PRODUCT CATALOG 2014

Watertight / Fire Rated / Sound Dampening
Energy Efficient / Seismic / Trafficable

Structural and Architectural
Expansion Joint and Sealant Products

Watertight by design ©

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Structural & Architectural Expansion Joint & Preformed Sealant Products

The EMSEAL Solution

EMSEAL contributes to the preservation, durability and sustainability of the built environment.

We do so by delivering high value, lowest total cost of ownership, structural expansion joints and precompressed sealants that work.

Innovation has driven breakthrough new materials that ensure continuity-of-seal against water, fire, heat, cold, air movement, and sound in single product, single installation solutions.

We are a team of highly trained, motivated, and personable customer and technical service professionals.

We deliver ready-to-go as well as custom solutions to structural expansion joint and other sealing applications.

Our products are the result of market-driven innovation and decades of experience born of total dedication to the field of expansion joint sealing and component gasketing.

EMSEAL's track record of successfully completed projects is equally attributable to its approach to expansion joint treatment. Anybody can make an expansion joint appear watertight in cross-section. However, joints leak at changes in plane, direction and where dissimilar joint materials meet.

Successful projects with expansion joints that don't leak are characterized by a collaborative commitment by the A/E team, the general contractor, the joint manufacturer, and the waterproofing sub-contractor to detail, construct, fabricate, and install three-dimensional solutions. EMSEAL uniquely facilitates this process through a needs analysis and communication process that anticipates and addresses problems before they literally become cast in concrete. This collaborative approach has resulted in the successful execution of watertight expansion joints on new and retrofit projects on structures of every type. Owners, architects, engineers, general contractors, EMSEAL, and like-minded waterproofing sub-contractors are proving this approach possible and practical.

Applications

EMSEAL products are designed and manufactured to meet the demands of both the remediation of existing buildings and the maintenance of new structures.

EMSEAL products address the application demands of modern construction. From small details such as traffic point loads to larger concerns such as LEED certification and seismic design, EMSEAL is meeting the evolving demands of modern architecture and engineering. This catalog displays EMSEAL's architectural product line of joint sealant technologies.

EMSEAL Product Features

Breakthroughs in Foam Impregnations

The backpressure resulting from impregnated foam technology eliminates the need for mechanical anchoring methods. Screws and other hardware, which traditionally have been the only means to anchor to a substrate, are eliminated. Non-invasive anchoring allows for a secure hold with simpler installation in a much shorter time.

100% Wax-free

There is no place in the industry for wax-saturated foam products. Both wax-saturated products, as well as asphalt technologies, suffer similar shortcomings such as low temperature brittleness and high temperature instability.

EMSEAL's microsphere-modified, 100% acrylic impregnation is unique in enhancing the desirable characteristics of the foam base such as resilience, while imparting water and temperature resistance. This formulation outperforms imitation products combining commodity foams and wax saturations.

First in Fire-Rated, Watertight, Multi-Purpose Joint Seals

Certified by Underwriters Laboratories to the rigors of UL-2079, EMSEAL's EMSHIELD series of products is changing the expansion joint sealing game. It is no longer necessary to have to choose between watertightness and fire rating. Because the fire rating is now built into the expansion joint it is no longer necessary to specify two installations of separate joint sealant and fire-resistant joint fillers in either decks or walls. EMSEAL also offers a pick-resistant, fire-rated expansion joint when vandalism and tampering are an important concern.

Enhanced R-Value
EMSEAL's foam-based, wall-joint systems are excellent insulators. They contain no metal and attach to substrates without invasive metal anchors avoiding any conductive thermal breaks in wall components. Whether for small joints in façade panels or at window perimeters, or in the backup walls of cavity-wall construction, or even in structural walls of block or precast, EMSEAL joint sealants provide continuity of insulation at all penetrations.

Sound Barrier
Walls sealed with our preformed sealants have sound absorption properties that approximate those of a solid wall. Independent laboratory STC and OITC tests prove that filling a structural joint with an EMSEAL product can restore the original sound transmission coefficient of the wall itself. Choose a fire-rated EMSEAL product and the wall is sound-proofed, fire-rated, insulated, color-coordinated and able to move – all in a single product installation.

Commitment to Service and Quality Assurance
At EMSEAL service begins from the first contact and continues throughout the design, procurement and installation process. A comprehensive EMSEAL representation network throughout the US, Canada, and increasingly throughout the world is serviced locally by Regional Managers and/or representatives and is backed up at our corporate headquarters by dedicated Regional Inside Technical Support staff.

Using project-specific application checklists and web and phone-based collaboration to address job requirements, the support staff will work with you to understand and meet your needs. The result is a working relationship with EMSEAL that produces the best product choice and solution for your specific project.

Ecologically Sound (LEED)
EMSEAL's hybrid impregnated materials use water-based emulsions and contain no chlorinated wax, isobutylene or other deleterious chemicals. The unique features of these products are synchronous with LEED design principles and can contribute toward achieving LEED points. And EMSEAL foam products have an industry-leading lifecycle advantage. Recent LEED projects include sealing all 6,514 windows on the Empire State Building LEED Gold Retrofit.

Corporate Sustainability
EMSEAL is certified and recognized by SBLP as a leader in sustainable business. The corporate mission of EMSEAL embraces the commitment to ecological sustainability.

EMSEAL Track Record
The list of successful EMSEAL expansion joint installations is growing every day. We are the basis of design in original construction and are the industry leader for retrofitting existing structures. A small sample of recent work includes:

Fenway Park / Empire State Building / CN Tower Toronto
Microsoft Campus / Yankee Stadium / Pentagon
Museum of Modern Art (NY) / Las Vegas Hilton
Mall of America / University of Michigan / Basra Stadium
Ronald Reagan National Airport / Cleveland Museum of Art
Charlotte Motor Speedway / Texas A&M / CNN Plaza
Gates Residence / Citi Field / Dell Headquarters
Walmart Distribution Centers / Lambeau Field
Cal Poly Pamona / Bogota El Dorado International Airport
Smithsonian Museum / McCarran International Airport
Indianapolis Motor Speedway / Art Institute of Chicago
Foxwoods Casino / US Air Force Academy / Clorox Plaza
Abu Dhabi Financial Center / Planet Godrej - India
United States Mint / Lincoln Center / The World Bank
Berlin Federal Prison / Bryant Denny Stadium (U. of Alabama)
Port Allen River Lock / Atlanta International Airport CONRAC

and hundreds of other stadiums, museums, corporate buildings, residences, schools, airports, hospitals, municipal buildings, parking garages, bridges and other structures worldwide.

Talk To Us Today
Beyond offering the industry's most innovative and successful line of expansion joints, we are committed to partnering with you at every phase of the construction process. From the person answering the phone to the regionally dedicated inside and in-field technical support of our Tech Team and Regional Sales Managers, to our online chat and ***gotomeeting*** collaboration, EMSEAL is completely dedicated to your satisfaction and the success of your project.

EMSEAL offers SWRI and AIA certified training in all facets of expansion joint application and installation. Accredited courses are offered locally and at EMSEAL's corporate headquaters in Westborough, MA.

Comprehensive information is available on the web at **www.emseal.com**. If you would like to discuss a specific application's demands please call us at **508-836-0280**.

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www.emseal.com



Wall Joints Above-Grade – Product Selection Guide

Application	*Standard Joint Size (at Mean T°)*	*EMSEAL Product*	*Cat. Page*
Secondary Seal to Field Applied Liquid Sealant, 50% Movement	1/8" to 6" (3 - 150mm)	**BACKERSEAL**	9
Structural Joints in Exterior Walls Lowest Cost, Primary Seal, Reel Package Quick Installation, 50% Movement	1/2" to 1 1/4" (12 - 30mm)	**COLORSEAL-ON-A-REEL**	10
Structural Joints in Exterior Walls Primary and Secondary Seal in Single Product, 50% Movement	1/2" to 8"* (12 - 200mm)	**COLORSEAL**	11
Structural Joints in Exterior and Interior Walls 2 or 3-Hour Fire-Rated, Watertight Single Product, 50% Movement	1/2" to 6" (12 - 150mm)	**EMSHIELD WFR2 / WFR3**	12
Structural Joints in Exterior and Interior Walls Pick-Resistant/Tamper-Resistant 2-Hour Fire-Rated, Watertight Single Product, 50% Movement	1/2" to 6" (12 - 150mm)	**EMSHIELD SecuritySeal SSW**	13
Structural Joints in Exterior Walls Primary Seal, 100% Movement	1/2" to 8"* (12 - 200mm)	**SEISMIC COLORSEAL**	14
Curved Expansion Joints New to Old Additions	1/2" to 8"* (12 - 200mm)	**COLORSEAL or SEISMIC COLORSEAL**	11 14
Dual Sealing One Install	1/2" to 8"* (12 - 200mm)	**SEISMIC COLORSEAL DS**	16
Color Switching to Match Substrate Changes	1/2" to 8"* (12 - 200mm)	**COLORSEAL or SEISMIC COLORSEAL**	11 14
Size Switching to Accommodate Joint Gap Variations	1/8" to 8"* (3 - 200mm)	**BACKERSEAL COLORSEAL SEISMIC COLORSEAL**	9 11 14

** EMSEAL has provided seals up to 20" (500mm) wide in specific applications. Please consult with EMSEAL about your specific needs.*

Usage Guide

Typical Substrates

Brick
Stone
EIFS
Concrete Blocks
Gypsum Board
Pre-cast Panels
Metal Panelized Systems
Curtain Walls
Fire-Rated Walls
Tamper-Resistant Walls
Window Walls
Parapet Walls
Cavity Walls
Interior Acoustic
Sky Bridges
Window Perimeters

Wall Joints Below-Grade – Product Selection Guide

Application	*Standard Joint Size (at Mean T°)*	*EMSEAL Product*	*Cat. Page*
Below-Grade Walls, Positive Side Accessible	1/2" to 4"* (12 - 100mm)	**DSM / DSM-DS SYSTEM or 20H SYSTEM**	17 18
Below-Grade Walls, Blind Side	2" (50mm)	**BG SYSTEM**	19

** EMSEAL has provided seals up to 20" (500mm) wide in specific applications. Please consult with EMSEAL about your specific needs.*

Usage Guide

Typical Substrates

Foundation Walls
Tunnel Walls & Floors
Planter Walls & Floors

More Info @ Website

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Decks Solid Slab / Precast – Product Selection Guide

