



BUILDING TRUST



PRODUCT DATA SHEET

Emshield™ SecuritySeal SSW2

Vandalism / Water / Fire / Movement / Sound

US Patents: 9,670,666 9,637,915 9,068,297 8,739,495 C1 10,934,702 10,934,704 10,941,562



EMSHIELD SSW2 sample shown here is displayed in substrate mock-up

Product Description

SecuritySeal SSW by Sika Emseal a pick-resistant, watertight, 2-hour fire-rated, expansion joint for locations requiring a hardened tamper-resistant surface. Institutional walls such as those found in prisons, detention centers, medical and psychiatric hospitals, school facilities and day-care centers are some of the many venues where SecuritySeal is the perfect choice.

The system is comprised of fire-retardant-impregnated foam which is factory pre-coated with a top coat of 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. Joins between each stick are executed using a field-applied polyurethane sealant at the bellows' edge of the join and intumescent caulking on the foam face.

SecuritySeal SSW functions as a watertight primary seal with movement capabilities of +/- 50% (100% total) available in widths for gaps ranging from 1/2-inch to 6-inches (12mm - 150mm). It is designed to be used in both retrofit and new structural expansion joints and in all other openings in vertical-plane applications.

Uses and Applications

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

For expansion joints in exterior and interior walls 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 cover, plate 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.

Pick-Resistant, Watertight, 2-Hour Fire-Rated, Sound Attenuating, Wall Expansion Joint

SecuritySeal SSW 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 vertical-plane applications. It eliminates the need for additional fire blankets, mineral wools, liquid sealants, cover plates, or other fire stopping materials.

SecuritySeal SSW continues with the comprehensive Emshield line of breakthrough, multifunction, structural expansion joint materials being released by Emseal. Tested and certified by Underwriters Laboratories (UL) and Underwriters Laboratories Canada (ULC), to the rigors of UL 2079, it can work in conjunction with the Emshield horizontal fire-rated deck expansion joint, DFR2, and also the vertical silicone-coated wall expansion joint, WFR2.

This fire-rated expansion joint, in a single installation, provides a watertight, clean-handling, UV-stable, non-staining, low-temperatureflexible, high-temperature-stable, watertight, sound-attenuating, energy-efficient tamper-resistant, structural expansion joint seal.

Emshield SecuritySeal SSW builds on Emseal's track record of over 30 years of innovation in sealing structural expansion joints with impregnated foam sealants

Four Times the Movement of Pick-Resistant Liquid Sealants

Liquid sealants offered for security applications achieved their tamper resistance in part from their hardness. 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 SSW, 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 100% total movement capability thereby extending the use of tamper-resistant sealant technology to structural movement joints.

Features

Secure Pick-Resistant Seal

The outer 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 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 SSW 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 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.

Colors

The two polyurethane faces of Emshield SecuritySeal SSW can be manufactured in either Tru White or Limestone to blend with the two wall surfaces

Bellows Configuration

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

SSW2 System Sizing		
Product Code*	Nominal Material Size (Joint Size at Mean T°F)	Depth of Seal
SSW2-0050	1/2" (12mm)	4" (100mm)
SSW2-0075	3/4" (20mm)	4" (100mm)
SSW2-0100	1" (25mm)	4" (100mm)
SSW2-0125	1 1/4" (30mm)	4" (100mm)
SSW2-0150	1 1/2" (40mm)	4" (100mm)
SSW2-0175	1 3/4" (45mm)	4" (100mm)
SSW2-0200	2" (50mm)	4" (100mm)
SSW2-0225	2 1/4" (55mm)	4" (100mm)
SSW2-0250	2 1/2" (65mm)	4" (100mm)
SSW2-0275	2 3/4" (70mm)	4" (100mm)
SSW2-0300	3" (75mm)	4" (100mm)
SSW2-0325	3 1/4" (85mm)	4" (100mm)
SSW2-0350	3 1/2" (90mm)	4" (100mm)
SSW2-0375	3 3/4" (95mm)	4" (100mm)
SSW2-0400	4" (100mm)	4" (100mm)
SSW2-0425	4 1/4" (105mm)	4" (100mm)
SSW2-0450	4 1/2" (115mm)	4" (100mm)
SSW2-0475	4 3/4" (120mm)	4" (100mm)
SSW2-0500	5" (125mm)	4" (100mm)
SSW2-0525	5 1/4" (130mm)	4" (100mm)
SSW2-0550	5 1/2" (140mm)	4" (100mm)
SSW2-0575	5 3/4" (145mm)	4" (100mm)
SSW2-0600	6" (150mm)	4" (100mm)

*NOTE: Product Code begins with SSW2 designation.
 [e.g. SSW2-0100 = 1-inch (25mm) SSW2]

Performance

Capable of movements of +50%, -50% (100% total) of nominal material size.

Standard sizes from 1/2" (12mm) to 6" (150mm).

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

Note: Substrates must be capable of resisting, without deflection, 2.5 psi backpressure from the foam across the area of contact as determined by the supplied materials' nominal dimensions. Consult Emseal

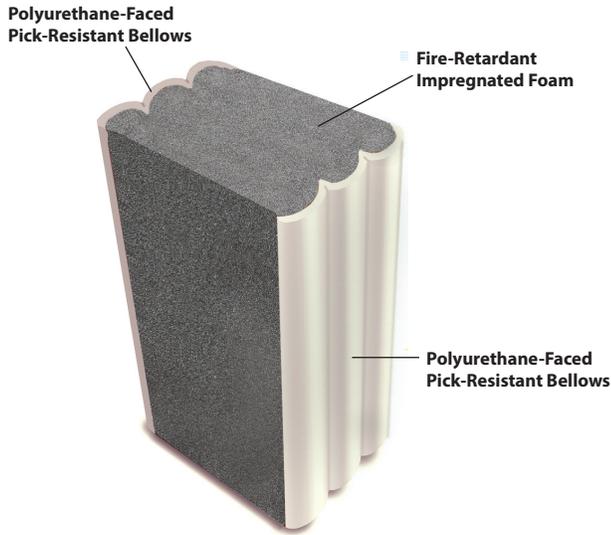
Testing and Standards

SecuritySeal SSW2 has been tested and certified under UL 2079. It meets the requirements of ASTM E1966, ASTM E119 and ASTM E1399. UL 2079, like ASTM E1966, was developed to encompass the fire testing of ASTM E119 and movement cycling regime of ASTM E1399.

Laminations: SecuritySeal SSW2 has passed UL 2079 when configured with either vertical, compression-bonded laminations OR with horizontal, adhesive-bonded laminations. The orientation or presence of laminations in any form is inconsequential to the performance of the product under the UL 2079 testing criteria.



SecuritySeal SSW2



Design/System/Construction/Assembly

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.

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. Each 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 SSW2 is available for shipment internationally. Prices are available from local representatives and/or directly from the manufacturer. The product range is continually being updated, and accordingly 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

Product Data Sheet
Emseal Emshield SecuritySeal SSW2
July 2022 Version SE-2.0



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