



A SIKA COMPANY

# INSTALL DATA EMSEAL SJS-FP-FR Addendum

## *For Split Slabs ... Install Data Addendum — Installing Transitions*

### **Installation Instructions Addendum**

#### **SJS-FP-FR Addendum 1: Installing Transitions in SJS-FP-FR System**

**IMPORTANT!** This is an addendum to "Installation Instructions: SJS-FP-FR (Seismic Joint System, For Plaza Decks and Split Slabs, Fire Rated). Do not install this material until all members of your crew have read and understand both sets of instructions. If any of the crew do not understand any part of these instructions call EMSEAL: USA & Canada: 1-800-526-8365 or 508-836-0280

### **Installing Transitions and Terminations**

Where expansion joints begin, end and run adjacent to, over, under, or around obstructions such as walls, columns, curbs, sidewalks, planters etc., are typically where leaks persist even after straight runs of joints have been properly sealed. Options exist to properly seal these areas.

### **Transitions and Terminations in Metal Parts**

It is usual for the contractor to order factory-fabricated transitions and terminations, as welded assemblies. The components that make up any factory-fabricated item are welded together in the configuration represented by contractor-supplied drawings and dimensions.

### **Transitions and Terminations in the Side Flashing Sheets**

**NOTE** – It is critical to achieving watertightness that wherever a transition or termination exists, the side flashing sheets be properly welded to follow all contours at the condition so that they may be properly integrated with the deck waterproofing materials.

It is possible following proper training from an EMSEAL field technician for the contractor to fabricate transitions and terminations in the heat-weldable side flashing sheets in the field. However, it is more efficient and usual to order transitions and terminations in the side flashing sheets as factory-fabricated, welded items along with the corresponding welded metal parts.

The components that make up any factory-fabricated item would be welded together in the configuration represented by contractor-supplied drawings and dimensions.

**NOTE** – It is difficult to accurately represent all substrate contours that the side flashing sheets will come in contact with. For this reason factory-welded side sheets cannot be guaranteed to fit and may require field modification by the contractor.

### **Transitions and Terminations in SJS-FP-FR Foam/Spline Assembly**

Most transitions and terminations in the foam-and-spline assembly are planned for in consultation with EMSEAL at time of ordering. Some transitions (like curb transitions and treads and risers for example) are factory-fabricated by EMSEAL to the contractors' field measurements. Other transitions and terminations are field-assembled using custom components ordered as agreed. For most flat changes in direction in the horizontal plane, EMSEAL supplies the SJS FP-FR System assembly configured for field joining at the change in direction. In addition connection of the transition pieces is executed at butt joins to straight lengths using methods represented in principle in these instructions and/or as trained by an EMSEAL field technician.

### **Welded End-Dam Terminations at Vertical-Plane Terminations**

Welded end-dam terminations in flashing sheets at end of joint runs are required wherever the joint ends against a perimeter pour, curb, column or anywhere the deck waterproofing terminates on a vertical surface. An end-dam consists of a folded and welded "boot" in the FP flashing sheet that is embedded and covered in waterproofing membrane materials and is mechanically fixed to the vertical substrate with a termination bar and sealant.

The wearcourse or topping slab is poured up to and over this termination point and the control joint formed by the pour is sealed with a liquid sealant by others. Welded end-dam terminations can be provided factory made by EMSEAL to field measurements or can be field executed. Instruction for proper field welding is available from the on-site EMSEAL technician. Contact EMSEAL to coordinate instruction.

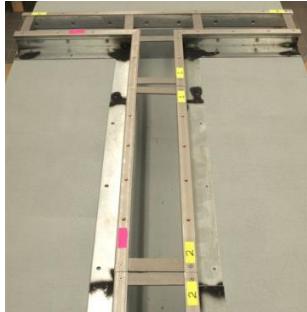
*Publication Note: All literature is deemed accurate at the time of publication. EMSEAL will publish newer product literature to reflect updates and changes in specifications. Please consult EMSEAL for the most accurate support material. www.emseal.com.*

**IMPORTANT: Always Start Installation at Factory-Fabricated Transitions**

If your job contains factory-fabricated transitions such as tees, flat 90's, upturns or downturns, these are fixed points and must be installed first.