Application	*Standard Joint Size (at Mean T°)*	*EMSEAL Product*	*Cat. Page*
Protected or Non-Traffic Deck Applications 100% Movement	1/2" to 8"* (12 - 200mm)	**HORIZONTAL COLORSEAL**	24
Top and Intermediate Decks 55% Movement	1/2" to 4"* (12 - 100mm)	**DSM System**	20
Tee-to-Tee and Other Control Joints Ideal for Correcting Pour Problems.	1/2" to 4"* (12 - 100mm)	**DSM System**	20
Perimeter Joints	1/2" to 4"* (12 - 100mm)	**DSM System**	20
	1/2" to 8"* (12 - 200mm)	**HORIZONTAL COLORSEAL**	24
2-Hour Fire-Rated, Top and Intermediate Decks, Joint-Face Adhered, Watertight, Trafficable, Single Installation	1/2" to 4" (12 - 100mm)	**EMSHIELD DFR2**	22
3-Hour Fire-Rated, Top and Intermediate Decks, Joint-Face Adhered, Watertight, Trafficable, Single Installation	1/2" to 4" 12 - 100mm)	**EMSHIELD DFR3**	22
2-Hour Fire-Rated, Pick-Resistant Tamper-Resistant, Joint-Face Adhered, Watertight, Trafficable, Single Installation	1/2" to 4" (12 - 100mm)	**EMSHIELD SecuritySeal SSF2**	23
3-Hour Fire-Rated, Pick-Resistant Tamper-Resistant, Joint-Face Adhered, Watertight, Trafficable, Single Installation	1/2" to 4" (12 - 100mm)	**EMSHIELD SecuritySeal SSF3**	23
Top and Intermediate Decks, Blockout Mounted	1" to 5-1/2" max (25 - 140mm)	**THERMAFLEX Series**	29
Large or Seismic Top and Intermediate Decks Joint-Face Adhered with Integral Coverplate	4" to 24" (100 - 600mm)	**SJS SYSTEM**	26
1-Hour Fire-Rated, Large or Seismic Top and Intermediate Decks Joint-Face Adhered with Integral Coverplate	4" to 10" (100 - 250mm)	**SJS-FR1 SYSTEM**	28
2-Hour Fire-Rated, Large or Seismic Top and Intermediate Decks Joint-Face Adhered with Integral Coverplate	4" to 10" (100 - 250mm)	**SJS-FR2 SYSTEM**	28

Usage Guide

Typical Substrates

Parking Decks

Roof Joints

Ice Rink Perimeters

Stair/Elevator Tower Perimeters

Stadium Tread and Risers

Sidewalks

Fire-Rated Applications

Airport Aprons

Roadways

Parking Decks

Stadium/Arena Treads & Risers

Concourses

Floors

More Info @ Website



Decks Split Slab / Plaza – Product Selection Guide

Application	*Standard Joint Size (at Mean T°)*	*EMSEAL Product*	*Cat. Page*
Integrally Tied into Split Slab Construction	Up to 3 1/4" max (85mm) max	**MIGUTAN FP 110**	30
Integrally Tied into Split Slab Construction	Up to 6" max (150mm)	**MIGUTAN FP 155**	30
For Expansion Joints that Tie into Split Slab Construction, also Solid Slab to Split Slab Construction, Joint Face Adhered	1/2" to 4" (12 - 100mm)	**DSM-FP SYSTEM**	32
For Expansion Joints that Tie into Split Slab Construction, also Solid Slab to Split Slab Construction, 2-Hour or 3-Hour Fire-Rated	1/2" to 4" (12 - 100mm)	**DFR-FP SYSTEM**	33
For Large or Seismic Designed Joints that Tie into Split Slab Construction Joint Face Adhered with Integral Coverplate	4" to 24" (100 - 600mm)	**SJS-FP SYSTEM**	34
For Large or Seismic Designed Joints that Tie into Split Slab Construction 1-Hour or 2-Hour Fire-Rated	4" to 10" (100 - 250mm)	**SJS-FP-FR SYSTEM**	35

Usage Guide

Typical Substrates

Podium Decks
Split Slab Plaza Decks
Garden Roofs
Roadways
Stadium Concourses

Roof / Submerged / NSF – Product Selection Guide

Application	*Standard Joint Size (at Mean T°)*	*EMSEAL Product*	*Cat. Page*
Roofs as part of an integrated waterproofing system. Transitions from roof to wall.	1" to 4" (25 - 100mm)	**RoofJoint** **Roof Joint Wall Closure**	38 39
Chlorine and Chemical Resistant Continuous Submersion Joint-Face Adhered 50% Movement	1/2" to 4"* (12 - 100mm)	**Submerseal**	36
Chemical Resistant Joint Face-Adhered 50% Movement	1/2" to 4"* (12 - 100mm)	**CHEMSEAL**	37
Non-Contaminating Joint-Face Adhered NSF/ANSI-Certified 50% Movement	1/2" to 8"* (12 - 200mm)	**DSF System**	37

Usage Guide

Typical Uses

Roofs
Roof to Wall Transitions

Water Treatment Facilities
Water Parks
Swimming Pools
Fountains
Spill Containment
Chemical Environments
Potable Water

** For head-pressure limitations please consult with EMSEAL about your specific needs.*

More Info @ Website



Interior Floors & Walls – Product Selection Guide

Application	*Standard Joint Size (at Mean T°)*	*EMSEAL Product*	*Cat. Page*
Interior Floors and Interior Walls	Up to 24″ max (600mm) max	**Various Products**	41 - 46
Interior Walls 2-Hour Fire-Rated Single Product	1/2″ to 6″ (12 - 150mm)	**EMSHIELD WFR2**	12
Interior Walls Pick-Resistant/Tamper-Resistant 2-Hour Fire-Rated Single Product	1/2″ to 6″ (12 - 150mm)	**EMSHIELD SecuritySeal SSW2**	13
Interior Floors 2-Hour Fire-Rated Single Product	1″ to 4″ (25 - 100mm)	**EMSHIELD DFR2**	22
Interior Floors 3-Hour Fire-Rated Single Product	1″ to 4″ (25 - 100mm)	**EMSHIELD DFR3**	22
Interior Floors Pick-Resistant/Tamper-Resistant 2-Hour Fire-Rated Single Product	1″ to 4″ (25 - 100mm)	**EMSHIELD SecuritySeal SSF2**	23
Interior Floors Pick-Resistant/Tamper-Resistant 3-Hour Fire-Rated Single Product	1″ to 4″ (25 - 100mm)	**EMSHIELD SecuritySeal SSF3**	23
Interior Walls and Ceilings Acoustic and Thermal Joint and Gap Filler for Non-Moving Joints and Gaps	1″ to 6″ (25 - 150mm)	**QuietJoint**	40

Usage Guide

Typical Uses

Convention Centers

Stadiums

Arenas

Hospitals

Warehouses

Schools

Office Buildings

Condos

Airports

Shopping Malls

Casinos

Fire-Rated Locations

Prisons & Secure Facilities

More Info @ Website

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BACKERSEAL

Structures of all sizes can benefit from the sealing of thermal and sound conditions as well as the ease-of-installation offered by BACKERSEAL.

BACKERSEAL behind field-applied liquid sealant provides true "belts and suspenders" sealing – 2 systems working on different principles to guarantee performance of the same function.

BACKERSEAL (Greyflex) is an economical preformed expanding foam sealant that provides watertight secondary sealing in applications behind conventionally installed liquid sealant and backer rod or directly behind field-applied low modulus liquid sealants.

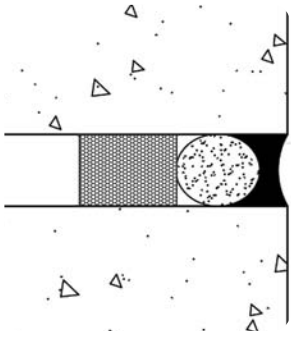
- Warranted for watertightness
- 100% free of wax or asphalt compounds
- Featuring EMSEAL's exclusive, breakthrough, microsphere-modified acrylic impregnation technology
- Watertight, odorless, clean handling, non-staining, low-temperature flexible, high-temperature stable
- Thermally insulating
- Acoustic dampening –
  STC rated 53 (in a STC 68 wall)
  OITC rated 49 (in a OITC 52 wall)
- Conforms to joint gap irregularities
- Also available in sticks
- Movement of +/- 25% (Total 50%) of nominal size

Sound Attenuation STC 53 / OITC 49

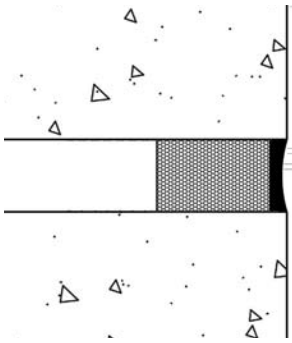
BACKERSEAL Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
1/8	(3)	5/8	(15)
1/4	(6)	3/4	(20)
3/8	(10)	3/4	(20)
1/2	(12)	3/4	(20)
5/8	(15)	1	(25)
3/4	(20)	1	(25)
1	(25)	1 1/4	(30)
2	(50)	2 1/2	(65)
3	(75)	3 1/8	(80)
4	(100)	4	(100)
5	(125)	5	(125)
6	(150)	6	(160)

Typical BACKERSEAL Usage



BACKERSEAL in place as a secondary seal to liquid sealant and backer rod. This double system ensures a redundant seal to water and insulates against energy loss while preserving the liquid sealant manufacturer's geometry for optimal performance.



BACKERSEAL with directly-applied, low modulus liquid sealant provides redundant sealing in shallow-depth substrates.

COLORSEAL-ON-A-REEL

COLORSEAL-ON-A-REEL offers a quicker and simpler installation making it highly suited for tilt-up walls, precast concrete, masonry, sidewalks, driveways and other smaller gap applications.

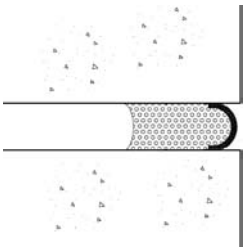
COLORSEAL-ON-A-REEL is a silicone-coated, pre-compressed, primary seal for rapid installation into small joints in vertical and horizontal planes. It is a cost-effective version of EMSEAL's industry-standard SEISMIC COLORSEAL product shipped on a reel for rapid installation into small joints — 1/2 to 1 1/4-inches wide (12 - 30mm). Reel-packaging, in contrast to 'stick' packaging: reduces waste, lowers production costs, makes handling easier, and installs rapidly. COR is a fraction of the price of similarly sized stick COLORSEAL. Its installed-cost makes COR a cost-effective alternate to 'caulk and backer rod'.

- Rapid installation – new or retrofit
- Watertight
- Airtight
- Thermally insulating
- Sound dampening
- Cost-effective
- Ships on 10-foot reels
- 26 standard and custom colors *(see page 15)*
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- Bellows remain tension-free during joint movement
- Easily handles changes in plane and direction
- Conforms to substrate irregularities
- Resists hurricane force wind & water
- ABAA Compliant
- Movement of + 30% /- 50% (Total 80%) of nominal size

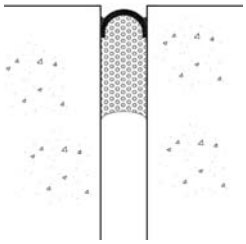
COLORSEAL-ON-A-REEL Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	(mm)	Inches	(mm)
1/2	(12)	1 3/4	(45)
3/4	(20)	1 3/4	(45)
1	(25)	1 3/4	(45)
1 1/4	(30)	2	(50)

Typical COLORSEAL-ON-A-REEL Usage



COLORSEAL-ON-A-REEL is held in place by a combination of pressure-sensitive adhesive impregnation and back-pressure of the expanding foam in conjunction with a field-installed band of silicone caulk.



COLORSEAL-ON-A-REEL can be installed in horizontal surfaces as well as vertical applications.

COLORSEAL-ON-A-REEL can also be applied in horizontal decks, slabs, and walkways.

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

More Info @ Website

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COLORSEAL

Color coordination and color switching make COLORSEAL an aesthetically versatile option for joints from 1/2" (12mm) up to 8" (200mm) in virtually any substrate material.

