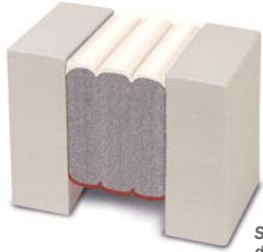




EMSHIELD SecuritySeal-SSF2/SSF3

Vandalism / Water / Fire / Movement / Traffic / Sound

TECH DATA



SecuritySeal SSF2 and SSF3 displayed in typical substrate.



UL Certified Systems
FF-D-0076, FF-D-0077
FF-D-0088, FF-D-0089
FW-D-0054, FW-D-0055
FW-D-0076, FW-D-0077
ULC Certified Systems
JF-135, JF-136
JF139, JF141

Product Description

SecuritySeal SSF2 and SSF3 are pick-resistant, watertight, 2-hour (SSF2) or 3-hour (SSF3) fire-rated, expansion joints for locations requiring a hardened tamper-resistant surface. Concrete decks and institutional floors such as those found in prisons, detention centers, public parking garages, medical and psychiatric hospitals, school facilities and day-care centers are some of the many venues benefitting from SecuritySeal SSF2 and SecuritySeal SSF3.

The system is comprised of fire-retardant-impregnated foam which is factory pre-coated on the bottom side with an intumescent fire-proofing material. The top traffic side is coated with waterproof, tamper-resistant polyurethane. The system is supplied compressed smaller than the width of the joint gap. A field-injected polyurethane sealant band seals the bellows to the substrate at the installation surface. Sticks are joined using a field-applied polyurethane sealant at the bellows' edge of the joint and intumescent caulking on the foam face producing a cohesive watertight fire-rated system.

SecuritySeal SSF functions as a watertight primary seal with movement capabilities of +/- 25% (50% total) available in widths for gaps ranging from 1/2-inch to 4-inches (12mm - 100mm).

Pick-Resistant, 2-Hour or 3-Hour Fire-Rated, Watertight, Trafficable, Horizontal Expansion Joint

SecuritySeal SSF is watertight, fire-rated, sound-attenuating, and energy-efficient. It is manufactured with a pick-resistant outer polyurethane seal for use in both retrofit and new structural expansion gaps in horizontal-plane applications. It eliminates the need for additional fire blankets, mineral wools, liquid sealants, or other fire stopping materials.

SecuritySeal SSF2 and SecuritySeal SSF3 continue the comprehensive EMSHIELD line of breakthrough, multifunction, structural expansion joint materials now available from EMSEAL. Tested and certified by Underwriters Laboratories (UL) and Underwriters Laboratories Canada (ULC), to the rigors of UL 2079, **SecuritySeal SSF** can work in conjunction with SSW2 – the EMSHIELD pick-resistant vertical 2-hour fire-rated deck expansion joint.

SecuritySeal expansion joints, in a single installation, provide a watertight, clean-handling, UV-stable, non-staining, low-temperature-flexible, high-temperature-stable, sound-attenuating, energy-efficient, tamper-resistant, structural expansion joint seal.

EMSHIELD SecuritySeal builds on EMSEAL's track record of over 30 years of innovation in sealing structural expansion joints with impregnated foam sealants.

Twice the Movement of Pick-Resistant Liquid Sealants

Liquid sealants offered for security applications achieved their tamper resistance in part from their hardness – however, hardness restricts movement. In general, pick-resistant liquid sealants have movement capability of +/- 12.5% or 25% total. Because of the bellows configuration of **SecuritySeal**, the tamper-resistant polyurethane sealant is not stretched or compressed as in typical field-applied "caulk and backer rod" installations. Instead, the bellows folds and unfolds with joint movement. This results in the ability to offer a full 50% total movement capability thereby extending the use of tamper-resistant sealant technology to structural movement joints.

Features

Secure Pick-Resistant Seal

The upper watertight layer is made of a hardened flexible polyurethane which resists deterioration and destruction from picking. This deters vandalism, dislodging of debris harmful to patients or inmates, and the ingestion of picked materials by young children.

