

Silicone Sealants

Dow Corning® SL Parking Structure Sealant (Self-Leveling)

FEATURES

- Good weatherability
- Long-life reliability
- Ultra-low modulus
- High movement capability
- Resilient
- Ideal for maintenance crews
- Seals irregular surfaces
- Easy to use
- Unprimed adhesion
- All-temperature gunnability

COMPOSITION

- One-part, neutral-cure, RTV silicone sealant

Ultra-low-modulus, self-leveling silicone sealant for parking structure applications

APPLICATIONS

- Parking structures, parking lots, sidewalks, loading/material transfer docks and pedestrian bridges and plazas
- New construction or as a remedial or repair sealant in existing construction
- Irregular surfaces benefiting from self-leveling characteristics for horizontal or slightly sloped joints (no more than 6 percent slope from horizontal)

TYPICAL PROPERTIES

Specification Writers: Please contact your local Dow Corning Sales Application Engineer or Dow Corning Customer Service before writing specifications on this product.

Method	Test	Unit	Result
As Supplied			
	Color		Dark gray
	Flow, Sag or Slump		Self-leveling
	Skin-Over Time at 25°C (77°F), maximum	minutes	60
	Full Adhesion	days	14-21
	VOC Content ¹	g/L	30
As Cured – After 21 days at 25°C (77°F) and 50 percent RH			
	ASTM D 2240 Durometer, Shore 00		50
	ASTM D 412 Tensile	psi	42
	ASTM D 412 Elongation	percent	1500
	ASTM D 412 Modulus, at 150% elongation	psi	15
	ASTM C 1135 Modulus,		
	at 25% elongation	psi	7
	at 50% elongation	psi	8
	ASTM C 1135 Ultimate Elongation (concrete)	percent	>800
	ASTM C 719 Movement Capability	percent	+100/-50

¹Based on South Coast Air Quality Management District of California. Maximum VOC is listed both inclusive and exclusive of water and exempt compounds. For a VOC data sheet for a specific sealant color, please send your request to product.inquiry@dowcorning.com.

DESCRIPTION

Dow Corning® SL Parking Structure Sealant is a one-part, cold-applied, self-leveling silicone material that cures to an ultra-low-modulus silicone rubber upon exposure to atmospheric moisture. The cured silicone rubber remains flexible over the entire temperature range expected in construction applications.

Because of its ultra-low-modulus characteristics and good extension/

compression recovery (+100/-50 percent of original joint width), *Dow Corning SL Parking Structure Sealant* provides outstanding performance where joint movement occurs.

Features of *Dow Corning SL Parking Structure Sealant* include:

- Good weatherability – the sealant’s 100 percent silicone rubber is virtually unaffected by sunlight, rain, snow, ozone or temperature extremes

- Long-life reliability – under normal conditions, cured sealant stays rubbery from -45 to 149°C (-49 to 300°F) without tearing, cracking or becoming brittle
- Ultra-low modulus – the sealant stretches 100 percent in the joint with very little force. This places minimal strain on the bond line or joint wall, maximizing the probability of a successful seal with continuous joint movement. Joint movements caused by temperature, traffic or shear require a sealant that does not strongly resist stress and/or shear
- High movement capability – the sealant will perform in a continuous joint movement of +100/-50 percent of original joint width
- Resilient – once cured, the sealant rejects stones and other debris, permitting unrestricted joint movement with temperature changes
- Ideal for maintenance crews – the one-part formulation will easily bond to damaged silicone sealant provided the damaged area is clean, dry and frost-free
- Seals irregular surfaces – the self-leveling characteristics make the sealant ideal for sealing irregular joint surfaces by providing adequate contact to the substrate without the need for tooling
- Easy to use – self-leveling (no tooling step required), one component, cold applied, ready-to-use as supplied; dispensed directly from cartridges or pails into the joint by hand or with an air-powered gun
- Unprimed adhesion – no primer is required for bonding to most concrete and asphalt surfaces. For optimum adhesion, the surface must be clean, dry and frost-free at the time of sealant application
- All-temperature gunnability – consistency and self-leveling characteristics are relatively unchanged over normal installation temperature range

INSTALLATION

Refer to the *Parking Structure Installation Guide*, Form No. 62-481, for further information on joint preparation and sealant application.

Joint Design

Low-modulus *Dow Corning SL Parking Structure Sealant* easily withstands extreme joint movement when properly applied. The sealant will withstand 100 percent extension and 50 percent compression of the original joint width; however, the recommended joint movement design is for ± 25 percent and not at the sealant limits. This difference ensures a successful seal job when job site joint widths are different than the design widths.

A thin bead of silicone sealant will accommodate more movement than a thick bead. *Dow Corning SL Parking Structure Sealant* should be no thicker than $\frac{1}{2}$ inch and no thinner than $\frac{1}{4}$ inch at the crown of the backer rod. (See Table I and Figure 1.) For joints 1 inch or less in width, the sealant width to depth ratio should be 2:1. For joints greater than 1 inch in width, a $\frac{1}{2}$ -inch thickness at the crown of the backer rod should be maintained.

In all cases where sealant is placed in horizontal joints that will come in contact with vehicular or pedestrian traffic, the sealant should be recessed in the joint a minimum of $\frac{1}{4}$ to $\frac{3}{8}$ inch with a $\frac{1}{2}$ - to $\frac{5}{8}$ -inch recess recommended in wider joints (see Table II).

Joint designers should consider the potential of heel penetration in pedestrian traffic areas, and in those areas, consider using a stiffer or higher density backer material.