Sound Attenuation STC 56 / OITC 53

COLORSEAL combines factory-applied and cured silicone bellows with a microsphere-modified acrylic-impregnated expanding foam sealant backing.

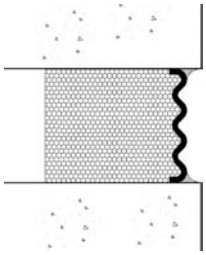
- Warranted for watertightness
- 100% free of wax or asphalt compounds
- Non-invasive anchoring
- Primary and secondary seal in one step
- 26 standard and custom colors *(see page 15)*
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- Thermally insulating
- Acoustic dampening –
  STC rated 56 (in a STC 72 wall)
  OITC rated 53 (in a OITC 61 wall)
- Bellows remain tension-free during joint movement
- Won't suffer from compression set
- Movement of +/- 25% (Total 50%) of nominal size
  (for 100% movement see SEISMIC COLORSEAL pg. 15)

COLORSEAL Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	(mm)	Inches	(mm)
1/2	(12)	1 1/2	(40)
5/8	(15)	1 1/2	(40)
3/4	(20)	1 1/2	(40)
1	(25)	1 3/4	(45)
2	(50)	2 1/2	(65)
3	(75)	3 1/2	(90)
4	(100)	4 3/4	(120)
5	(125)	5 1/2	(140)
6	(150)	6	(150)
7	(175)	7	(175)
8	(200)	8	(200)

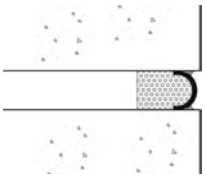
COLORSEAL sizes are available in 1/4" increments of nominal sizes from 1" to 6", and 1/2" increments from 6" to 8". Consult EMSEAL for larger sizes. Nominal size is equivalent to joint gap size at mean temperature.

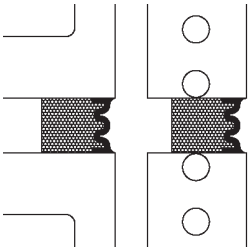
Typical COLORSEAL Usage



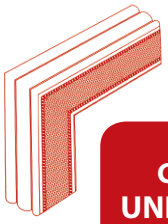
COLORSEAL is held in place by a combination of pressure-sensitive adhesive impregnation and back-pressure of the expanding foam in conjunction with a field-installed bead of silicone caulk at the substrate-to-bellows interface.

Sizes from 1/2-inch (12mm) to 1 1/4 (30mm) are manufactured with a single bellows silicone face. Larger sizes up to 8-inches (200mm) are manufactured with multiple bellows.





COLORSEAL installed as primary rain screen in a brick facade, as well is in the concrete-block structural backup, where it ensures continuity of R-value and air barrier while preventing cavity moisture from entering the structure.



Now Available
COLORSEAL UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations
See page 25

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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www.emseal.com

EMSHIELD WFR2 / WFR3

Watertight by design©

US Patent 8,365,495

Water / Fire / Energy / Sound / Movement

Watertight, Energy-Efficient 2-hour and 3-hour Fire-Rated Wall Expansion Joint

EMSHIELD WFR2 and **WFR3** are patent-pending, single-unit, fire-rated expansion joints which provide water protection, sound attenuation, thermal insulation, color coordination, and accommodate structural joint movement. WFR2 (Wall, Fire-Rated 2-Hours) and WFR3 (3-Hours) continue the line of breakthrough, multi-function, structural expansion joint materials from EMSEAL. Both have been tested and certified by Underwriters Laboratories (UL) to the rigors of UL and ULC 2079.

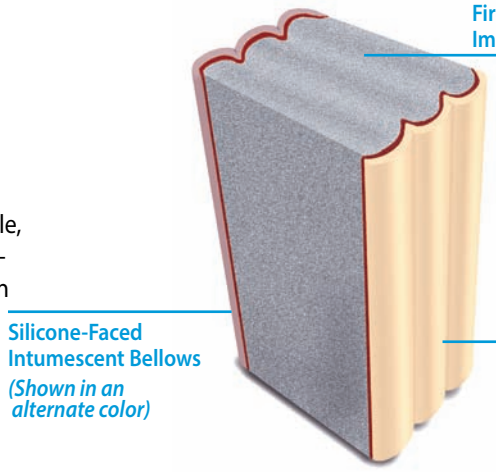
Fire-retardant impregnated foam is factory pre-coated on both faces with an intumescent fire-proofing material. It is then coated again on both faces with a waterproof silicone coating which is available in a choice of 26 colors for each side.

Providing an excellent barrier to sound transfer, WFR2 and WFR3 have an STC rating of 62 (in a STC 68 wall) and an OITC rating of 52 (in a OITC 52 wall). They have also been tested to ASTM E330, ASTM E331, and ASTM E283 standards maintaining air pressure and stopping water and wind penetration at 200 mph.

EMSHIELD WFR2 and WFR3 provide a watertight, clean handling, UV stable, non-staining, low-temperature-flexible, high-temperature-stable, energy-efficient, sound attenuating and fire-rated joint seal in a single installation process. For interior and exterior walls.
Movement of +/- 25% (50% total)

Sound Attenuation STC 62 / OITC 52

EMSHIELD WFR2 / WFR3



EMSHIELD WFR2 / WFR3 Sizing

Joint Size at Mean T°F		WFR2 Depth of Seal	WFR3 Depth of Seal
Inches	*(mm)*	*Inches (mm)*	*Inches (mm)*
1/2	(12)	4 (100)	5 (125)
5/8	(15)	4 (100)	5 (125)
3/4	(20)	4 (100)	5 (125)
1	(25)	4 (100)	5 (125)
1 1/4	(30)	4 (100)	5 (125)
1 1/2	(40)	4 (100)	5 (125)
1 3/4	(45)	4 (100)	5 (125)
2	(50)	4 (100)	5 (125)
3	(75)	4 (100)	5 (125)
4	(100)	4 (100)	5 (125)
5	(125)	4 (100)	5 (125)
6	(150)	4 (100)	5 (125)

WFR2 sizes are available in 1/4" increments of nominal sizes from 1" to 6". Nominal size is equivalent to joint gap size at mean temperature.

One Install Does It All

Now Available
EMSHIELD WFR UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations
See page 25

UL Systems
WW-D-0091, WW-D-0092, WW-D-1079
WW-D-1081, HW-D-0615, HW-D-1090
WW-D-0087, WW-D-00899

ULC Systems
JF131, JF132,JF145, HW77

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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SecuritySeal SSW

US Patent 8,365,495

Pick-Resistant, 2-hour Fire-Rated, Watertight, Wall Expansion Joint

EMSHIELD SecuritySeal SSW2 is a pick-resistant, watertight, 2-hour fire-rated, expansion joint for vertical locations requiring a hardened tamper-resistant surface. Institutional walls found in prisons, detention centers, mental and psychiatric hospitals, school facilities, and day-care centers are some of the many venues where SecuritySeal SSW is preferred.

Vandalism / Water / Fire / Movement / Sound

Sound Attenuation STC 62 / OITC 52

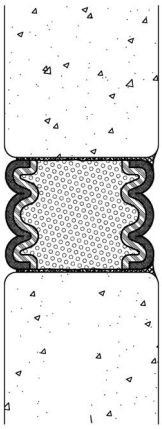
- Hardened pick-resistant surface
- 2-hour built-in fire rating (UL/ULC-certified)
- Warranted for watertightness
- Non-invasive anchoring
- Size switching accommodates joint gap variations
- Thermally insulating
- Acoustic dampening –
  STC rated 62 (in a STC 68 wall)
  OITC rated 52 (in a OITC 52 wall)
- Won't suffer from compression set
- Movement of +/- 25% (Total 50%) of nominal size

SecuritySeal SSW2 Sizing

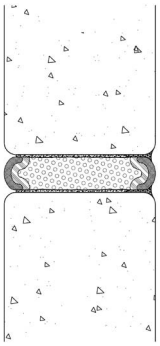
Joint Size at Mean T°F		Depth of Seal	
Inches	(mm)	Inches	(mm)
1/2	(12)	4	(100)
5/8	(15)	4	(100)
3/4	(20)	4	(100)
1	(25)	4	(100)
1 1/4	(30)	4	(100)
1 1/2	(40)	4	(100)
1 3/4	(45)	4	(100)
2	(50)	4	(100)
3	(75)	4	(100)
4	(100)	4	(100)
5	(125)	4	(100)
6	(150)	4	(100)

SSW2 sizes are available in 1/4" increments of nominal sizes from 1" to 6". Nominal size is equivalent to joint gap size at mean temperature.

Typical SecuritySeal SSW Usage



Topview of SecuritySeal SSW. Installed in a fire-rated wall, the front face is sealed with a polyurethane corner bead for watertightness.



SecuritySeal SSW is manufactured with a single bellow polyurethane face on both sides when used in a gap from 1/2-inch (12mm) to 1 1/4-inch (30mm). (Topview)

Now Available
SecuritySeal UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations
See page 25

UL Systems
WW-D-0093, WW-D-1083,
HW-D-0616, HW-D-1091

ULC Systems
JF134, HW78

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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SEISMIC COLORSEAL

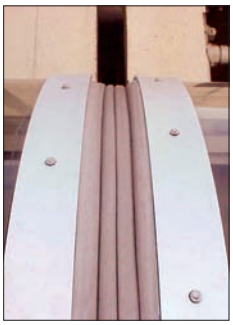
Sound Attenuation STC 52 / OITC 38

SEISMIC COLORSEAL is a silicone-coated, precompressed, primary seal that is used in structural, high-movement joints in virtually any substrate. It is ideally suited for watertightness in vertical or horizontal structural, seismic and abutment joints in the vertical plane.

- Warranted for watertightness
- 100% free of wax or asphalt compounds
- Non-invasive anchoring
- Primary seal
- 26 standard and custom colors *(see page 15)*
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- Thermally insulating
- Acoustic dampening – STC rated 52 (in a STC 56 wall) OITC rated 38 (in a OITC 38 wall)
- Bellows remain tension-free during joint movement
- Won't suffer from compression set
- Movement of +/- 50% (Total 100%) of nominal size

SEISMIC COLORSEAL installed in a building facade between dissimilar materials maintains the R-Value in the building envelope. Because SEISMIC COLORSEAL uses no fasteners it is especially suited to filling joints at inside corners.

Notching and bending the foam backing permits the silicone facing of the bellows to remain seamless at directional changes which are historically difficult to make watertight. For warranted CAD details between dissimilar EMSEAL joint technologies please call EMSEAL or go to www.emseal.com.



Non-invasive anchoring and sealing is achieved through a combination of the pressure-sensitive adhesive acrylic impregnation, the inherent back pressure of the foam and a field-applied corner bead of silicone.

Curves in building elements are easily accommodated through the material's omni-directional flexibility.

SEISMIC COLORSEAL is an ideal solution for textured or rough substrates. The product's pliant nature combined with its inherent backpressure allows it to conform to the textured wall surface.

