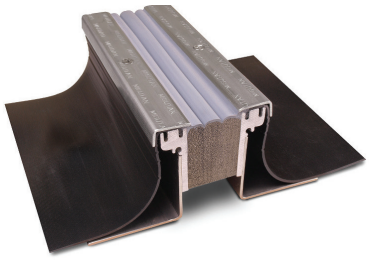
BUILDING TRUST

PRODUCT DATA SHEET

DSM-FP System

Watertight, Plaza Deck, & Split Slab Expansion Joint



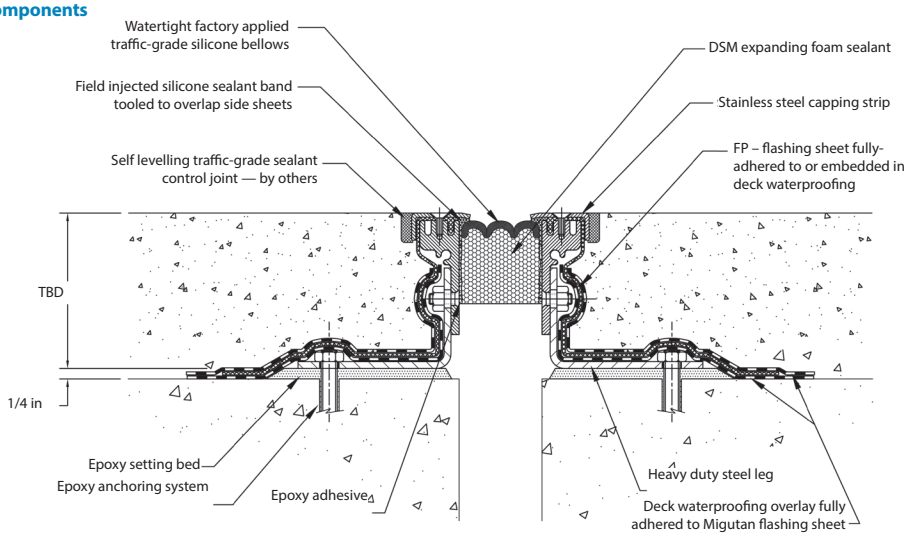
Product Description

The **DSM-FP System** by Sika Emseal is designed to provide a watertight, trafficable joint system in smaller 1/2" (12mm) to 4" (100mm) joint openings, in decks of split-slab design. DSM-FP expands the use of the DSM System to waterproofed split-slab deck designs through the use of side flashing sheets that integrate with the deck waterproofing membrane.

The material that bridges and seals between the DSM-FP mounting rails is Emseal's DSM System which is comprised of silicone-coated, precompressed foam hybrid sealant that ensures watertightness, absorbs sound, dampens vibration and offers uncomplicated installation. DSM is the latest evolution in the field-proven technology that Emseal has used for 30 years of sealing horizontal plane joints with impregnated foam sealants.

- The **DSM-FP System** consists of two subassemblies:
  1. The structural-slab mounted supporting legs with integral waterproofing side sheets; and
  2. the silicone-faced, precompressed, foam sealant — DSM System.
- The mounting leg assembly is delivered with opposing legs factory-set to the nominal joint size. It is installed onto a wet-setting bed of epoxy mortar and bolted to the deck.
- Epoxy gel adhesive is applied to the faces-installed mounting leg assembly.
- The DSM System precompressed foam sealant is installed into the joint gap where it self expands into the wet epoxy adhesive.
- Consecutive lengths are joined through the field-application to the intersecting bellows surfaces of Emseal-supplied, low-modulus, high-movement silicone.
- To complete the waterproofing, a field-applied silicone sealant band is injected at the bellows to the mounting-leg interface and tooled over the side flashing sheet at its insertion point.
- Stainless steel capping strips are installed over the top of the retainer legs and hold the side-flashing sheets firmly in compression.
- With the DSM-FP side flashing sheets pulled out of the way, the deck waterproofing membrane is installed on the deck and brought over the top of, and up the DSM-FP mounting legs.
- The side flashing sheets are lowered into the liquid membrane (or into the non-sag mastic component of a sheet waterproofing system) and sandwiched with another layer of waterproofing. Drainage board and/or protection board are added in accordance with the designer's preference.
- Concrete, pavers, asphalt, or other topping slab or wearing course material is installed up to the stainless steel retaining caps on the DSM-FP mounting rails with or without a field-applied sealant control joint depending on the wear-course material (consult Emseal).

