



SILSPEC® SSS Silicone Strip Seal



DESCRIPTION:

SILSPEC® SSS Silicone Strip Seal is a preformed silicone seal designed to be installed into new, newly rehabilitated or existing expansion joints. SILSPEC® SSS Silicone Strip Seal utilizes a preformed silicone rubber profile that is chemical, UV and weather resistant. The silicone profile is bonded to the substrate with Dow Corning's time-proven 995 Adhesive/Sealant. The result is a system that gives the owner an expansion joint seal that will perform for many years in many different climatic conditions.

The system is designed to provide a wide range of movement capabilities of up to 4" and can seal joints with skew movements, vertical displacements and thermal cycling of the joint openings in all weather conditions. It features a service temperature range of -40°F to 302°F (-40°C to 150°C). It will not put tension on the joint faces during normal movement of the joint.

With 3 available sizes, SILSPEC® SSS Joint Seal offers a variety of choices when it comes to the needs of the customer. The seal can be installed quickly with a minimum of down-time and disruption to traffic. It is easily repairable if need be and can accommodate changes in plane and direction easily.

SILSPEC® SSS Silicone Strip Seal can be used with concrete, steel or our SILSPEC® 900PNS and SILSPEC® 2000 Polymer Concretes to form a durable, long-lasting expansion joint seal.

USES:

- ◆ Watertight, traffic durable, joint-face-adhered, preformed, primary seal for retrofit and new expansion joints in road bridges, abutments and longitudinal joints.
- ◆ Ideal for new construction or retrofit bridge preservation of old or failed joint systems in concrete or rebuilt joint edges. SILSPEC® SSS Silicone Strip Seal can also be used in steel armor angle joints where it is not feasible for removal and the existing joint opening movement range falls with-in the movement capability of the seal.

FEATURES:

Watertight– the tensionless silicone profile is installed just below the deck surface. This ensures watertightness is achieved at the deck surface.

Non-Invasive Anchoring- there are no hard metal-to-concrete connections or anchors with the SILSPEC® SSS Silicone Strip 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 folded profile; and the silicone adhesive bottom and top beads at the joint face to silicone profile interface.

Movement Capability– SILSPEC® SSS Silicone Strip Seal can accommodate non-uniform joint openings and has a movement range of up to 4".

Silicone Components– Both the SILSPEC® SSS Silicone Strip Seal and the Dow Corning® 995 adhesive are 100% silicone make-up. This ensures both the profile and adhesive suffer virtually no UV degradation over years of exposure to the elements.

Chemical Resistant– Silicone components are resistant to de-icing chemicals, fuels and oils encountered with normal exposure to highway environments.

Easy Installation– SILSPEC® SSS Silicone Strip Seal allows for fast joint repairs, short lane closures and minimal down-time in a wide array of joint sizes and configurations.

PERFORMANCE:

- ◆ Joint faces should be plumb and sound to withstand wear and abuse of traffic.
- ◆ Available in 3 sizes, SSS-150, SSS-225 and SSS-400 to answer a wide range of needs.
- ◆ Fuel Resistance: Silicone sealant is not degraded by contact with fuel. Some swelling of the silicone material will occur, but it will return to its original shape upon evaporation of the fuel.
- ◆ During cyclic movement of the joint, the profile simply folds and unfolds free of tension on the bond line, and virtually free of tensile stresses in the silicone material.

COMPOSITION:

- ◆ SILSPEC® SSS Silicone Strip Seal is extruded from 100% silicone polymer for a high-grade, long lasting profile.
 - ◆ Dow Corning® 995 Adhesive/Sealant is a 100% silicone chemistry that bonds tenaciously to the seal profile and the joint face whether it is concrete, steel or SILSPEC® Polymer Concretes*.
- *Other substrates require adhesion testing to ensure bond of the adhesive.

PACKAGING & YIELD:

SILSPEC® SSS Silicone Strip Seal is available in custom lengths up to 100 LF.
 Dow Corning® 995 Adhesive is available in 20oz. Sausage Packs.
 Dow Corning® Primer P is available in Pint Units.
 Dow Corning® Primer-C OS is available in Pint Units.

| SILSPEC® SSS Size Chart | | | | | |
|-------------------------|--------------------|-----------------------|-----------------------|----------------------------------|----------------------------------|
| PRODUCT NUMBER & SIZE | INSTALLATION DEPTH | MIN. WIDTH (MOVEMENT) | MAX. WIDTH (MOVEMENT) | JOINT OPENING INSTALLATION (MIN) | JOINT OPENING INSTALLATION (MAX) |
| SSS-150 1½" | 1¼" | ½" | 2" | 1" | 2" |
| SSS-225 2¼" | 2½" | ¾" | 3" | 1¼" | 3" |
| SSS-400 4" | 3" | 1" | 5" | 2½" | 4½" |

| Approximate Yield | |
|---------------------------|---|
| Dow Corning® 995 Adhesive | SSS-150- 9 LF SSS-225- 6.2 LF SSS-400- 3.4 LF |
| Dow Corning® Primer-C OS | 100 LF of joint per Pint |
| Dow Corning® Primer P | 100 LF of joint per Pint |

SHELF LIFE

Adhesive & Primers– 1 year from date of manufacture when stored in a dry location, indoors, out of direct sun and between 50°F (10°C) and 90°F (32°C). Keep from freezing.