SEISMIC COLORSEAL

SEISMIC COLORSEAL Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	(mm)	Inches	(mm)
1/2	(12)	1 1/2	(40)
5/8	(15)	1 1/2	(40)
3/4	(20)	1 1/2	(40)
1	(25)	1 1/2	(40)
2	(50)	2 1/2	(65)
3	(75)	3 1/2	(90)
4	(100)	4 1/2	(115)
5	(125)	5 1/2	(140)
6	(150)	6	(150)
7	(175)	7	(175)
8	(200)	8	(200)

SEISMIC COLORSEAL sizes are available in 1/4" increments in nominal sizes from 1" to 6", and 1/2" increments from 6" to 8". Consult EMSEAL for larger sizes. Nominal size is equivalent to joint gap size at mean temperature.

Standard COLORSEAL Colors

Dow Corning® 790 Colors

- Precast White
- White
- Limestone
- Grey
- Black
- Bronze
- Sandstone
- Adobe Tan
- Dusty Rose
- Rustic Brick
- Blue Spruce
- Charcoal
- Natural Stone

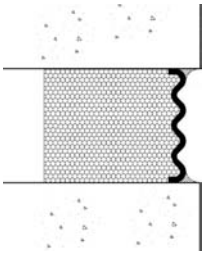
Pecora® 890 NST Colors

- Tru White
- Precast
- Beige
- Limestone
- Anodized Aluminum
- Aluminum Stone
- Natural Stone
- Sandstone
- Charcoal Gray
- Classic Bronze
- Black
- Hartford Green
- Red Rock

For custom colors see www.emseal.com

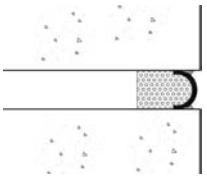
Colors printed on this page are printing approximations of actual colors. Please see actual samples or swatches for a truer match.

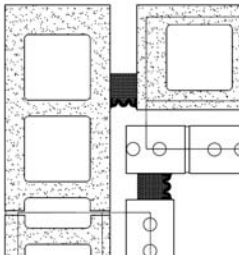
Typical SEISMIC COLORSEAL Usage



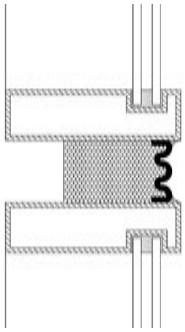
SEISMIC COLORSEAL is held in place by a combination of pressure-sensitive adhesive impregnation and back-pressure of the expanding foam in conjunction with a field-installed bead of silicone caulk at the substrate-to-bellows interface.

Sizes from 1/2-inch (12mm) to 1 1/4 (30mm) are manufactured with a single bellows silicone face. Larger sizes up to 8-inches (200mm) are manufactured with multiple bellows.





SEISMIC COLORSEAL is an excellent, simple sealing solution at inside corner conditions where it is impossible to install mechanically fastened 'strip-seal' systems. In cavity-wall conditions, installation of SEISMIC COLORSEAL in the structural backup maintains integrity of thermal insulation as well as the air barrier while preventing passage of cavity moisture into the structure.



SEISMIC COLORSEAL is uniquely suited to sealing structural joints in curtainwalls. Non-invasive anchoring means that mullions are not violated by screwing through them as occurs with "strip-seal" systems.

Now Available

SEISMIC COLORSEAL UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations

See page 25

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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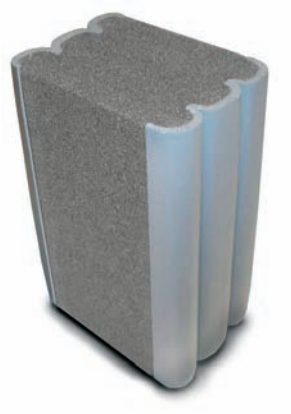
More Info @ Website

SEISMIC COLORSEAL DS



SEISMIC COLORSEAL DS seals interior and exterior sides of curtain wall joints in a single installation step. Each side can have its own color to match interior and exterior color schemes. For parapets it can provide a top, front, and back sealed surface addressing all three exposed planes.

Sound Attenuation STC 54 / OITC 38

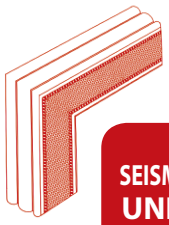
SEISMIC COLORSEAL DS is a unique, highly innovative, double-side coated variation of EMSEAL's acclaimed SEISMIC COLORSEAL material. Ideally suited for shallow substrates where sealing or finishing of both sides of the structure is desired in one installation.

- Warranted for watertightness
- 100% free of wax or asphalt compounds
- Rapid installation to seal two surfaces (front and back) in a single installation
- Non-invasive anchoring
- 26 standard and custom colors *(see page 15)*
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- Thermally insulating
- Acoustic dampening –
  STC rated 54 (in a STC 56 wall)
  OITC rated 38 (in a OITC 38 wall)
- Bellows remain tension-free during joint movement
- Movement of +/- 50% (Total 100%) of nominal size in any direction

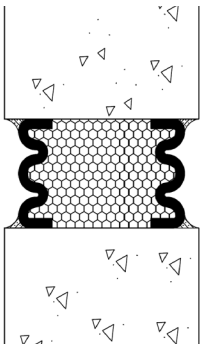
SEISMIC COLORSEAL DS Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	(mm)	Inches	
1/2	(12)	(mm)	
5/8	(15)	1 1/2	(40)
3/4	(20)	1 1/2	(40)
1	(25)	1 1/2	(40)
2	(50)	1 1/2	(40)
3	(75)	2 1/2	(65)
4	(100)	3 1/2	(90)
5	(125)	4 1/2	(115)
6	(150)	5 1/2	(140)
7	(175)	6	(150)
8	(200)	7	(175)

SEISMIC COLORSEAL DS sizes are available in 1/4" increments in nominal sizes from 1" to 6", and 1/2" increments from 6" to 8". Consult EMSEAL for larger sizes. Nominal size is equivalent to joint gap size at mean temperature.

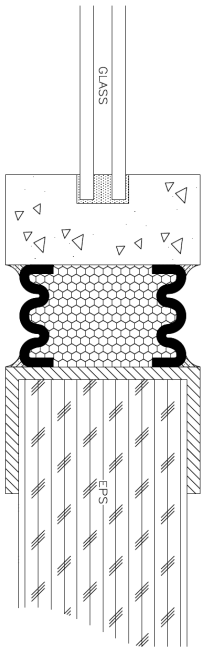


Typical SEISMIC COLORSEAL DS Usage



SEISMIC COLORSEAL DS can be made in custom depths to seal both sides of shallow substrates.

SEISMIC COLORSEAL DS is ideal for sealing both the exterior and interior faces of window and curtainwall systems. Colors on each face can be chosen to coordinate with interior and exterior finishes. Non-invasive anchoring preserves the integrity of the substrates while the product's inherent R-value ensures continuity of insulation.



Now Available

SEISMIC COLORSEAL DS UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations

See page 25

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

More Info @ Website

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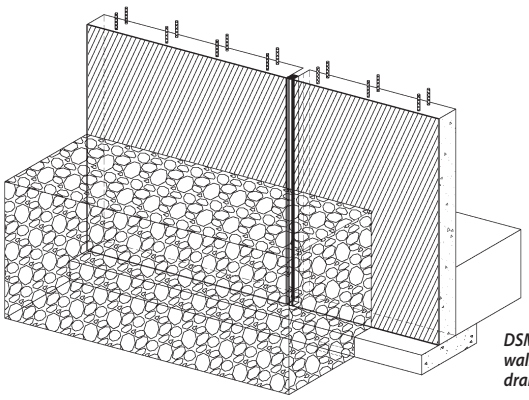
DSM System



DSM in a below-grade wall with an active drainage system.

The **DSM System** is a durable joint-face adhered, precompressed primary seal. It combines hydrophobic-acrylic impregnated foam sealant with factory pre-coated silicone bellows. It is available as standard single-sided (**DSM**) or optional double-sided (**DSM-DS**).

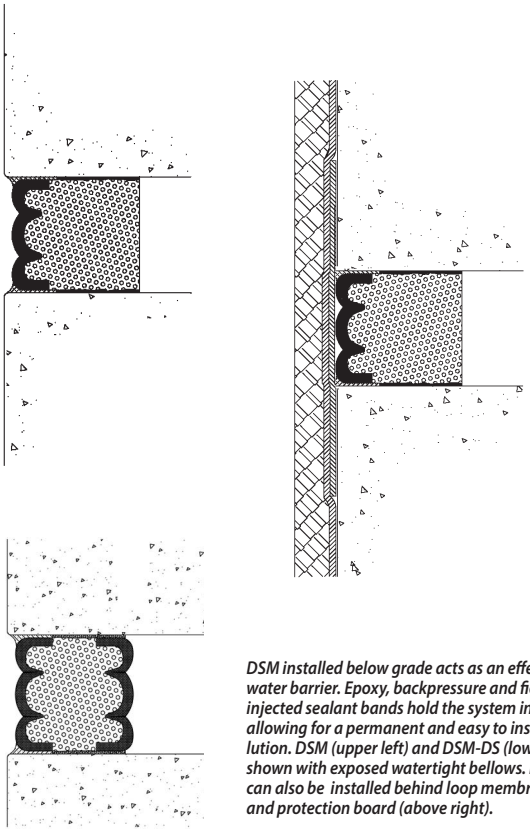
- Warranted for watertightness
- 100% free of wax or asphalt compounds
- Used as a primary seal for exterior vertical below-grade walls for installation from the positive side
- Non-invasive anchoring
- Non-staining
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- 100% free of wax and asphalt
- Movement of +30% and -25% (Total 55%) of nominal size

DSM Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
1/2	(12)	1 1/2	(40)
5/8	(15)	1 1/2	(40)
3/4	(20)	1 1/2	(40)
1	(25)	2	(50)
2	(50)	2 1/2	(65)
3	(75)	2 3/4	(70)
4	(100)	3 1/2	(90)

DSM sizes are available in 1/4" increments in nominal sizes from 1" to 4". Consult EMSEAL for larger sizes. Nominal size is equivalent to joint gap size at mean temperature.

Typical DSM and DSM-DS Usage



DSM installed below grade acts as an effective water barrier. Epoxy, backpressure and field-injected sealant bands hold the system in-place allowing for a permanent and easy to install solution. DSM (upper left) and DSM-DS (lower left) shown with exposed watertight bellows. Both can also be installed behind loop membrane and protection board (above right).

Now Available

DSM System UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations

See page 25

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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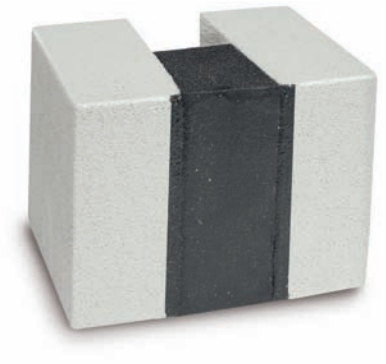
More Info @ Website

20H System



The 20H SYSTEM is installed from the positive side of the retaining wall into a pre-formed joint opening in cured concrete.

The 20H System is a tried and true preformed expanding foam sealant produced by impregnating permanently elastic, high-density, open-cell polyurethane foam with an acrylic polymer-modified, water-based asphalt emulsion. The architectural and engineering community has benefited from 20H System's performance for over 30 years.

