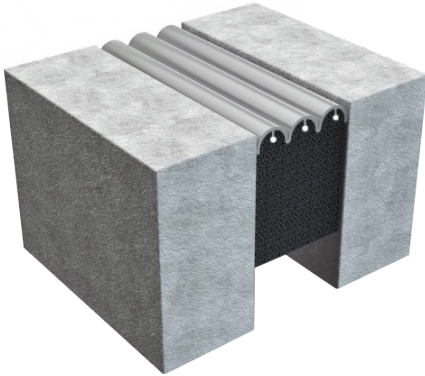




## DESCRIPTION

SILSPEC® RFS Reinforced Foam Seal is a pre-compressed, durable, self-expanding foam joint seal with a traffic-grade silicone coating. The seal is reinforced with a patent pending, engineered bellows to perform in typically horizontal applications. It can be subject to high concentrations of foot traffic, such as those found in skyways and parking garages, to building entrances. The seal is also ideally suited for joints in traffic lanes, walkways, and ramps. SILSPEC® RFS is manufactured to the highest level of quality and engineered to provide maximum performance for any size selected.



- No unbonded laminations
- Allows for up to 100% ( $\pm 50\%$ ) movement of the installed joint size
- Advanced, reinforced bellows with 15 psi of point load resistance
- True tensionless system
- Designated as a dual expansion joint system

**Non-Invasive Anchoring:** There are no hard metal-to-concrete connections or anchors with the SILSPEC® RFS Seal. This includes embedded pins, anchors, screws, bolts, tracks, trays, or rails. The seal is locked to the joint faces by back pressure of the foam, the epoxy adhesive, and the injected silicone sealant band at the joint face to foam and silicone bellows interface. (For joints wider than 3" consult SSI)

## COMPOSITION

SILSPEC® RFS is engineered to comprise four elements that give it high performance:

1. A base structure of super-resilient, micro-cellular, cross-linked, self-extinguishing polyurethane foam.
2. A hydrophobic acrylic emulsion impregnation.
3. Reinforcing rods captured in a durable, traffic-grade silicone.
4. A traffic-grade silicone cover seal.

Other coatings are available by special order. SILSPEC® RFS is supplied at the highest level of compression for ease of installation throughout a size's installation range and to deliver its best performance. Material length is made in 6.5 feet sticks and the product is supplied with the appropriate amount of epoxy bond adhesive and silicone cap seal.

Seal colors are available in Concrete Gray (DOWSIL 888), Black (Pecora 301NS), and Pavement Gray (Pecora 301NS).

## SIZE RANGE

The seal is available in sizes from 1 inch to 3 inches wide and 6.5 feet long. Custom sizes/configurations are available upon request.



## APPLICATIONS

- Primary horizontal expansion joints with high foot traffic
- Foot bridges, skyways, parking garages
- Plaza decks and building entrances
- Joints requiring a reinforced, pre-compressed material where a cover plate option is not suitable

## ADVANTAGES

- Accommodates rapid rates of joint movement
- Excellent compression recovery
- Readily adapts to changes in joint contours
- Wide range of joint sizes (1" to 3")
- ± 50% joint movement capability
- Consistent joint depth
- Foam impregnation meets Specification DIN 18542
- Long term resiliency and flexibility to -20° F
- Designed to withstand common automotive fluids and jet fuel per FHA PL06
- Supplied pre-compressed for ease of installation

## GENERAL

- The SILSPEC® RFS Joint Seal is produced by coating an impregnated cellular foam with highway-grade silicone.
- The silicone external facing is factory applied to the foam at a width greater than maximum joint extension and is cured before final compression. This application and curing takes place in a factory-controlled environment.
- When compressed, a bellows is created in the coating. As joint movement occurs, the bellows simply folds and unfolds free of tension on the bondline, and virtually free of tensile stresses in the silicone material.
- The foam provides a resilient backing to the silicone coating and, along with the reinforcing rods, comprises a seal capable of providing a point loading resistance of up to 15 psi.
- SILSPEC® RFS Seal is pre-compressed to less than the joint size for easy insertion. The seal expands gradually, after removal from the packaging.

## INSTALLATION

**Important:** The following instructions are a summary. Please refer to the RFS System Installation Guide job specific instructions in the product packaging. Or contact an SSI representative for complete procedures.

- Store indoors at room temperature. Expansion is quicker when warmer, slower when colder.
- Properly prepare substrates.
- Ensure material nominal size matches the joint size.
- Mix epoxy and trowel a thin layer onto joint faces, to at least the depth of the RFS Seal.
- Apply a thin layer of epoxy to both joint faces.
- Remove shrink-wrap packaging and cardboard. If necessary, heat using a torch to expand the material to a snug fit in the joint opening.
- Recess seal into joint, ¼ inch below traffic surface.
- Join lengths by applying silicone bonder, then pushing the coated ends together.
- Wipe silicone facing with a clean, lint-free rag made damp with solvent.
- Before the epoxy cures, apply cap beads of silicone to the joint edges and tool to remove excess silicone. Excess silicone should be removed from the RFS joint face.