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 Dow Corning® is the registered trademark of Dow Corning Corporation, Midland MI.



SILSPEC® SSS Silicone Strip Seal

Typical Physical Properties

| SILSPEC® SSS Silicone Strip Seal | | |
|----------------------------------|---|-------------|
| Property | Value* | Test Method |
| Color | Black | Visual |
| Durometer (Shore A) | 55 +/- 5 | ASTM D2240 |
| D 55 Product | 1,000 psi (min.) (6.89 MPa) | ASTM D412 |
| Tensile Strength | 400 % minimum | ASTM D412 |
| Elongation | 100 ppi minimum | ASTM D624 |
| Tear Strength (Die B) | 30 % maximum @ 212°F– 70 hrs. | ASTM D395 |
| Compression Set | * Independently Verified by ARDL Laboratory 10/15 | |

| Dow Corning® 995 Silicone Adhesive / Sealant | | |
|--|--------------------|-------------------|
| Cured 7 Days @ 77F (25C), 50% RH | | |
| Color | Visual | Black |
| Durometer (Shore A) | 40 +/- 5 | ASTM 2240 |
| Tensile Strength | 350 psi (2.41 MPa) | ASTM D412 |
| Ultimate Elongation | 525% | ASTM D412 |
| Working Time | 10-20 minutes | |
| Tear Strength | 49 ppi | ASTM D624 (Die B) |
| Peel Strength | 40 ppi | ASTM C794 |

PRIMING:

For best performance of the system, all substrates to receive the Dow Corning® 995 Adhesive should be primed.

Steel Faces: Dow Corning Primer-C OS or *SILSPEC® PRIMER 2000* if a corrosion inhibitor as well as a bond enhancer is desired. SILSPEC PRIMER 2000 is mixed 1:1 and applied by brush or roller. In warm weather, the primer can be mixed with Acetone in a 1:1:1 mix ratio. Allow primer to become tacky or dry to touch. Refer to SILSPEC® PRIMER 2000 TDS for complete mixing and handling information.

Concrete Faces: Dow Corning® Primer P, use a clean cotton wiping rag and apply to concrete face, allow to dry.

SILSPEC® 900PNS / 2000 Polymer Concretes: No priming required.

INSTALLATION:

Steel Joint Faces– steel joints faces should be sound, well anchored and free from contaminating oils, debris and rust. Sandblast faces to SPS-10 near white metal just prior to priming and installation. Sandblast equipment shall be equipped with traps to separate oil/water from the air stream.

Concrete / SILSPEC® Polymer Concretes: Faces should be sound and plumb, repair any areas that have contaminated, honeycombing, loose, deteriorated or delaminated concrete. Any fins present in the faces should be ground smooth. Concrete should be 14 days old prior to installation of the seal, SILSPEC® Polymer Concretes can be sealed once they reach sufficient strength to remove forming.

Sandblast faces to remove all contaminants that can cause bonding problems with the Dow Corning® 995 Adhesive / Sealant. Prime substrates as directed in the **PRIMING** section of this document. After sandblasting, blow with compressed air (at least 90psi) to remove debris from blast operation. All blast equipment shall be equipped with traps to remove oil/water from the air stream.

Use closed cell foam backer rod or foam board to set the depth of the seal. The backer is inserted into the joint opening and positioned to the correct depth for the profile being installed. Refer to SILSPEC® SSS Size Chart on page 1 for Installation Depth. An alternate method to set the seal depth is to saw or form shoulders in the faces at the appropriate depth.

Unroll the seal profile and wipe with a clean rag saturated with Acetone to clean. Be sure the serrations in the face and the bulbs are free of dirt, powder, other contaminants.

Apply a continuous 3/8" to 1/2" bead of Dow Corning® 995 Adhesive to the joint faces at the depth the seal bulbs will rest. Fold the seal profile and insert into the joint opening. Allow the seal to open and press into the adhesive beads to ensure contact with the bead and joint faces.

Apply the locking bead of adhesive in the joint over the bulbs. Do not apply the bead any higher than the serrations in the profile. Use a caulking tool to smooth the bead and ensure it makes full contact with the profile and joint faces.

Allow 1 hour after tooling before opening to traffic.

SILSPEC® SSS Silicone Strip Seal can be easily repaired if required, contact SSI for specific instructions and suggestions.

Splicing SILSPEC® SSS Silicone Strip Seal: While a continuous seal is preferred, SILSPEC® SSS can be field spliced. Contact SSI for specific instructions for splicing.

Detail Drawings & Guide Specifications

Detail drawings and Standard Specifications are available from SSI upon request.

Availability & Pricing

The SILSPEC® SSS Silicone Strip 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.

It is the users responsibility to familiarize themselves with all safety precautions prior to use. A product SDS is provided upon request by contacting SSI at (800)888-8909.

SILSPEC® SSS Silicone Strip Seal is the newest product in the SILICONE SPECIALTIES, INC. family of transportation materials.

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|----------------------------------|--------------------|
| X.J.S.® Joint System | SILSPEC® 900PNS |
| SILSPEC® 2000 | SILSPEC® FLEXPATCH |
| SILSPEC SES Expansion Joint Seal | SILSPEC® DECKSEAL |
| SILSPEC® RE-DECK | |

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