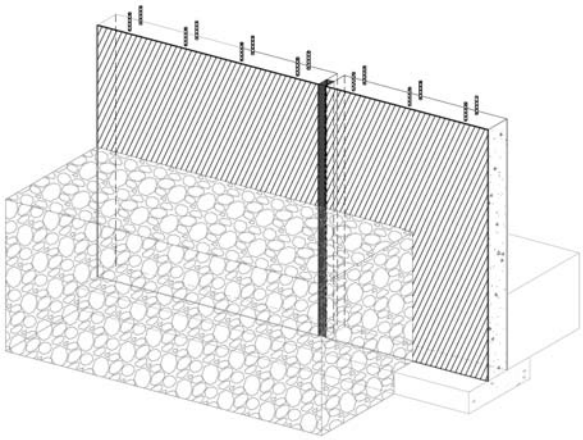
- Warranted for watertightness
- 100% free of wax
- Used as a primary seal for exterior vertical below-grade walls for installation from the positive side
- Non-invasive anchoring
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- Thermally insulating
- Movement of +/- 25% (Total 50%) of nominal size

20H System Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	(mm)	Inches	(mm)
1/2	(12)	1 1/2	(40)
5/8	(15)	1 1/2	(40)
3/4	(20)	1 1/2	(40)
1	(25)	2	(50)
2	(50)	2 3/4	(70)
3	(75)	3 1/2	(90)
4	(100)	4	(150)

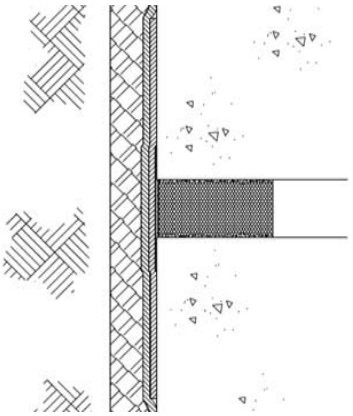
20H sizes are available in 1/4" increments in nominal sizes from 1" to 4". Nominal size is equivalent to joint gap size at mean temperature.

Typical 20H Usage

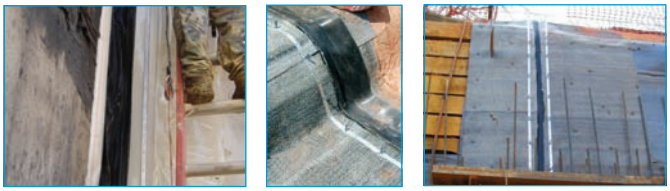


The 20H System in place with an active drainage system (supplied by others) to draw water away from the foundation.

The 20H System acts as a resilient support to below-grade water-proofing membranes.



BG System



Once the BG system is installed to the mud-slab or lagging, concrete is cast to encapsulate the waterproofing membrane and BG resulting in an integrated watertight system which accommodates movement at the joint gap.

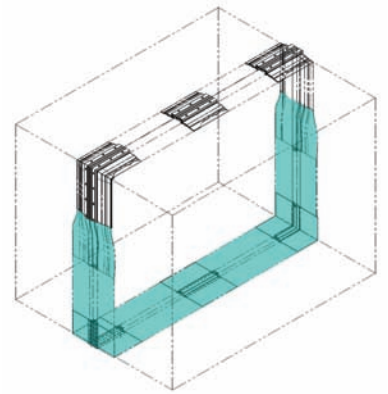
The **BG System** is a heavy-duty, double-celled, extruded, heat-weldable rubber gland flanked by integral side flashing sheets. It is combined in the field with a waterproofing membrane and accessories offered by the waterproofing membrane manufacturer for use in blind forming conditions. The BG System is the only expansion joint system designed for blind side as well as positive side applications.

- Integration of the below-grade waterproofing membrane and expansion joint system on the positive side of the wall or floor
- *Applications include:*

  Underside of the floor-slab of a foundation or tunnel with freestanding walls

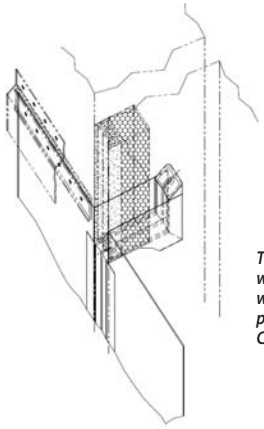
  Under the floor-slab and the walls of a blind-side formed foundation or tunnel

  On the walls only of a blind side formed foundation
- Ensures that movement at the joint gap is properly accommodated

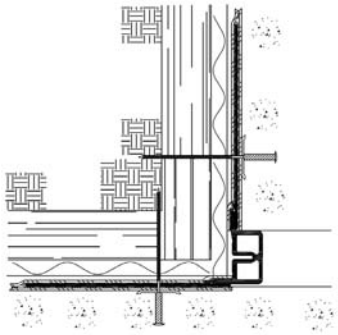


In this typical tunnel application, BG is used under the slab and up the blind-side formed walls. At the transition above the blind-side walls, BG wraps over the roof in softscapes or joins to MIGUTAN (see page 28) on the freestanding walls and across the roof or plaza deck in hardscape wear courses.

Typical BG System Usage



The BG System on a vertical blind-side wall application with a "boot transition" where it joins with another EMSEAL product above grade (shown with COLORSEAL).



A typical inside corner application of the BG SYSTEM integrated with a blind-side waterproofing membrane.

For specifications and limitations see BG System at www.emseal.com or contact EMSEAL.

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www.emseal.com

DSM System

The **DSM System** is a traffic durable, joint-face adhered, precompressed primary seal. Using a patented microsphere-modified-acrylic impregnation and factory pre-coated with highway-grade silicone, this system builds on EMSEAL's track record of over 30 years of sealing horizontal plane joints with impregnated foam sealants.

- Warranted for watertightness
- 100% free of wax or asphalt compounds
- UV stable
- Non-invasive anchoring
- Non-staining
- Low-temperature flexible, high-temperature stable
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- Movement of +30% and -25% (Total 55%) of nominal size

DSM features easy installation. After epoxy has been applied to the substrate the DSM foam sticks are pushed into the joint. Adjoining sticks are aligned into the face of the already installed stick and held above the surface until the adjoining stick is seated into the joint.

The waterproofing of stadium expansion joints seen here in the precast seating bowl. DSM offers continuity of seal through changes in plane and direction.

DSM is uniquely suited to retrofitting existing joints and readily replaces failed caulk, compression seals, inflated seal, and closed-cell joint fillers.

The DSM SYSTEM is a traffic-durable, lasting solution to high movement and heavy load traffic found in today's parking structures. New construction and retrofit applications are a perfect fit for DSM.

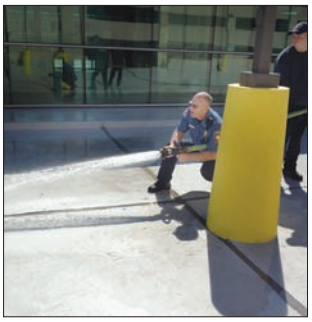
DSM System

DSM Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	(mm)	Inches	(mm)
1/2	(12)	1 1/2	(40)
5/8	(15)	1 1/2	(40)
3/4	(20)	1 1/2	(40)
1	(25)	2	(50)
2	(50)	2 1/2	(65)
3	(75)	2 3/4	(70)
4	(100)	3 1/2	(90)

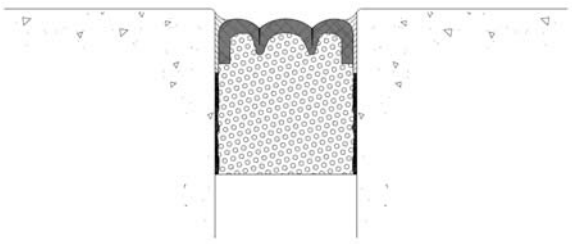
DSM sizes are available in 1/4" increments in nominal sizes from 1" to 4". Consult EMSEAL for larger sizes. Nominal size is equivalent to joint gap size at mean temperature.

DSM SYSTEM technology provides a structural joint sealant solution. Here DSM is installed at the top of a ramp where a drivelane transitions from on-grade to supported slab and from deck-to-deck to deck-to-wall.

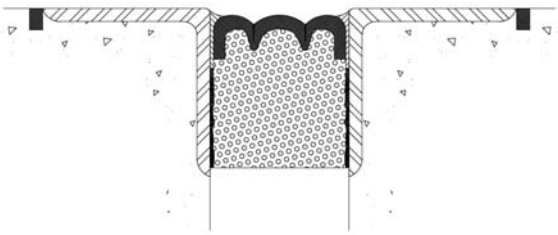


120 gallon per minute fire-hose water test proves DSM SYSTEM is watertight along its length, at joins and even at cross intersections of multiple sizes. Size switching ensures correct size product is in place despite joint size variation.

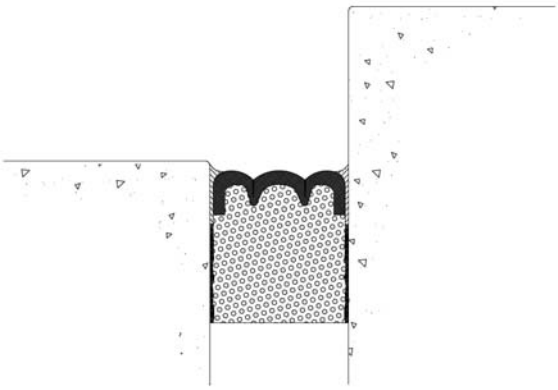
Typical DSM Usage



DSM is an ideal solution for deck to deck light and heavy traffic. This watertight product is easily installed and provides a low service cost during its life span.



Where metal angles exist and cannot be removed DSM can be installed into the existing metal angles.



The non-invasive anchoring method makes DSM a great choice for deck-to-wall applications.

Now Available

DSM System UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations

See page 25

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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www.emseal.com

More Info @ Website

EMSHIELD DFR2 / DFR3

US Patent 8,365,495

Traffic Durable, Watertight, 2-hour & 3-hour Fire-Rated Deck/Floor Expansion Joint

EMSHIELD DFR2 and **DFR3** are single unit fire-rated, traffic durable, high movement and watertight expansion joints. EMSHIELD DFR2 (Deck, Fire-Rated 2-Hours) and EMSHIELD DFR3 (Deck, Fire-Rated 3-Hours) have been tested and certified by Underwriters Laboratories (UL) to the rigors of UL and ULC 2079.

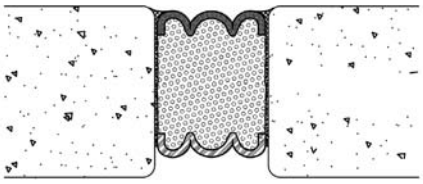
Installed entirely from floor/deck surface above allowing for easier installation without compromising continuity of the fire-barrier from obstructions (e.g. columns, HVAC, electrical, plumbing, etc.)

EMSHIELD DFR2 and DFR3 provide a watertight, clean handling, UV stable, non-staining, low-temperature-flexible, high-temperature-stable, traffic durable and fire-rated joint seal in a single installation process.

