

# CSL 316 High Performance Self-Leveling Silicone Concrete Joint Sealant

## FEATURES

- Neutral cure formulation
- No tooling required
- Withstands joint movement of +100%/-50%
- Ultra High elasticity
- Concrete grey color

## PRODUCT DESCRIPTION

CSL-316 is a self-leveling one-part, moisture curing RTV silicone sealant with an ultra high elongation — but not at the expense of product durability. It cures to a low durometer and is ideally suited for horizontal joints in concrete. Its self-leveling ensures that tooling is not required.

## PROPERTIES

CSL-316 may be applied easily over a temperature range of -18°C (0°F) to 50°C (120°F) and will exhibit excellent unprimed adhesion to concrete, steel and most other construction materials, provided they are clean, dry and free of dust or frost. CSL-316 has good flexibility and low modulus, so it will maintain its integrity on joints with movement. Self-leveling allows substantial savings in labor cost over the use of regular sealants due to the elimination of tooling.

Being silicone, CSL-316 is unaffected by sunlight (ultra-violet rays), ozone, temperature extremes, rain and ice. At conditions of 25°C (77°F) and 50% relative humidity, CSL-316 will skin over within 40 minutes and cure within 48 hours. Maximum strength will be developed in 21 days. CSL-316 has a long service life, under normal conditions it will maintain its physical properties between -45°C (-50°F) and 149°C (300°F).

## INSTALLATION

### Joint Design

In general, it is recommended that the depth of CSL-316 be equal to one half the joint width. Ideally, sealant thickness should be between 1/4" (6mm) and 1/2" (12mm) below the surface. The use of a polyurethane or expanded polyethylene foam backer rod prevents undesired three-sided adhesion and maintains correct sealant depth. The backer rod must be a snug fit on both sides of the joint throughout its length.

### Surface Preparation

New concrete should be allowed to cure and dry for at least 7 days. All joints must be clean, dry and free of contaminants before the backer rod is installed and CSL-316 is applied. If a joint is flushed with water, it should be done only in one direction to reduce contamination. After drying, the top inch (25mm) of each face should be sandblasted in a separate pass, with the nozzle held at an angle no more than two inches (50mm) from the face. Dust and loose particles must be blown out of the joint with oil-free compressed air, moving only in one direction. An oily surface may reduce adhesion.

### Joint Dimensions

The backer rod should be installed at the appropriate depth to provide the correct thickness of CSL-316 and recess below the surface, as shown in the table below. The sealant should be applied in one continuous movement with the nozzle set to fill the joint from the bottom up to avoid creating air voids. No tooling should be required. Excess sealant should be scraped up and removed. If joints are properly recessed, the highway may be returned to traffic as soon as installation and clean up are completed. Estimated consumption for various joint sizes is shown below.

### Recommended Joint Dimensions & Estimated Sealant Consumption

Joint Width (mm)	6mm	10mm	12mm	20mm	25mm
Backer Rod diameter	10	13	16	25	30
Backer Rod recess below surface	12	12	12	16	24
Sealant Thickness	6	6	6	10	12
Sealant recess below surface	6	6	6	6	12
Est. linear meter/liter	24	16	12	5	3

Joint Width (inches)	1/4"	3/8"	1/2"	3/4"	1"
Backer Rod diameter	3/8	1/2	5/8	1	1 1/4
Backer Rod recess below surface	1/2	1/2	1/2	5/8	1
Sealant Thickness	1/4	1/4	1/4	3/8	1/2
Sealant recess below surface	1/4	1/4	1/4	1/4	1/2
Est. linear feet/US gallon	275	185	140	60	35



## PACKAGING

CSL-316 is available in 300 ml (10.2 fl. oz.) caulking cartridges packaged in cartons of 20 cartridges, 2.5 US gallon cans, 5 US gallon pails and 200 Litre drums.

## STORAGE

CSL-316 when stored in original unopened container at or below 32°C (90°F) has a shelf life of 12 months from date of shipment.

## SAFETY PRECAUTIONS

CSL-316 uses a neutral cure system, so no acetic acid or objectionable by-products are evolved during cure. Adequate ventilation should be provided with extensive use of this sealant. On direct contact, uncured sealant may irritate eyes. Flush well with water and call a physician. Avoid prolonged contact with skin. See Material Safety Data Sheet available on this product. KEEP OUT OF REACH OF CHILDREN.

## 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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## Typical Properties

These values are not intended for use in preparing specifications

## UNCURED

Type	100% silicone, one-part RTV, self-leveling
Appearance	Smooth, thick liquid
Specific Gravity	1.13
Extrusion Rate (3.2mm (1/8") orifice, 90psi)	90 g/min.
Application Temperature Range	-18°C to 50°C (0°F to 120°F)
Cure System	Neutral, Moisture Cure
Skin-over Time at Standard Conditions*	40 min.
Cure Time at Standard Conditions*	48 hr.

## CURED AT STANDARD CONDITIONS\* FOR 7 DAYS

Durometer Hardness (ASTM D2240, Shore A)	15 points
Tensile Strength (ASTM D412)	7.0 kg/cm <sup>2</sup> (100 psi)
Elongation at Break (ASTM D412)	1100%
Joint Movement Capability	+100%/-50%
Accelerated Weathering (ASTM C793-91)	No degradation
Tack-free Time at Standard Conditions*	90 min.
Tensile Strength at 150% Elongation (ASTM D412)	3.0 kg/cm <sup>2</sup> (42 psi)

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

