Product Information

Silicone Sealants

DOW CORNING

Dow Corning® FC Parking Structure Sealant (Fast Cure)

FEATURES

- Good weatherability
- Resilient
- Long-life reliability
- Fast cure
- Unaffected by flood coats of silane waterproofing materials after only six hours of cure
- Part of the *Silspec*®[1] PDX high-performance joint system
- Easy to use
- Convenient disposal pack
- High movement capability
- Ultra-low modulus
- Seals irregular surfaces
- All-temperature gunnability
- Bonds to itself

COMPOSITION

- Two-part, ultra-low-modulus, neutral-cure, silicone sealant

[1]*Silspec* is a registered trademark of Silicone Specialties, Inc.

Ultra-low-modulus silicone sealant parking structure joints that experience extreme movement

APPLICATIONS

- Parking structures, parking lots, sidewalks, loading/material transfer docks and pedestrian bridges and plazas
- In situations where extreme joint movements occur within a short time after application
- For new construction or as a remedial or repair sealant in existing construction
- In horizontal or slightly sloped joints (up to 6 percent 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			
	Type		Ultra-low-modulus silicone
	Cure		Two-part
	Color (Part A, Part B)		Dark gray, white
	Flow, Sag or Slump		Self-leveling
	Skin-Over Time at 25°C (77°F), maximum	minutes	20
	Full Adhesion	days	1-2
	VOC Content[1]		
	Part A	g/L	30
	Part B	g/L	0
As Cured – After 48 hours at 25°C (77°F) and 50 percent RH			
ASTM D 2240	Durometer, Shore 00	points	60
ASTM D 412	Elongation	percent	1600
ASTM D 412	Tensile	psi	75
ASTM D 412	Modulus, at 150% elongation	psi	23
ASTM C 1135	Modulus,		
	at 25% elongation	psi	8
	at 50% elongation	psi	10
ASTM C 1135	Ultimate Elongation (concrete)	percent	>600
ASTM C 719	Movement Capability	percent	+100/-50

[1]Based 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® FC Parking Structure Sealant is a two-part, cold-applied, self-leveling, fast-cure silicone material that cures to an ultra-low-modulus silicone rubber designed for use in joints that experience thermal and/or vertical movements, especially during the early stages of sealant cure. Because of its fast cure profile, ultra-low-modulus characteristics and good extension/compression recovery (+100/-50 percent of original joint width), *Dow Corning* FC Parking Structure Sealant gives outstanding performance where extreme joint movements occur within a short time after application, such as in parking

structures, parking lots, sidewalks, loading/material transfer docks and pedestrian bridges and plazas.

Dow Corning FC Parking Structure Sealant is intended for use with mortar, cement block, portland cement concrete, asphalt, carbon steel and concrete repair/patching materials. All surfaces, except asphalt, require the use of a primer prior to installing the sealant. Consult the Priming section or your Dow Corning representative for recommendations for specific substrate-primer combinations.

Dow Corning FC Parking Structure Sealant is a self-leveling sealant primarily intended for use in horizontal or slightly sloped joints (up to 6 percent from horizontal) that vary in width from 1/2 to 3 inches at the time of sealing. Wider joints can be sealed, but require that you contact your Dow Corning representative to discuss the application. See Figure 1.

Dow Corning FC Parking Structure Sealant has the following features:

- Good weatherability – the sealant's 100 percent silicone rubber is virtually unaffected by sunlight, rain, snow, ozone or temperature extremes
- Resilient – once cured, the sealant rejects stones and other debris, permitting unrestricted joint movement with temperature changes
- 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
- Fast cure – cures fast enough to accommodate typical daily thermal or differential joint movements without being damaged. In comparison, single-component sealants typically require 7 to 21 days to fully cure and often are prematurely damaged due to excessive movement prior to complete cure
- Unaffected by flood coats of silane waterproofing materials after only six hours of cure
- Is part of the *Silspec*® PDX high-performance joint system, which combines a high-strength, flexible polymer nosing with this fast-cure silicone, and is specifically designed for restoration of failed expansion joint systems. Refer to the *Parking Structure Installation Guide*, Form No. 62-481
- Easy to use – self-leveling (no tooling), a two-part formulation with the ease of one-part installation; no premixing or measuring required
- Convenient disposal pack – available in E-Z Pak sausages, providing easy loading, use and disposal, and minimizing waste
- High movement capability – once cured, the sealant will accommodate movements up to +100/-50 percent of original joint dimension at the time of sealant application
- Ultra-low modulus – easily stretches in the joint with little stress on the bond line or joint wall, maximizing the probability of a successful seal with continuous or gradual joint movement
- Seals irregular surfaces – self-leveling characteristic makes the sealant ideal for sealing irregular joint surfaces by providing adequate contact to the substrate with no tooling
- All-temperature gunnability – consistency and self-leveling characteristics are relatively unchanged over normal installation temperature range
- Bonds to itself – ideal for maintenance applications where only one section at a time may be sealed, but a continuous seal is required