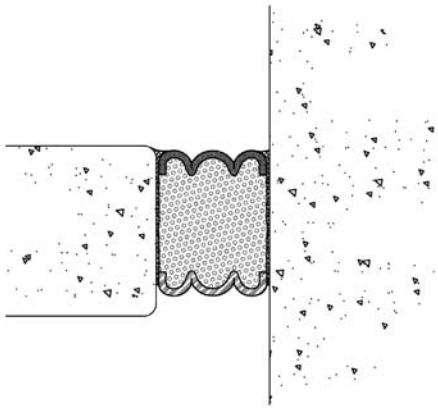
- Warranted for watertightness
- Built-in fire-rating
- Conforms to joint gap irregularities
- Installed from above floor/deck
  No lifts or holding labor needed
- Eliminates traditional need for fire-blankets or gutters
- Acoustic dampening – STC rated 62 / OITC rated 52
- Non-invasive anchoring
- Movement of +/- 25% (Total 50%)

Sound Attenuation STC 62 / OITC 52

Typical DFR2/DFR3 Usage



EMSHIELD DFR2 and DFR3 can be installed in interior and exterior horizontal locations needing a UL/ULC certified fire rating. Its non-invasive anchoring design allows it to be easily installed in deck-to-deck (floor-to-floor) or deck-to-wall locations. Parking garages, mechanical rooms, stadiums, retail stores, and other locations with trafficable floor/deck conditions will benefit from the installation of this watertight, sound-suppressing, thermally insulating fire-rated expansion joint.



EMSHIELD DFR2/3 Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
1/2	(12)	4	(100)
1	(25)	4	(100)
2	(50)	4	(100)
3	(75)	4	(100)
4	(100)	4	(100)

DFR2 nominal material size is equivalent to joint gap size at mean temperature. Also available in 1/4 inch increments from 1/2-inch to 4-inches.

Now Available
EMSHIELD DFR UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations
See page 25

UL Systems
FF-D-0075, FF-D-1086, FW-D-0052
FW-D-1073, FW-D-0078, FW-D-1090
FW-D-0053, FW-D-1075

ULC Systems
JF130, JF133, JF137, JF138

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More Info @ Website

SecuritySeal SSF2 / SSF3

US Patent 8,365,495

Vandalism / Water / Fire / Traffic / Sound

Pick-Resistant, 2-hour and 3-hour Fire-Rated, Watertight, Floor/Deck Expansion Joint

EMSHIELD SecuritySeal SSF2 and **SecuritySeal SSF3** are pick-resistant, watertight, 2-hour (SSF2) and 3-hour (SSF3) fire-rated expansion joints for horizontal locations requiring a hardened tamper-resistant surface.

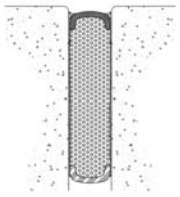
Installed entirely from floor/deck surface above allowing for easier installation without compromising continuity of the fire-barrier from obstructions (e.g. columns, HVAC, electrical, plumbing, etc.)

Floors and decks found in prisons, detention centers, public parking garages, mental and psychiatric hospitals, and school facilities are some of the many venues where SecuritySeal SSF is the perfect choice. Floor joints which join fire-rated walls in common rooms, mechanical rooms, and stairwells are typical locations of use.

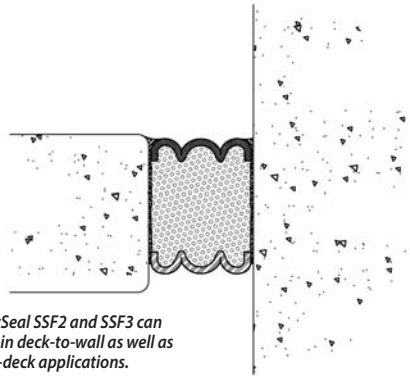
- Hardened pick-resistant surface
- 2-hour and 3-hour built-in fire-rated (UL/ULC-certified)
- Warranted for watertightness
- Non-invasive anchoring
- Installed from above floor/deck
  No lifts or holding labor needed
- Acoustic dampening – STC rated 62 / OITC rated 52
- Movement of +/- 25% (Total 50%) of nominal size

Sound Attenuation STC 62 / OITC 52

Typical SecuritySeal SSF Usage



SecuritySeal SSF2 and SSF3 are manufactured with a single bellow face when used in a gap from 1/2-inch (12mm) to 1 1/2-inch (40mm).



SecuritySeal SSF2 and SSF3 can be used in deck-to-wall as well as deck-to-deck applications.

SecuritySeal SSF2 / SSF3 Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
1/2	(12)	4	(100)
1	(25)	4	(100)
2	(50)	4	(100)
3	(75)	4	(100)
4	(100)	4	(100)

SSF2 and SSF3 nominal material size is equivalent to joint gap size at mean temperature. Also available in 1/4 inch increments from 1/2-inch to 4-inches.

Now Available
SecuritySeal UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations
See page 25

UL Systems
FF-D-0076, FF-D-0077, FF-D-1088
FF-D-1089, FW-D-0054, FW-D-0055
FW-D-0076, FW-D-0077

ULC Systems
JF135, JF136, JF139, JF141

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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HORIZONTAL COLORSEAL

HORIZONTAL COLORSEAL is selected to blend with the color of the surrounding substrate. It is an ideal solution in non-traffic situations and has the unique ability to handle curved joints large and small.

HORIZONTAL COLORSEAL is a high-movement silicone bellows system for deck applications used as a primary seal typically without a coverplate in non-traffic areas such as perimeters in decks or roofs. It can be used under a coverplate when pedestrian or vehicular traffic is expected.

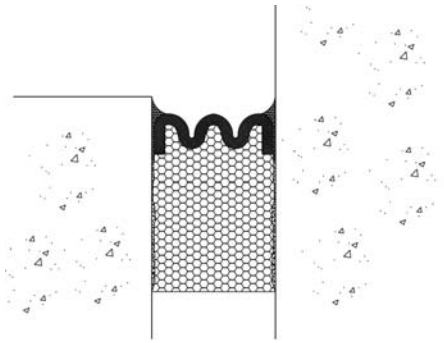
- Warranted for watertightness
- 100% free of wax or asphalt compounds
- Non-invasive anchoring
- 26 standard and custom colors *(see page 15)*
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- Thermally insulating and acoustic dampening
- Bellows are never under tension during joint movement
- No blockout required
- Movement of +/- 50% (Total 100%) of nominal size

HORIZONTAL COLORSEAL Sizing

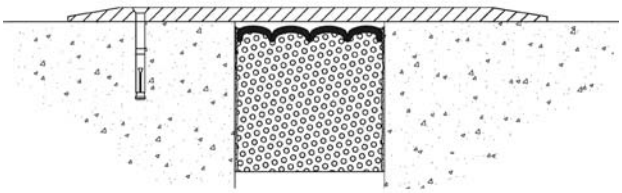
Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
1/2	(12)	1 1/2	(40)
5/8	(15)	1 1/2	(40)
3/4	(20)	1 1/2	(40)
1	(25)	1 1/2	(40)
2	(50)	2 1/2	(65)
3	(75)	3 1/2	(90)
4	(100)	4 1/2	(115)
5	(125)	5 1/2	(140)
6	(150)	6	(150)
7	(175)	7	(175)
8	(200)	8	(200)

HORIZONTAL COLORSEAL sizes are available in 1/4" increments in nominal sizes from 1" to 6", and 1/2" increments from 6" to 8". Nominal size is equivalent to joint gap size at mean temperature.

Typical HORIZONTAL COLORSEAL Usage



HORIZONTAL COLORSEAL is often installed at the junction of a deck and wall.



HORIZONTAL COLORSEAL is typically installed in an area where vehicular or pedestrian traffic does not come in direct contact with the seal. In vehicular situations this is often installed in conjunction with a metal coverplate.

Now Available
HORIZONTAL COLORSEAL UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations
See page 25

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

More Info @ Website

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UNIVERSAL-90's

Patent Pending

Continuity of Seal at Upturns, Downturns and Termination Points

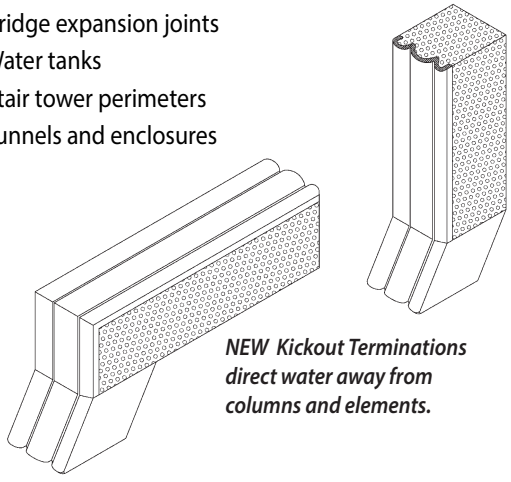
Universal-90's Transitions and Terminations are patent-pending, factory-fabricated, single-piece 90° units constructed from the same materials as the connecting precompressed expansion joint system. Bellows are constructed on both sides allowing a waterseal in an inner or outer 90° corner. This single unit achieves the greatest possible continuity of seal in transitions in planes, avoiding the limitations of field-made joins.

Using Universal 90's in your expansion joint design ensures continuity of seal. Installation time is reduced and the integrity of the seal is maintained.

Universal-90's are available for all coated EMSEAL products.

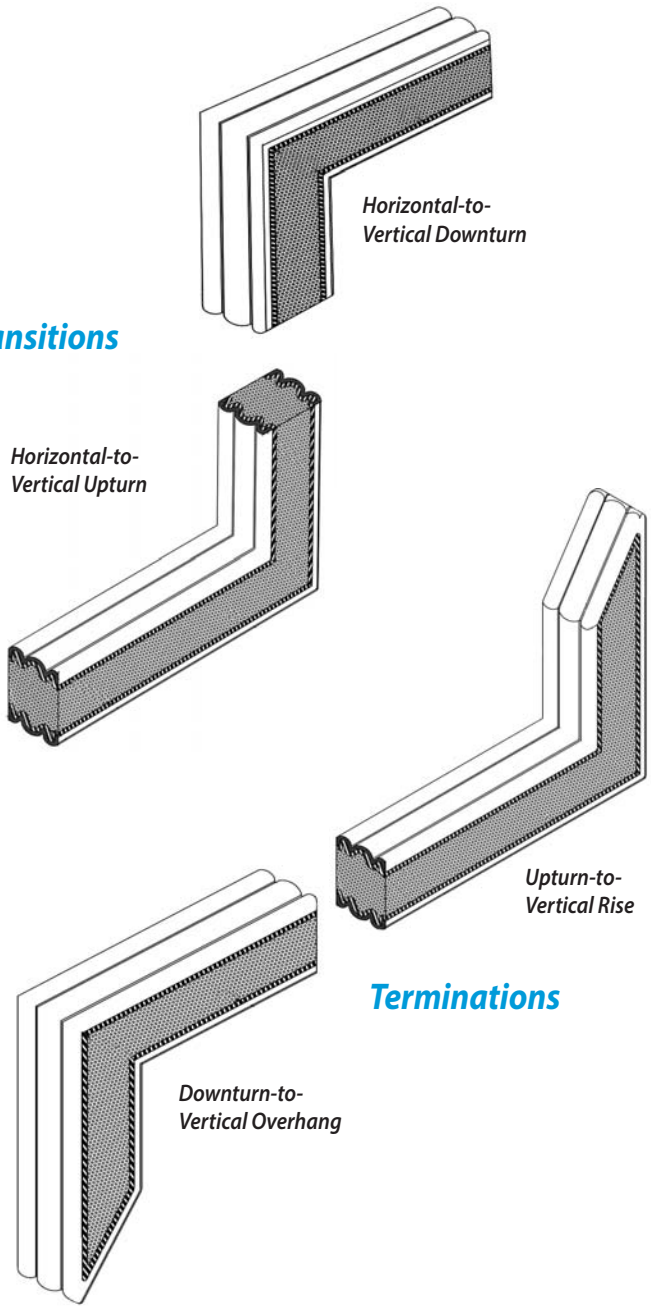
Some of the many applications:

- Stadiums
- Arenas
- Parking decks
- Floors
- Deck-to-wall
- Elevator tower perimeters
- Deck-to-deck
- Bridge expansion joints
- Water tanks
- Stair tower perimeters
- Tunnels and enclosures



NEW Kickout Terminations direct water away from columns and elements.

