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Silicoflex Installation Procedure for TxDOT Standard WD-CSBJ(SS)-24



Silicoflex Locking Adhesive



Silicoflex Seal on Wooden Reel



P-200 Primer (A and B Components)



Silicoflex Installation Equipment Checklist

| Item | Use | Notes |
|---|--|---|
| Air Compressor* | For Sandblaster and pneumatic caulking gun | |
| Sandblasting Equipment Do NOT Sandblast Galvanized Surfaces | For removal of contaminants, rust and debris to produce a rough profile on both inner joint faces. | This method is preferred to remove debris and produce a rough profile in which to bond the Silicoflex system. |
| Clean Rags | To clean Silicoflex Seal, joint header, and galvanized steel surface | Galvanized steel must be cleaned twice |
| Denatured Alcohol ONLY | To clean Silicoflex Seal, joint header, and clear all blooming on galvanized surface. | Not Isopropyl - this has oils in it. Galvanized Steel must be cleaned twice. |
| Clean Empty Containers | To mix two-component Silicoflex P-200 primer | One pound coffee can, or one quart pail works well |
| Small Paint Brushes | To apply mixed Silicoflex Primer to joint header or galvanized surface | Small rollers may be used as well |
| Caulking Gun (30 oz.) | To apply Silicoflex Locking Adhesive | Pneumatic or electric will make the job easier |
| Box Cutter or Knife | To cut the end of caulking tube and trim seal | |
| Popsicle Sticks or Tongue Depressors | To smooth out top bead of adhesive | Small or large sized, depending on Silicoflex Seal size |

*Optional

Note

The minimum temperature in which you can install the joint seal is 40° F and rising ambient air temperature. The joint surface must be completely dry before installing the joint seal. The joint seal cannot be installed immediately after precipitation or if precipitation is forecasted for the day. Joint preparation and installation of joint seal must be done during the same day.

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Surface Preparation

Galvanized Surfaces

Do not sandblast galvanized surfaces. Clean the surfaces at least twice with denatured alcohol only to be free and clear of all blooming.

Rehabilitation Surfaces

If using Silicoflex for strip seal rehab or road widening scenarios, the old steel must be prepared properly based on coating on the steel. The steel must be of sound condition, secured into the bridge deck.

Steel Surfaces

New primed or painted steel does not require sandblasting and can be cleaned with denatured alcohol only.

Uncoated steel surfaces must be sandblasted to a “near white” condition.

Concrete Surfaces

Concrete surface must be sandblasted to remove any and all unsound concrete and debris from exterior surfaces. There must be less than 12% moisture in substrate.

Step One - Preparation

Using oil and water-free compressed air, blow joint area clean of all sand and debris. Care must be taken to remove sand and debris from vicinity of the joint so that it doesn't enter the joint during installation.



Step Two - Cleaning

Using a clean rag saturated in denatured alcohol, wipe down both sides of the vertical face of the open joint to properly clean the bonding surface. Wipe down the seal as well with the denatured alcohol before installing.

Mineral spirits and paint thinners are not to be used for cleaning the joint header.



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Step Three - Application

Mix the A and B components of RJ Watson Silicoflex P-200 primer in a clean bucket until it becomes a uniform opaque color. The primer must then be applied to the vertical face of the joint interface with a clean brush or roller.

Allow 5 - 20 minutes for the primer to dry, depending on ambient temperature, prior to the installation of Silicoflex seal.

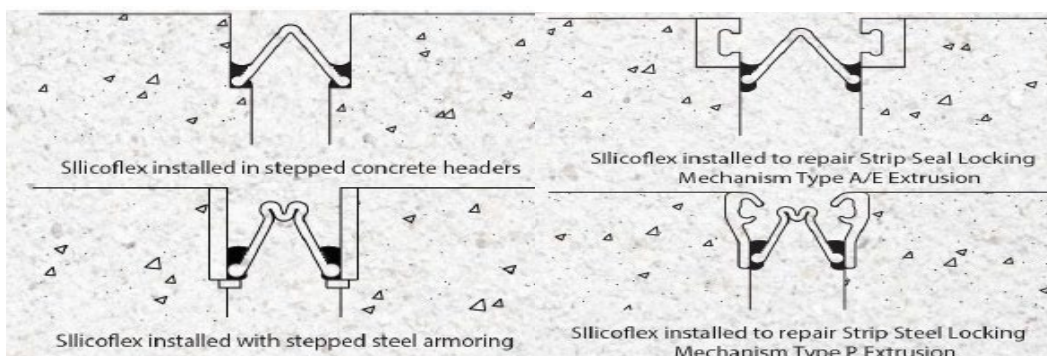
Traffic must not be allowed to pass over open joint after primer has been applied. Installation must be completed the same day as primer application.