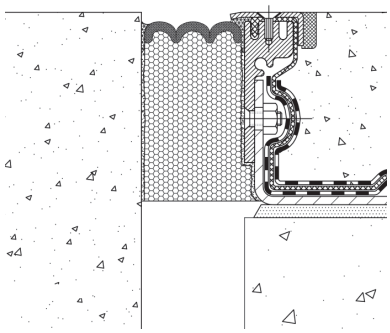
Figure 1: System Components



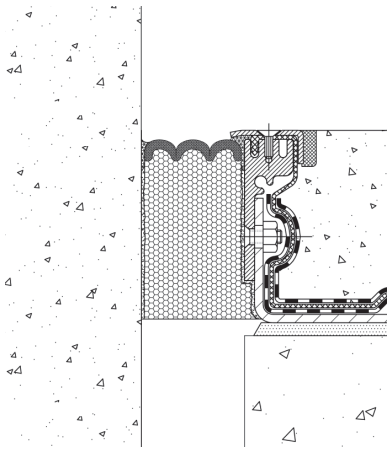
Uses and Applications

- For new construction and retrofit of old or failed joint systems.
- For restoring watertightness to chronic leaking over occupied spaces.
- Uniquely suited to joint openings between split-slab and solid-slab construction.
- Uniquely suited to deck-to-wall and deck-to-column conditions in split-slab construction.
- Plaza and podium decks.
- Split-slab or asphalt-overlay parking decks.
- Airport roadways.
- Mall bridge connectors.
- Stadium concourses, etc.

Solid-Slab to Split-Slab Connections



Solid-Slab to Split-Slab Deck to Deck



Wall/Column to Split-Slab

DSM-FP is an effective watertight expansion joint for bridging split-slab and solid-slab construction. The watertight precompressed DSM foam sealant is held securely in place by utilizing the back-pressure of the expanding foam, epoxy adhesive, and a field-injected silicone sealant band at the substrate interface. The connection to solid-slab construction is made directly to the slab substrate. The split-slab connection is made to the DSM-FP mounting leg. The split-slab connection incorporates an integral waterproofing flashing sidesheet embedded between layers of the deck waterproofing membrane on the structural slab and beneath the topping slab.

Features

Watertight Surface Joint – Emseal's DSM precompressed foam sealant serves as a dual seal when installed between the DSM-FP System's two mounting legs or between a single mounting leg and another substrate on the opposite side of the joint. The precompressed foam and silicone external facing create a watertight seal with Total 100% movement capability: +50% and -50% of nominal supplied size.

This ensures that watertightness is achieved at the deck surface. The need for moisture barriers and secondary gutter systems is eliminated or made optional.

Watertight Integration with the Split-Slab Waterproofing Membrane – Integration of the DSM-FP side flashing sheets into a sandwich with the deck waterproofing membrane ensures the deck-to-joint interface is watertight.

Sound Attenuation – the impregnated foam and silicone hybrid acts not only as the sealing mechanism, but also as a highly effective sound dampener.

Trafficable, Fuel-Resistant Surface – The DSM impregnated foam is compressed to handle normal pedestrian and vehicular traffic. The watertight bellows surface is made of a traffic-grade silicone which is not degraded by incidental contact with fuel.

Deck-To-Wall Conditions – Because DSM System installs to substrates without the need for any supporting metal rails or invasive anchors, the DSM-FP System is uniquely suited to handling deck-to-wall, deck-to-column, entryway and other conditions.

Continuity of Seal – as in all Emseal expansion joint systems, continuity of seal through changes in plane and direction is an essential performance differentiator. Factory-fabricated transitions in the mounting leg and side flashing sheets at curbs, sidewalks, parapets, tees, and crosses are available with the DSM-FP System. Details for watertight transitions between different Emseal product systems are available.

Performance & Selection

Joint Sizes – For mean-temperature, structural-slab, joint sizes from:

1-inch (25mm) up to 4-inches (100mm) in the upper topping slab.

1/2-inch (12mm) up to 4-inches (100mm) in the lower structural slab. For special conditions consult Emseal.

For larger than 4" (100mm) see SJS-FP.

Movement Capability – Total 100% movement capability:

+ 50% and -50% of nominal supplied size.

Leg Heights – 1-inch (25mm) to 12-inches (300mm)

Fire Rating – Emseal offers a variety of products to fire-rate expansion joint openings. Contact Emseal for more in-formation.

CAD & Guide Specs

Guide Specifications and **CAD details** are available online at Emseal.com or by **contacting Emseal.**

Warranty

Standard or project-specific warranties are available from Sika Emseal on request.

Availability & Price

DSM-FP is available for shipment internationally. Prices are available from local representatives and/or directly from the manufacturer. Sika Emseal reserves the right to modify or withdraw any product without prior notice.

Emseal JOINT SYSTEMS, LTD
25 Bridle Lane
Westborough, MA 01581 USA
Phone: 508.836.0280
Fax: 508.836.0281
www.Emseal.com

Emseal, LLC
111 Royal Group Crescent
Woodbridge, ON L4H 1X9 Canada
Phone: +1-416-740-2090
Fax: +1-416-740-0233
www.Emseal.com

SIKA CORPORATION
201 Polito Avenue
Lyndhurst, NJ 07071 USA
Phone: +1-800-933-7452
Fax: +1-2019336225
www.usa.sika.com

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