UNIVERSAL-90 Configurations



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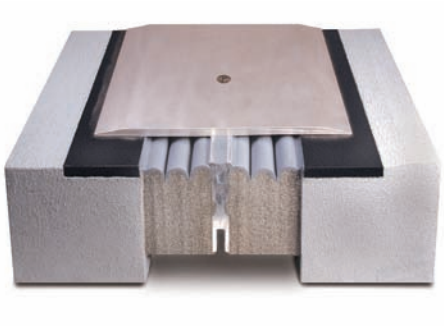
More Info @ Website

SJS – Seismic Joint System

Watertight by design©

US Patent: 6,532,708

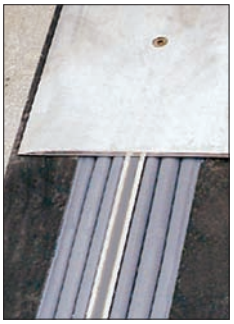


SJS is a watertight, high-movement, sound-dampened coverplate system for large and seismic expansion joint gaps. SJS is constructed from two horizontal joints pre-assembled in parallel adjacent to a heavy-duty extruded aluminum spline. The system contains no metal embeds, self-centering bars, or other unnecessary metal components. The spline acts as a receptor for attaching the surface-mounted traffic plates that bear vehicle and other loads.

- Warranted for watertightness
- Easy installation with non-invasive anchoring
- No hard metal-to-concrete connections
- Factory fabricated changes in plane and direction
- Aluminum or stainless steel coverplates available
- Field-adjustable plate support
- The quietest coverplate system available when installed with EMSEAL-supplied elastomeric nosing material
- Coverplate is easy to install with self-locating, vibration-dampening screws
- Does not depend on a gutter
- Designed for gaps of 4-inches (100 mm) or larger
- Movement of +/- 50% (Total 100%) of nominal size
- Fire-Rated version also available. *See Page 28*
  *SJS-FR1 1-hour UL/ULC-certified
  *SJS-FR2 2-hour UL/ULC-certified

The back pressure of the SJS foam and an epoxy adhesive provides watertightness with non-invasive anchoring without relying on a gutter. Installation is faster than other more complicated systems.

EMSEAL offers pre-fabricated factory transitions for treads and risers which allow for ease of installation and which also ensure watertightness in changes of plane.



Installation is completed with aluminum or stainless steel coverplates. The center spline functions as a continuous receptor for the self-locating coverplate screws allowing for greater ease of installation. The coverplate edge-chamfer is available in standard or optional low-slope configurations.

Watertightness is assured at the traffic surface negating the need for ineffective moisture barriers and secondary gutters.

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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FX: 416.740.0233

www.emseal.com

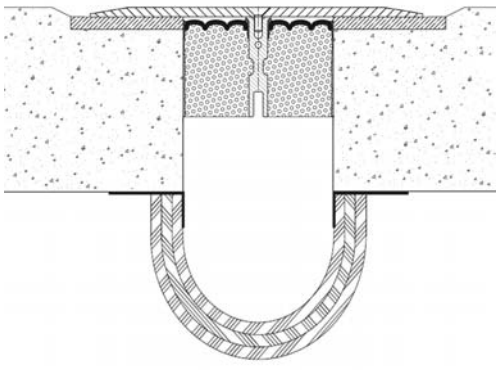
More Info @ Website

SJS – Seismic Joint System

SJS Sizing

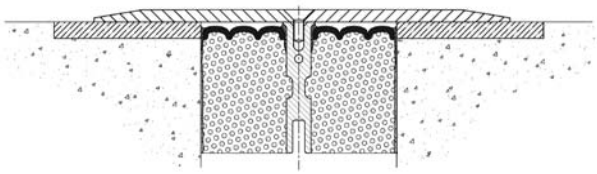
Joint Size at Mean T°F		Depth of Seal	
Inches	(mm)	Inches	(mm)
4	(100)	4	(100)
5	(125)	4	(100)
6	(150)	4	(100)
7	(175)	4	(100)
8	(200)	4	(100)
9	(225)	5	(125)
10	(250)	5	(125)
11	(275)	5	(125)
12	(300)	5	(125)
13	(325)	5	(125)
14	(350)	5	(125)
15	(372)	5	(125)
16	(400)	5	(125)
17	(425)	5	(125)
18	(450)	5	(125)

SJS sizes are available in 1" increments in nominal sizes from 4" to 24". Consult EMSEAL for larger sizes. Nominal size is equivalent to joint gap size at mean temperature.

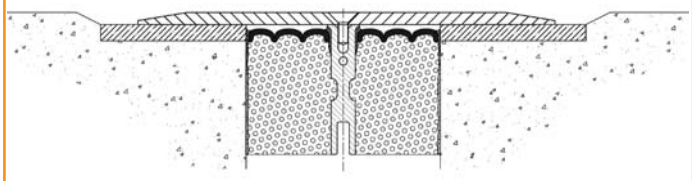


The SJS Seismic Joint System provides an effective large-gap waterproofing solution. A fire-rated version for expansion gaps from 4-inches to 10-inches is available (see SJS-FR on page 28). It can also be combined with a separate traditional fire-barrier to provide a fire rating at larger sizes. (illustration above)

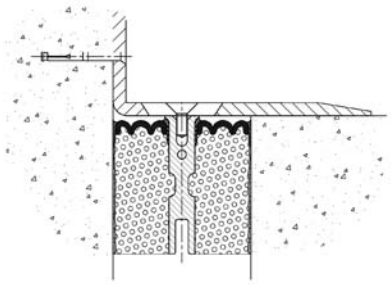
Typical SJS Usage



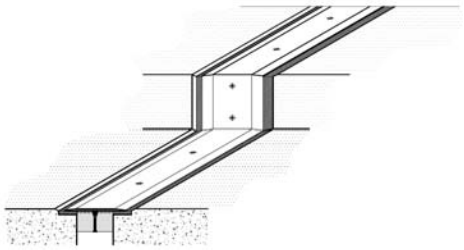
The SJS Seismic Joint System installed flush with the joint surface.



SJS installed recessed from the deck or road surface lowering the coverplate to the traffic surface height. The EMCRETE elastometric nosing material works to level the coverplate as well as to absorb and attenuate sound.



Installation can also be made at deck-to-wall conditions.



SJS maintains its watertight capabilities even with changes in plane and direction. Here horizontal and vertical coverplates cover the foam.

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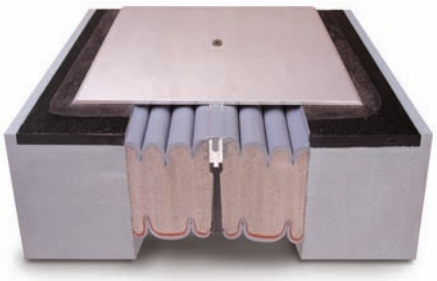
SJS-FR Fire-Rated Seismic Joint System

Watertight by design©

US Patents: 8,365,495 & 6,532,708



SJS-FR1 and SJS-FR2 are fire-rated, watertight expansion seals which are designed for larger gaps. Their topping coverplate makes them the best solution for applications such as parking decks, stadium concourses and seating levels, interior and exterior floors, and other locations where larger or seismic gaps need a fire-rated, watertight, traffic-bearing expansion joint.

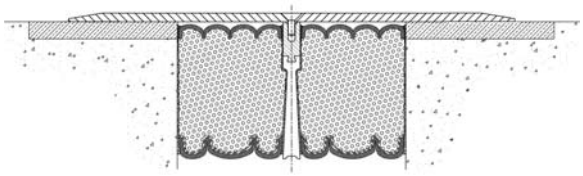
SJS-FR1 and **SJS-FR2** are UL/ULC certified (2079) fire-rated, watertight, high-movement, sound-dampened systems for large and seismic expansion joint gaps. Designed for use in fire-rated concrete decks/floors, interior or open air slabs, treads and risers, in both new or retrofit construction.

Installed from floor/deck surface above allowing for easier installation without compromising continuity of the fire-barrier from obstructions (columns, HVAC, electrical, plumbing, etc.)

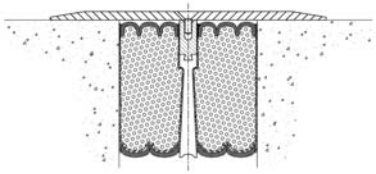
SJS-FR1 and SJS-FR2 have all of the performance advantages of the SJS System with the addition of a built-in UL-certified 1-hour (SJS-FR1) or 2-hour (SJS-FR2) fire rating. They are constructed of fire-retardant foam with an intumescent coating on the non-traffic underside. The top provides a warranted watertight seal. The topping coverplate provides a durable trafficable surface.

- 1-hour or 2-hour UL/ULC-certified fire-rated
- Built-in fire-rating
- Eliminates the need for fire-blankets or gutters
- Warranted for watertightness
- Installed from above floor/deck
  No lifts or holding labor needed
- Easy installation with non-invasive anchoring
- No hard metal-to-concrete connections
- Aluminum or stainless steel coverplates available
- Coverplate is easy to install with
  self-locating, vibration-dampening screws
- Movement of +/- 50% (Total 100%) of nominal size

Typical SJS-FR Usage



The SJS-FR System with surface blockouts built-up with EMSEAL's EMCRETE nosing material. Beneath the coverplate, the nosing material acts as a leveling course and a sound-absorbing buffer. The coverplate can sit proud of the deck or recessed to be flush with the deck.



The SJS-FR System is a highly trafficable UL-certified fire-rated expansion joint for larger gaps of 4-inches (100mm) to 10-inches (250mm). Surface-mount or rececessed coverplate is available in aluminum or stainless steel.

SJS-FR Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
4	(100)	6	(150)
5	(125)	6	(150)
6	(150)	6	(150)
7	(175)	6	(150)
8	(200)	6	(150)
9	(225)	6	(150)
10	(250)	6	(150)

Sizes are available in 1" increments in nominal sizes from 4" to 10". Nominal size is equivalent to joint at mean temperature.