Installation Width and Depth for Each Size Seal

| | Silicoflex SF 150 | Silicoflex SF 225 | Silicoflex SF 325 | Silicoflex SF 400* | Silicoflex SF 500 |
|---|-------------------|-------------------|-------------------|--------------------|-------------------|
| Correct Joint Depth Needed for Each Seal Size → | 2" | 3" | 3 1/2" | 3 3/4" | 4" |
| Maximum Opening | 2" | 3" | 4" | 5" | 6 1/2" |
| Minimum Opening | 1/2" | 3/4" | 3/4" | 1" | 1 1/2" |
| Maximum Installation Width | 2" | 3" | 3 1/2" | 4 1/2" | 5 1/2" |
| Minimum Installation Width | 1" | 1 1/4" | 1 1/4" | 2 1/4" | 2 3/4" |

* TxDOT Standard



Installation Procedure

Step One

Prior to installation of the Silicoflex seal, a bead of Silicoflex adhesive should be applied to both vertical surfaces of the open joint at the approximate final installation depth.

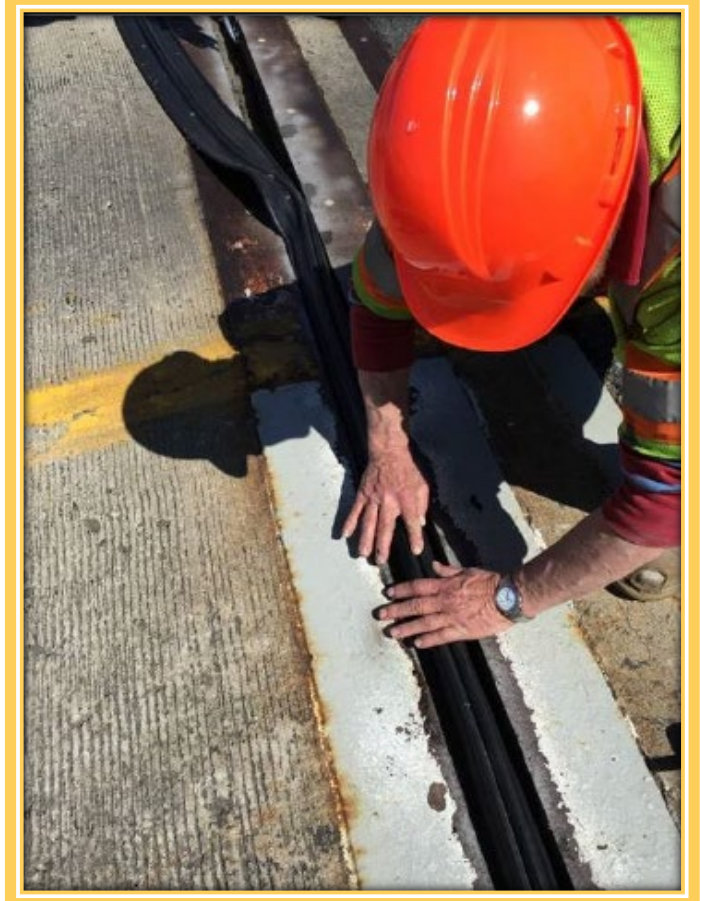
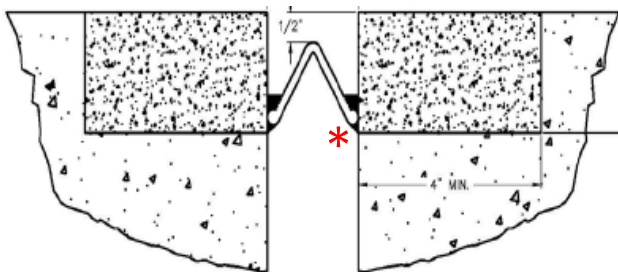
Step Two

Insert the seal into the joint in an inverted “V” shape with the point of the “V” pointing upward. *

Step Three

The depth of the preformed silicone seal must be checked and adjusted by hand so that the very top of seal is $\frac{1}{2}$ " below the road surface at full closure as depicted in the cross-sectional view below.

The seal must be pushed down to the ledge if installed into SEJ-B standard.





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Step Five - Final Sealant

A final bead of Silicone Locking Adhesive (approximately 3/8" diameter) is to be applied to each side of the seal which should be in contact with the joint header. This final bead shall be placed to the top of the ridges on the seal, and no higher.

This is one of the most important steps and **MUST BE DONE!**

Step Six - Bonding

The adhesive should then be tooled at least twice to make sure that there is proper contact with the vertical edges of the joint and to be sure that the sealant has seated firmly into the seal serrations. A wooden tongue depressor can serve as a tool.

The adhesive for Texas is crystal blue in color to allow for ease of visual inspection after installation. It is the responsibility of the contractor and inspector to ensure that this crystal blue color is visible on the top after installation is completed.

Note

Silicoflex is a moisture curing adhesive. At 75°F and 50% humidity, it tacks over in a few minutes and cures in approximately 24 hours under these conditions. It can be opened to traffic one hour after installation.





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Silicoflex Splicing Procedure

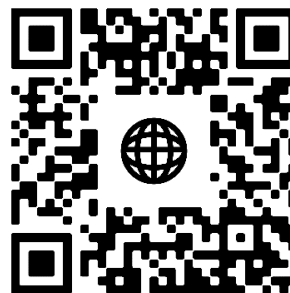
Step One

Use a miter box and a long, sharp knife used to maintain a straight and accurate cut.

Step Two

Apply a liberal amount of Silicoflex Adhesive to adjacent sections of seal to be spliced and bring two pieces together. Tool extra adhesive so that it leaves a nice finish.

Here are typical directional change sections completely installed



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For more information contact:

sales@gsihighway.com

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