**TYPICAL PHYSICAL PROPERTIES**

Property	Value
UV Resistance, DIN 18542	Pass
Temperature Stability Range, ASTM C711	-40° F to 185° F
Tensile Strength, ASTM D3573E	21 psi Min.
Shear Strength, Minimum	8 N/cm <sup>2</sup>
Bleeding (Both Based on Acrylic Impregnations)	None
Mildew Resistance (Based on Silicone Coating)	Excellent
Staining (Based on Silicone Coating)	None
Weatherometer (Based on Silicone Coating)	Minimal
Primary Surface Weathering (Based on Silicone Coating)	None
Flammability	Self-Extinguishing
Flash Point	590° F
Monolithic Foam	Yes
Base Material	High Density Polyurethane Foam
Impregnation	Modified Acrylic
Hydrophobicity (Internal Lab Test)	Pass
Durometer (Based on Silicone Coating [DOW])	25 (Shore A-2)

Typical Physical Properties of Silicone Coating	
Color	Concrete Gray, Black, Pavement Gray
Percent Solids (Minimum)	96
Specific Gravity	1.26 - 1.34
Properties of Sealant Cured 21 Days at 77° F (25° C) & 50% RH	
Elongation Percent Minimum	1,400
Joint Modulus at 50% Elongation, psi (kPa) Maximum	7 (48)
Joint Modulus at 100% Elongation, psi (kPa) Maximum	8 (55)
Joint Modulus at 150% Elongation, psi (kPa) Maximum	9 (62)
Adhesion to Concrete, Minimum Percent Elongation	+ 600
Adhesion to Asphalt, Minimum Percent Elongation	+ 600
Joint Movement Capability, +100/-50%, 10 Cycles	No Failures
Weatherability	Unaffected By Climatic Extremes
Flexibility	Cured Sealant Stays Rubbery From -50 – 300° F (-45 – 149° C)

**DETAIL DRAWING & GUIDE SPECIFICATIONS**

Detail drawings and standard specifications are available from SSI, upon request.



RFS System Sizing				
Product Number/ Nominal Material Size (Joint Size at Mean T° F)	Depth of Seal	Minimum Joint (Closes To)	Maximum Joint (Opens To)	
The following sizes are supplied in sticks of 6.5 LF (Recess ¼" below road surface)				
RFS-100	1" (25 mm)	2" (50 mm)	½" (12 mm)	1 ½" (40 mm)
RFS-114	1 ¼" (30 mm)	2" (50 mm)	⅝" (15 mm)	1 ⅞" (47 mm)
RFS-112	1 ½" (40 mm)	2" (50 mm)	¾" (20 mm)	2 ¼" (55 mm)
RFS-134	1 ¾" (45 mm)	2" (50 mm)	⅞" (22 mm)	2 ⅝" (68 mm)
RFS-200	2" (50 mm)	3" (75 mm)	1" (25 mm)	3" (75 mm)
RFS-214	2 ¼" (55 mm)	3" (75 mm)	1 ⅛" (28 mm)	3 ¾" (95 mm)
RFS-212	2 ½" (64 mm)	3" (75 mm)	1 ¼" (30 mm)	3 ¾" (95 mm)
RFS-234	2 ¾" (70 mm)	3" (75 mm)	1 ⅜" (35 mm)	4 ⅛" (105 mm)
RFS-300	3" (75 mm)	3" (75 mm)	1 ½" (40 mm)	4 ½" (115 mm)
For sizes not shown, consult SSI. Custom sizes also available. Select nominal material size to correspond to joint-gap size at mean temperature.				

The RFS Reinforced Foam Seal is available through your local representative and/or directly from SSI. The product range is continually updated and, accordingly, SSI reserves the right to modify or withdraw product.

(800) 888-8909



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**Warranty Limitations:** SSI represents to the purchaser of this product from SSI (referred to as customer) that the information in this literature is an accurate description of the typical characteristics, properties, and uses of the product, if transported, stored, and applied in accordance with this literature and the referenced Material Safety Data Sheet. Unless SSI provides, before product installation, an express written warranty after receipt and evaluation of specific written project conditions and applicable scope documentation, SSI's exclusive warranty is that the product will conform to the sales representations stated, herein, and the current Material Safety Data Sheet. SSI expressly disclaims all other express or implied warranties, including without limitation warranties of merchantability and fitness for particular purpose. In no event shall SSI's liability for damages arising from the sale of this product the amount of purchase price received by SSI from customer for this product delivered to the project in question, or at SSI's sole option, SSI may replace the product or portion thereof that does not conform to the foregoing representation. SSI expressly excludes any liability for special or consequential damages.

Customer is solely responsible for evaluating job conditions and the suitability of described physical properties and characteristics of the product to meet specified or apparent project requirements and for application of the product in accordance with SSI's recommendations.

These representations are intended for reliance exclusively by the customer and are not intended to benefit any other person or entity. These exclusions, modifications, or limitations of warranties, including their effect on rights and remedies, that are effective against are also effective against subsequent purchasers, users, and third party beneficiaries of the sale of this product.

SSI undertakes no responsibility for storage, mixture, preparation of surfaces, application, use, or misuse of product or its conformity to specifications that are not previously and expressly acknowledged in writing by SSI.

**To Purchase, Please Contact SSI at Any of the Following Locations:**

Dallas, TX (972) 243-0676 ♦ Fort Worth, TX (682) 647-1881  
Houston, TX (713) 460-8800 ♦ Austin, TX (512) 326-1156  
San Antonio, TX (210) 930-6360 ♦ El Paso, TX (915) 591-6800  
McAllen, TX (956) 782-1341 ♦ Springdale, AR (479) 365-8050

Baton Rouge, LA (225) 620-0950 ♦ New Orleans, LA (504) 539-3102  
Kansas City, MO (816) 561-1617 ♦ St. Louis, MO (314) 410-6801  
Oklahoma City, OK (405) 524-9525 ♦ Tulsa, OK (918) 587-5567

Thank You For Choosing SSI