm)
Volume Resistivity (ASTM D257)	1.5 x 10 ¹⁵ ohm.cm
Dissipation Factor, 100 Hz to 100 kHz (ASTM D150)	0.0015
Dielectric Constant, 100 Hz to 100 kHz (ASTM D150)	2.80

*Standard Conditions are 25°C (77°F) and 50% relative humidity

Apply CSL-510 into the joint so that full contact is made between sealant and surface.

Priming is normally not required for applications to non-porous surfaces. Unprimed adhesion can be easily tested by applying a small trial bead and allowing 7 days for maximum adhesion to occur. If primer is required consult CSL-944 product sheet or contact manufacturer.

5. COLORS

CSL-510 standard colors are clear, white, black and aluminum. Other colors are available on request.

6. PACKAGING

CSL-510 industrial silicone is available in 300ml (10.2 fl oz) caulking cartridges, 19L (5 US gallon) pails and 189L (50 US gallon) drums.

7. STORAGE

CSL-510 when stored in original unopened container at or below 32°C (90°F) has a one year shelf life from the date of manufacture. Most products however, will last longer if stored in cool dry conditions.

8. SAFETY PRECAUTIONS

CSL-510 releases small amounts of acetic acid during cure. Adequate ventilation should be provided with the extensive use of this sealant. On direct contact, uncured sealant may irritate eyes. Flush well with

water and call a physician. See Material Safety Data Sheet available on this product.

9. WARRANTY

CSL Silicones Inc. warrants that its products will meet its specifications. CSL shall in no event be liable for incidental or consequential damages. Except as expressly stipulated, CSL's liability, expressed or implied, is limited to the stated selling price of any defective goods.

Data is subject to change without notice and it is therefore recommended that this information not be used for specification writing. For additional information on specific applications, contact the manufacturer.

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