This applies to installing transition pieces in:

1. the FP legs,
2. the FP flashing sheets,
3. the SJS-FP-FR spline/foam assemblies, and
4. the cover plates.

**1. FP Rails**

Place the factory-fabricated transition in the metal FP rails into the wet, epoxy-mortar setting bed.

Tap the system down into the setting bed until the upper surface is at the required elevation and the rails are level.

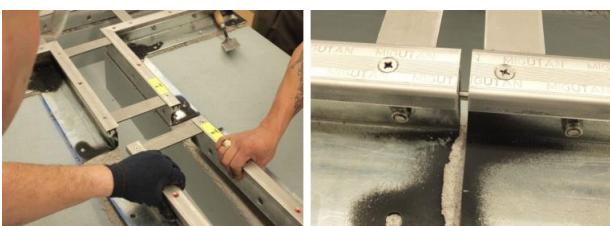
Ensure that the flanges are fully embedded in the wet epoxy and that no hollow areas exist beneath the flanges.



Working away from the ends of the transition, connect the straight lengths of rail and install straight lengths.

Position the first straight length of FP rail making sure it is interlocked with the transition.

Alignment and connection between lengths is made with stainless steel pins set into one end of the rails. Insert the pins into the holes of the adjoining piece.



**TIP** – Sometimes the metal pins will not align easily. To fix this loosen the screws in the capping strips that hold the clamping spacers. This will give you some 'play' to help with pin alignment. Once aligned, retighten the screws.

Install, level, and anchor the rest of the rails in accordance with the standard SJS-FP-FR Installation Instructions starting at Step 11.

**2. Rubber Flashing Sheets**

Roll out flashing sheets along the edges of the joint.

Start installation at transitions with factory-made transition pieces. Working away from the fixed transition points, install the flashing sheets in accordance with the standard SJS-FP-FR Installation Instructions starting at Step 17.

**3. SJS-FP-FR Foam/Spline Assembly**

For most flat changes in direction in the horizontal plane, EMSEAL supplies the SJS-FP-FR System assembly configured for field joining at the change in direction. In addition connection of the transition pieces is executed at butt joins to straight lengths using methods represented in principle in these instructions and/or as trained by an EMSEAL field technician.

The following describes the installation of a tee starting with the cross piece of the tee. The principle is the same for flat direction changes.

**Cut the Shrink Wrap Packaging**

Cut shrink-wrap by running a utility knife along the hardboard sides. (DO NOT cut along silicone bellows surfaces).

*IMPORTANT: Work quickly and deliberately after cutting the shrink-wrap to avoid material expanding beyond a usable size.*

**Remove Shrink-Wrap and Hardboard Packaging**

Working around the hanger-bars, remove and discard shrink-wrap and hardboard.

**Wipe Release Agent Off Silicone Face, Top and Sides**

For packaging and production reasons, the silicone facing is coated in the factory with a release agent.



Prior to installation, this release agent must be wiped off all surfaces that will later make contact with liquid applied silicone. This includes, the face, tops and grooves of the bellows next to the face, and along the sides.

**TIP** – Lightly, quickly and thoroughly wipe the cured silicone facing with a lint-free rag made damp with water to remove the release agent.

**TIP** – Use the hardboard packaging as a flat, clean working surface.

**CAUTION** – if the material is expanding rapidly then skip this step and do it later before joins are made and before the sealant bands are injected.



#### Rotate Hanger Bars

Rotate the hanger bars and holding the material by the hanger-bars position it over the joint opening.



#### Allow Foam to Expand to Suit Joint-Gap Size

If the foam is expanding slowly, allow the foam to expand to the width of the joint then lower the foam/spline assembly into the wet epoxy on the joint faces.