Watertight

All EMSEAL preformed-sealant expansion joint systems are manufactured to be "watertight by design". The acrylic-impregnated open-cell foam is factory pre-coated with water-resistant polyurethane which acts as the primary waterproof seal.

Fire-Rated

It has been tested and certified by Underwriters Laboratories (UL) to the rigors of UL 2079. As a single unit **2-hour fire-rated expansion (WWF2)** or a **3-hour fire-rated expansion (WWF3)** joint it eliminates the need for additional fire stops at the joint gap thereby eliminating the need for multiple products to perform the roles of sealing, bridging and fire-rating joints.

Sound Suppression

A single-sided installation of standard 4-inch SecuritySeal yields a tested Sound Transmission Class rating of STC 62 in a STC 68 wall. It also receives an Outdoor-Indoor Transmission Class rating of OITC 52 in an OITC 52 wall.

Non-Invasive Anchoring

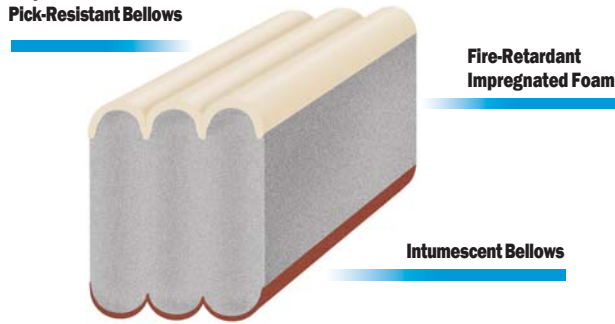
There are no hard metal-to-substrate connections with SecuritySeal such as embedded pins, anchors, screws, bolts or tracks, trays or rails, flanges or coverplates. The system is locked to the joint faces by means of 1) the backpressure of the foam, 2) epoxy adhesive, and 3) the injected sealant bands at the joint face. This method of single-unit installation accommodates installation at later construction stages where access, positioning, or the existing infrastructure may interfere.

Energy Efficiency

EMSEAL's foam technology also acts as an efficient thermal barrier. This means that indoor air quality and HVAC balance can be controlled while insulating the interior space from hot and cold exterior conditions. The non-metallic, non-invasive anchoring means that with SecuritySeal there are no thermal breaks introduced at structural or other joint openings.

Joint-Size Variation

Uniform bellows appearance, and the ability to handle variations in joint size through size-switching.

**Polyurethane-Faced
Pick-Resistant Bellows****EMSHIELD SecuritySeal SSF****Uses**

- Prisons
- Schools
- Daycare Facilities
- Anywhere vandalism is a concern
- Detention Centers
- Psychiatric Facilities
- Public Parking Structures

For expansion joints in exterior and interior floors and decks where a combination of pick-resistance, watertightness, fire-rating, sound attenuation and thermal-efficiency are required. It can be used alone or under any other expansion joint coverplate or filler where depth of substrate allows. Its pick-resistant surface composition makes it an excellent choice where the integrity of the seal and tamper prevention is necessary.

Colors

Polyurethane face is available in either Tru White or Limestone.

Bellows Configuration

Widths from 1/2" (12mm) to 1 1/2" (40mm) are sealed with single bellow seals. Widths from 1 3/4" (45mm) to 4" (100mm) are sealed with a multiple bellows seals.

Performance

Capable of movements of +25%, -25% (50% total) of nominal material size.

Standard sizes from 1/2" (12mm) to 4" (100mm).

Depth of Seal for all sizes = 4" (100mm).

Design/System/Construction/Assembly/Usage

This material has been tested to UL/ULC 2079 and is manufactured under UL's Follow-Up Service. The material is being supplied as a fire-rated component of a wall or floor assembly. It has been tested to UL 2079 in assemblies as depicted in EMSEAL's various listings in the UL Online Certifications Directory. Use of this material in assembly configurations other than depicted in the named UL listings will not encumber or lower the resistance of the deck or wall assembly but is done so at the designers' discretion and responsibility for designing substrates as part of a fire rated assembly that meet applicable standards for the project. Similarly, the published information in the UL Listings cannot always address every construction nuance encountered in the field. Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products or materials. Authorities Having Jurisdiction should be consulted before construction to ensure that specific adjacent substrates and assemblies are detailed and constructed to meet local fire-rating requirements.

