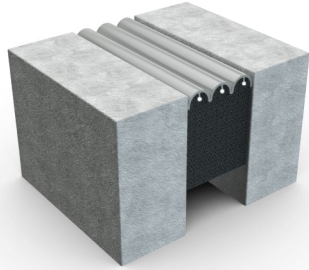




SILSPEC® RFS Reinforced Foam Seal



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 and can be subject to high concentrations of foot traffic such as those found in skyways and parking garage to building entrances. The seal is also ideally suited for joints in traffic lanes, walkways and ramps. SILSPEC® RFS with its reinforced bellows provides a waterproof primary seal that is rain and snow proof. The seal is specifically designed to be used in joints where cover plates are not suitable or desired. SILSPEC® RFS is manufactured to the highest level of quality and engineered to provide maximum performance for any size selected.

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 deliver its best performance. Material length is 2 meter (6.56 LF) sticks and the product is supplied with the appropriate amount of epoxy bonder adhesive and silicone cap seal.

The seal is Concrete Gray color silicone.

SIZE RANGE:

The seal is available in sizes from 1" to 3"* wide and 2 meters long. Custom sizes/configurations available on request.

FEATURES:

- ◆ No unbonded laminations
- ◆ Allows for up to 100% (+/-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.

APPLICATIONS:

- ◆ Primary horizontal expansion joints with high foot traffic.
- ◆ Foot Bridges, sky-ways, 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, from 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 PLO6
- ◆ 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 comprise 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 packaging.

INSTALLATION:

IMPORTANT: The following instructions are a summary. Refer to the RFS SYSTEM Installation Guide, job specific instructions in the product packaging, or of an SSI technician for complete procedures.

- ◆ Store indoors at room temperature. Expansion is quicker when warm, slower when cold.
- ◆ Properly prepare substrates.
- ◆ Ensure material nominal size matches 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, hardboard. If necessary, heat using torch to expand material to a snug fit in the joint opening.
- ◆ Recess seal into joint 1/2" 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.



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SILSPEC® RFS Reinforced Foam Seal

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.
Sher Strength, Minimum	8N/CM ²
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	Gray
Percent Solids (minimum)	96
Specific Gravity	1.26-1.34
Properties of Sealant Cured 21 days at 77°F (25°C) and 50% RH	
Elongation Percent Minimum	1400
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°F to 300°F (-45°C to 149°C)

Detail Drawings & 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	Min. Joint (closes to)	Max Joint (opens to)
The following sizes are supplied in sticks of 6.56 ft. (2m). (Recess 1/2" Below Road Surface)			
RFS-100 1" (25mm)	1-3/4" (45mm)	1/2" (12mm)	1-1/2" (40mm)
RFS-114 1-1/4" (30mm)	2" (50mm)	5/8" (15mm)	1-7/8" (47mm)
RFS-112 1-1/2" (40mm)	2-1/2" (65mm)	3/4" (20mm)	2-1/4" (55mm)
RFS-134 1-3/4" (45mm)	2-1/2" (65mm)	7/8" (22mm)	2-5/8" (68mm)
RFS-200 2" (50mm)	2-1/2" (65mm)	1" (25mm)	3" (75mm)
RFS-214 2-1/4" (55mm)	2-1/2" (65mm)	1-1/8" (28mm)	3-3/4" (95mm)
RFS-212 2-1/2" (55mm)	2-3/4" (70mm)	1-1/4" (30mm)	3-3/4" (95mm)
RFS-234 2-3/4" (70mm)	2-3/4" (70mm)	1-3/8" (35mm)	4-1/8" (105mm)
RFS-300 3" (75mm)	2-3/4" (70mm)	1-1/2" (40mm)	4-1/2" (115mm)

For sizes not shown consult SSI.
Select nominal material size to correspond to joint-gap size at mean temperature.
Custom sizes also available.

Availability & Pricing

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

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