Preparation

Clean all concrete, masonry and stone joints of all contaminants and impurities. Porous substrates should be cleaned where necessary by grinding, saw cutting, blast cleaning (sand or

water), mechanical abrading or a combination of these methods as required to provide a sound, clean, dry surface for sealant application. Dust, loose particles, etc., should be blown out of joints with dry, oil-free compressed air or be vacuum cleaned.

Metal and glass surfaces adjacent to masonry should be cleaned by wiping with an oil-free absorbent cloth saturated with solvent such as xylene or toluene. Do not use alcohols as they inhibit the cure.

Priming

Standard substrates that normally allow unprimed adhesion of the sealant include: mortar, cement block, portland cement concrete and asphalt. Nonporous substrates, such as aluminum, steel or plastics, may require use of a primer for optimal adhesion. Contact your Dow Corning representative for specific substrate recommendations.

Backer Rod

Dow Corning SL Parking Structure Sealant is part of a system that must include the proper backer rod and proper installation procedures. The backer rod must be expanded, closed-cell polyethylene foam. Where irregularly shaped joints exist, backer rod that is open-cell with an impervious skin is acceptable to ensure a tight fit against the irregular joint wall faces. Several other back-up materials (paper, fibrous ropes and open-cell foams) are available, but have proven to be unacceptable. There are several manufacturers of closed-cell polyethylene foam and any may be used.

When using *Dow Corning SL Parking Structure Sealant* with other *Dow Corning®* brand Parking Structure Sealants, please note that these materials are all compatible with one another in either the cured or uncured state, may come in contact with one another, and will bond to one another provided no debris or other contaminants interfere with the bond.

Table I: Estimating Requirements¹

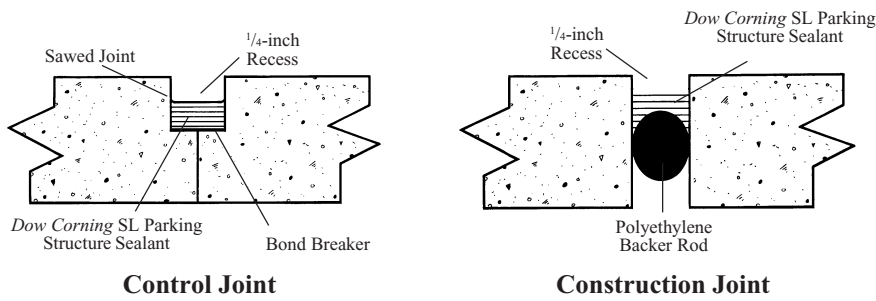
Linear Feet per Gallon of <i>Dow Corning</i> SL Parking Structure Sealant for Various Joint Sizes							
		Width, inches					
Thickness, inches		1/4	3/8	1/2	5/8	3/4	1
	1/4	275	173	123	—	—	
	3/8	—	—	—	83	60	45
	1/2	—	—	—	—	—	35

¹Installation yields (linear feet/gallon) are based on calculations for an exact sealant bead shape-factor. Actual yield will vary depending on deviation from calculated bead shape, tooling techniques, backer material placement, waste, and applicator experience.

Table II: Recommendations for Sealant Placement in Joint

<u>Joint Width¹, inches</u>	<u>Recess, inches</u>
1/4 to 1	1/4-3/8
1-2	1/2-5/8

¹Applies to horizontal joints where pedestrian or vehicular traffic is anticipated.

Figure 1. Good Joint Designs

1. Joint width wide enough to accommodate movement.
2. Joint deep enough to allow for recess, sealant placement and backer rod/bond breaker.
3. Proper backer rod/bond breaker tape placement.
4. Sealant installed to proper depth and width.
5. Sealant recessed 1/4 inch to 3/8 inch below pavement surface.

Maintenance

Damaged sealant can easily be repaired by cleaning the surrounding area with an appropriate solvent (do not use alcohol), cutting the damaged area out with a knife, and resealing with *Dow Corning* SL Parking Structure Sealant. Do not overfill the joint.

HANDLING PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL

AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT WWW.DOWCORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

PACKAGING

Dow Corning SL Parking Structure Sealant is supplied in 29-fl oz (857-mL) disposable plastic cartridges and 2.0-gal (7.5-L) bulk pails.

STORAGE AND USABLE LIFE

When stored in the original, unopened container at or below 32°C (90°F), *Dow Corning* SL Parking Structure Sealant has a shelf life of 12 months from date of manufacture. Refer to product packaging for “Use By Date.” Keep containers tightly closed.

LIMITATIONS

Dow Corning SL Parking Structure Sealant should not be applied:

- In projects requiring material approval with state departments of transportation for highway pavements, or Federal Aviation Administration approval for use in airfield pavement joints (runways, taxiways, aprons)
- To surfaces that have prolonged or continuous immersion in water
- In below-grade applications
- In totally confined spaces where the sealant is not exposed to atmospheric moisture
- In joints greater than 2 inches in width (such applications should be reviewed with a *Dow Corning* Sales Application Engineer for alternative product recommendations)
- To surfaces that will be painted – most paint films will not stretch with extension of the sealant and may crack or peel
- To surfaces that either were or will be treated with a silane water-proofing material within 14 days
- In applications using natural stone pavers, because fluids in the sealant may stain the stone
- To surfaces coated with bitumen-based waterproofing coatings

Do not apply deck coatings over uncured sealants as cure retardation or inhibition may occur.

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

SHIPPING LIMITATIONS

None.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, www.dowcorning.com, or consult your local Dow Corning Sales Application Engineer.

AVAILABILITY

Dow Corning SL Parking Structure Sealant is available from a local Dow Corning distributor. Call 1-800-248-2481 or (989) 496-6000 for the name of the distributor nearest you.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our

products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.