SecuritySeal SSF2/SSF3 Sizing

Product Code	Nominal Joint Size	Material Size @ Mean Temp.)	Depth of Seal
SSW2-50-100-02	1/2"	(12mm)	4" (100mm)
SSW2-65-100-02	5/8"	(15mm)	4" (100mm)
SSW2-75-100-02	3/4"	(20mm)	4" (100mm)
SSW2-100-100-02	1"	(25mm)	4" (100mm)
SSW2-125-100-02	1 1/4"	(30mm)	4" (100mm)
SSW2-150-100-02	1 1/2"	(40mm)	4" (100mm)
SSW2-175-100-02	1 3/4"	(45mm)	4" (100mm)
SSW2-200-100-02	2"	(50mm)	4" (100mm)
SSW2-225-100-02	2 1/4"	(55mm)	4" (100mm)
SSW2-250-100-02	2 1/2"	(65mm)	4" (100mm)
SSW2-275-100-02	2 3/4"	(70mm)	4" (100mm)
SSW2-300-100-02	3"	(75mm)	4" (100mm)
SSW2-325-100-02	3 1/4"	(80mm)	4" (100mm)
SSW2-350-100-02	3 1/2"	(85mm)	4" (100mm)
SSW2-375-100-02	3 3/4"	(95mm)	4" (100mm)
SSW2-400-100-02	4"	(100mm)	4" (100mm)
SSW3-50-100-02	1/2"	(12mm)	4" (100mm)
SSW3-65-100-02	5/8"	(15mm)	4" (100mm)
SSW3-75-100-02	3/4"	(20mm)	4" (100mm)
SSW3-100-100-02	1"	(25mm)	4" (100mm)
SSW3-125-100-02	1 1/4"	(30mm)	4" (100mm)
SSW3-150-100-02	1 1/2"	(40mm)	4" (100mm)
SSW3-175-100-02	1 3/4"	(45mm)	4" (100mm)
SSW3-200-100-02	2"	(50mm)	4" (100mm)
SSW3-225-100-02	2 1/4"	(55mm)	4" (100mm)
SSW3-250-100-02	2 1/2"	(65mm)	4" (100mm)
SSW3-275-100-02	2 3/4"	(70mm)	4" (100mm)
SSW3-300-100-02	3"	(75mm)	4" (100mm)
SSW3-325-100-02	3 1/4"	(80mm)	4" (100mm)
SSW3-350-100-02	3 1/2"	(85mm)	4" (100mm)
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SSW3-400-100-02	4"	(100mm)	4" (100mm)

Testing and Standards

SecuritySeal has been tested and certified under UL 2079. UL 2079, like ASTM E1966, was developed to encompass the fire testing of ASTM E119 and the movement cycling regime of ASTM E1399. **SecuritySeal** meets the requirements of ASTM E1966, ASTM E119 and ASTM E1399.

EMSHIELD products have been tested and meet air leakage requirements of ASTM E283, water penetration requirements of ASTM E331, and air pressure maintenance requirements of ASTM E330 all tested at greater than hurricane force winds with foam expanded to its max expanded size.

Warranty

Standard or project-specific warranties are available from EMSEAL on request. This product can only perform its designed function if it, and the joint-gap into which it is installed, is sized to suit anticipated joint movements in consideration of the movement capability of the product and in consideration of the temperature at time of installation, and if it is installed in strict accordance with EMSEAL's installation instructions

Availability & Price

EMSHIELD SecuritySeal is available for domestic or international shipment. Prices are available from local representatives and/or directly from the manufacturer. The product range is continually being updated, and accordingly EMSEAL reserves the right to modify or withdraw any product without prior notice.