Press the material down firmly until the hanger bars are touching the tops of the side sheets in the rails. The hanger bars will support the system while the epoxy cures and will set the foam/spline assembly at the proper height.



#### Install Intersecting Lengths

At tees and flat-90's, intersecting lengths are joined starter pieces that are custom configured that have a "soft end" where the center spline stops short and the last six to eight inches is foam only.

#### Prepare Faces to Be Joined

**TIP** – On hot days, the liquid sealants used as joining materials (intumescent and silicone) can be applied to the ends of each stick prior to unpacking them. To do this, carefully cut and peel the plastic shrink wrap away from around the end of the stick.



**CAUTION** – DO NOT cut on the silicone bellows!

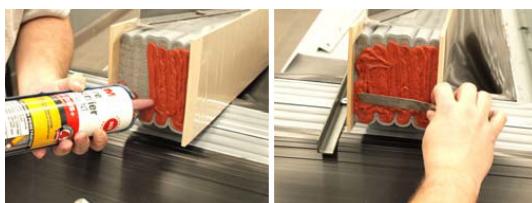
To remove the factory-applied release agent, thoroughly wipe the cured silicone face, tops and grooves of the bellows next to the face, and along the sides with a lint-free rag made damp with water.



#### Apply Intumescent Caulk

Using a quart-size caulk gun and the 3M CP-25 intumescent caulk-tube provided, gun the intumescent caulk onto the foam surface of the starter piece.

Spread the intumescent caulk to an even thickness using a caulk knife.



#### Apply Silicone Sealant at Bellows Join

Using a 20-oz sausage caulk gun and the sausages of silicone provided, gun a bead of silicone along the face of the edge of the factory-cured silicone bellows at the top of the SJS-FP-FR foam.



### Install Soft-End Into Side of In-Place Length

Lower the joining piece into the wet epoxy on the joint faces and press the joining piece firmly into the side of the previously installed length.

(Notice how the bow in the side of the cross piece is re-compressed by the joining piece — ensuring a compression fit).



### Tool and Blend Squeezed-Out Silicone

Tool the silicone that squeezes out at the join to blend it with the bellows.

(DO NOT allow the silicone to fill the folds of the bellows).



### Install Straight-Run Lengths

Having installed the transition pieces, straight lengths can be installed in all directions off the transition in accordance with the standard SJS-FP-FR Installation Instructions starting at Step 28.

## 4. Coverplates

**IMPORTANT:** Allow for Longitudinal Expansion of Plates: the metal coverplates will lengthen with rises in temperature. A transition marks a fixed point. Other fixed point can be caused by curbs, parapets, walls or other obstacles against which the plates could bind. Gaps at the beginning and/or end of each joint run must be left to accommodate plate expansion. This should have been worked out with EMSEAL at order-time based on information about the job provided by the contractor. Any questions, consult EMSEAL.

### Align First Coverplate Over the Transition

As with the other system components, start coverplate installation at transitions first.

Place the first section of coverplate over the joint assembly and line up the screw holes over the channel in the spline.

**NOTE** – The screws are self-tapped into the spline anywhere along the spline. You do not have to align the plate holes with the holes where the hanger-bars were attached.



### Screw In Coverplate

Using a drill-driver and hex bit socket, drive the coverplate screws into the spline channel until tight.

Smaller SJS (Illustration A) uses a 5/32" socket.

Larger SJS (Illustration B) uses a 7/32"socket.

(See **NOTE A page 1 in standard SJS-FP-FR Installation Instructions**)

Continue to install coverplate sections, **leaving a 2-mm spacing between coverplates (approx thickness of a US quarter coin)**, install coverplate sections until installation is complete with the installation of the final finishing cover plate. REFER to the standard SJS-FP-FR Installation Instructions starting at Step 44.



If any of the crew do not understand any part of these instructions call EMSEAL: 1-800-526-8365 (USA & Canada) or 508-836-0280