Table I: Usage Rate and Sealant Recess Recommendations

Joint Width, inches	*Recommended Sealant Bead Thickness, inches*[1]	*Recess, inches*	*Kit Yield, linear feet*[2]	*Gallon Yield, linear feet*[2]
1/2	1/4	1/4-3/8	35	123
1	1/2	1/4-3/8	9	35
1 1/2	1/2	1/2-5/8	6	26
2	1/2	1/2-5/8	4.5	17
2 1/2	1/2	1/2-5/8	3.8	12.7
3	1/2	1/2-5/8	2.3	8.5

[1]Bead thickness measured from high point of backer rod in the joint.
[2]Yield varies with joint design, backer placement, waste and experience. Above yield is based on one kit containing two 20-fl oz E-Z Pak sausages.

INSTALLATION

Joint Design

Low-modulus *Dow Corning* FC 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* FC Parking Structure Sealant should be no thicker than 1/2 inch and no thinner than 1/4 inch at the crown of the backer rod. See Table I for estimates of bead thickness, coverage rates and sealant recess below the joint surface.

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 1/4 to 3/8 inch with a 1/2- to 5/8-inch recess recommended in wider joints.

Backer Rod

Dow Corning FC 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.

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

For concrete surfaces and *Silspec*® 950 PDX, it is necessary to use *Dow Corning*® 1205 Prime Coat. Uniformly coat the entire surface using a brush or clean cloth moistened with primer. Do not saturate the substrate, as this will increase drying time. Allow a minimum of 60 minutes for the prime coat to dry prior to sealant application.

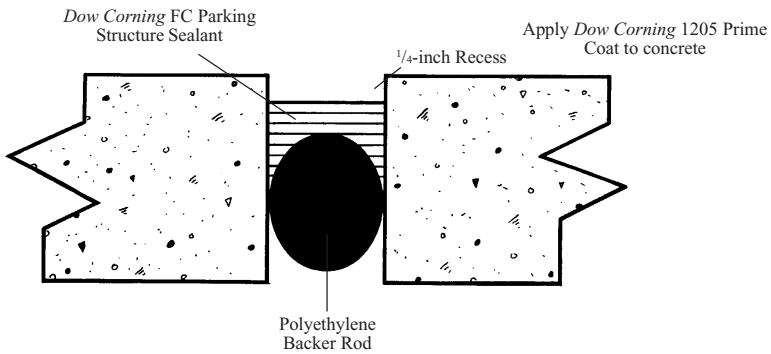
For carbon steel surfaces, apply a thin coating of a recommended primer. The steel must be sandblasted (see *Parking Structure Installation Guide,* Form No. 62-481, for all preparation recommendations) prior to applying a uniform coating of primer to the entire surface. Allow the primer to "dry to the touch" prior to sealant application.

Contact your Dow Corning Sales Application Engineer for further recommendations on substrates other than carbon steel, concrete, mortar, asphalt or brick.

Application

When using *Dow Corning* FC 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.

Figure 1. Good Joint Design



1. Joint width wide enough to accommodate movement.
2. Joint deep enough to allow for recess, sealer placement and backer rod.
3. Proper backer rod placement.
4. Sealant installed to proper depth and width.
5. Sealant recessed 1/4 inch to 1/2 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* FC 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 FC Parking Structure Sealant is supplied in a kit of two 20-fl oz (591.5-mL) E-Z Pak sausages, labeled Part A and Part B.

STORAGE AND USABLE LIFE

When stored in the original, unopened container at or below 32°C (90°F) *Dow Corning* FC Parking Structure Sealant has a shelf life of 18 months from date of manufacture. Refer to product packaging for "Use By Date." Keep containers tightly closed.

LIMITATIONS

Dow Corning FC Parking Structure Sealant should not be applied:

- In applications using natural stone pavers, because fluids in the sealant may stain stone
- 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
- To surfaces that will be painted – most paint films will not stretch with extension of the sealant, and may crack or peel
- To surfaces coated with bitumen-based waterproofing membranes
- By field-mixing in an open bucket – the proper application equipment must be utilized to ensure optimum performance
- Using an open-cell backer rod without a totally impervious skin

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 FC Parking Structure Sealant is available from Dow Corning's authorized distributors. For the name and telephone number of the nearest Dow Corning distributor, call 1-800-322-8723.

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.

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