SJS-FR1 1-hour fire-rated

SJS-FR2 2-hour fire-rated

SJS-FR1
UL Systems
FFD-1091, FFD-2014
ULC System
JF140

SJS-FR2
UL Systems
FFD-1092, FFD-2015
ULC System
JF142

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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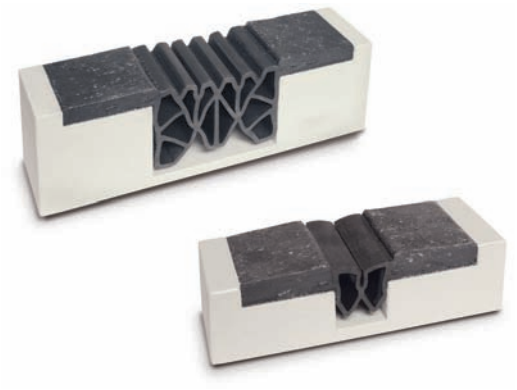
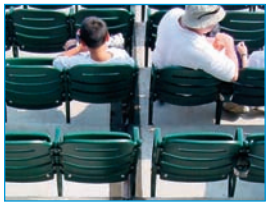
THERMAFLEX





THERMAFLEX provides a durable expansion joint which will stand up to direct traffic pressure. Factory-welded transitions are engineered to accommodate changes in plane over curbs, and in treads and risers on stadiums.

THERMAFLEX is a traffic-durable membrane/nosing system. The gland used in the system becomes integral with the deck as the nosing material penetrates the perforations in the gland, encapsulates the flanges, and bonds to the concrete.

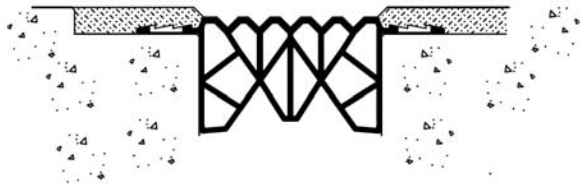
- Warranted for watertightness
- Double-cell or multi-cell glands
- Heat weldable Santoprene gland
- Factory-fabricated transitions and terminations
- Cold-applied nosing is self-curing
- Nosing material is a two-part polyurethane reinforced with fiberglass and silica sand
- Aggregate loading is conservatively maintained not to exceed two parts aggregate to one part resin by weight
- Nosing material is easily troweled
- Durable under vehicular traffic and extreme weather conditions

THERMAFLEX Sizing

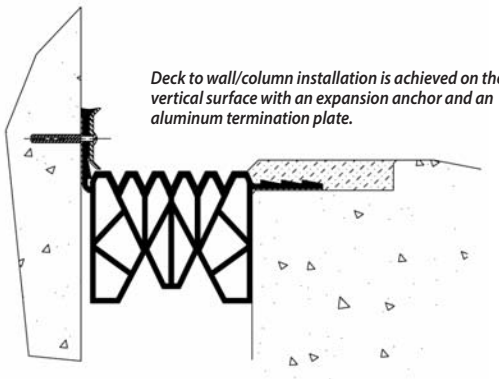
Model No.	Installation Width Min	Preferred	Max	Blockout Dimensions (Each side of joint gap)	
TM 1.5	1 in (25mm)	1 1/4 in (30mm)	2 in (50mm)	3/4 in x 3 in	(19mm x 75mm)
TM 2.5	1 1/4 (30)	2 1/4 (55)	2 3/4 (70)	3/4 x 3	(19 x 75)
TCR 300	1 7/8 (47)	2 1/8 (53)	2 3/4 (70)	3/4 x 3 1/2	(19 x 90)
TCR 400	2 1/4 (55)	2 3/4 (70)	3 3/4 (95)	3/4 x 3 1/2	(19 x 90)
TCR 500	3 (75)	3 1/2 (90)	4 3/4 (120)	3/4 x 3 1/2	(19 x 90)
TCR 600	4 1/2 (115)	4 3/4 (120)	5 1/2 (140)	3/4 x 3 1/2	(19 x 90)

For size variations or information please consult EMSEAL technical services

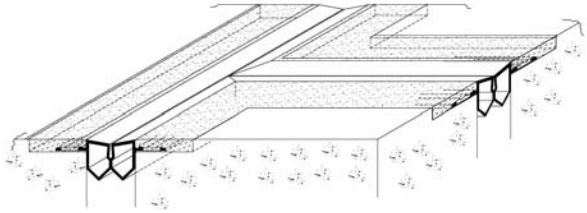
Typical THERMFLEX Usage



THERMAFLEX is constructed of extruded thermoplastic Santoprene® rubber sealing glands with punched flanges embedded in a high-strength, flexible, impact-absorbing elastomeric nosing.



Deck to wall/column installation is achieved on the vertical surface with an expansion anchor and an aluminum termination plate.



Sealing glands are heat-weldable allowing for changes in direction or plane while maintaining watertightness. Factory-fabricated transitions allow for ease of installation. EMSEAL warrants its transitions both within the technology and transitions made in the vertical plane between dissimilar EMSEAL technologies to be watertight.

More Info @ Website
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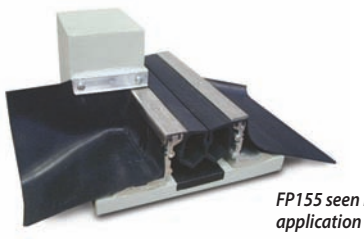
www.emseal.com

MIGUTAN FP110 / FP155

MIGUTAN FP110 and **FP155** are unique designs incorporating side membrane sheets which integrate with the deck waterproofing system to form a continuous, completely watertight system. MIGUTAN is the only system of its kind with a 20-year track record and tens of thousands of feet installed and functioning. MIGUTAN is the most configurable, warranted, split-slab expansion joint in the industry.

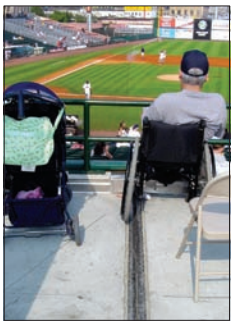
- Exceptional durability under vehicular traffic and extreme weather conditions
- Can be used below grade or on decks
- Heavy-duty positive interlocking aluminum side rails
- Steel side legs available
- Stainless steel gland-retaining capping strips
- Sealing insert and side flashing sheet are heat-weldable thermoplastic rubber (TPR)
- Factory fabricated tees, crosses, directional changes, column details, terminations and changes in plane
- Leg heights from 1" (25mm) to 12" (300mm) as well as low leg height versions
- Available with integrated coverplate



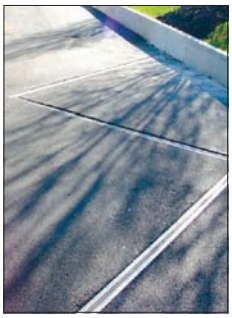
FP155 seen in deck-to-wall application at a column transition.

Leg heights from 1" (25mm) to 12" (300mm) accommodate pavers, asphalt, concrete and other wear-course toppings allowing for exceptional durability under vehicular traffic and extreme weather and temperature conditions.

The MIGUTAN sealing insert and side flashing sheets are made of heat-weldable thermoplastic rubber. This ensures continuity of seal through transitions in plane and direction as well as at terminations. The flashing sheets are embedded in and encapsulated by the deck waterproofing membrane. The result is a static integration of the joint and the waterproofing that will not fail from cyclical movement across the joint.



The MIGUTAN design provides watertight joints over occupied spaces below such as stadiums. It also provides for a pedestrian-friendly and accessible surface.



Positive interlocking metal rails (or alternative stainless steel pins) eliminate misalignment between adjoining sections. This method has proven successful with tens of thousands of feet installed and functioning over the past 20 years. Factory-fabricated direction changes ensure continuity of seal.

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

More Info @ Website

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EMSEAL® www.emseal.com

MIGUTAN FP110

Model No.	Leg Height	Max. Joint Gap at Mean T°F	Movement Range	Total Movement	Overall Width System at Mean Temp	Exposed Width System at Mean Temp
FP110/25	1 in (25mm)	2 3/8 in (65mm)	*See Below*	*See Below*	9 in (225mm)	*See Below*
FP110/45	1 3/4 (45)	3 in (75mm)	+1 1/4 in (+30mm) -1 1/4 in (-30mm)	2 1/2 in (60mm)	9 3/8 in (237mm)	4 3/8 in (112mm)
FP110/60	2 3/8 (60)					
FP110/80	3 1/8 (80)					
FP110/95	3 3/4 (95)					
FP110/115	4 1/2 (115)					
FP110/130	5 1/8 (130)					
FP110/150	5 7/8 (150)					
FP110/165	6 1/2 (165)					
FP110/185	7 1/4 (185)					
FP110/200	7 7/8 (200)					
FP110/220	8 5/8 (220)					
FP110/235	9 1/4 (235)					
FP110/255	10 (255)					
FP110/270	10 5/8 (270)					
FP110/290	11 1/2 (290)					
FP110/305	12 (305)					

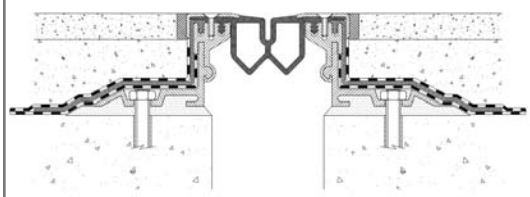
For size variations or information please consult EMSEAL technical services. Visit www.emseal.com

For sizes above 150mm: Intended for non-vehicular-traffic plaza decks. Extra-high leg heights accommodate thick overlay systems and topping slabs. These models are supplied with extra-long (double-width) side sheets to ensure proper integration with deck waterproofing.

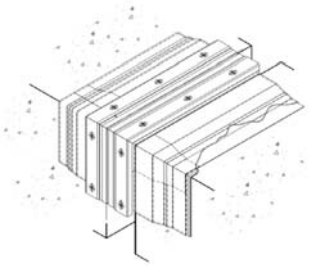
MIGUTAN FP155

Model No.	
FP155	***Available in same leg heights as the FP110 (see chart above)*** ***Migutan FP155 is engineered for wider joint gaps.*** ***Contact EMSEAL for joint gap and performance specifications.***

Typical MIGUTAN Usage

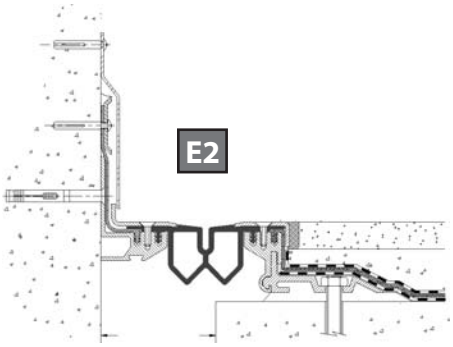


In deck-to-deck applications, MIGUTAN is ideal for plaza and podium decks, stadium concourses, arrival roadways, and anywhere waterproofed split slabs are designed.

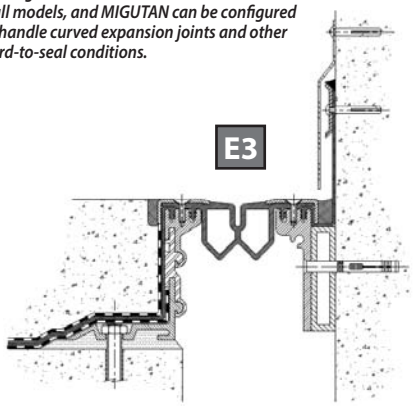


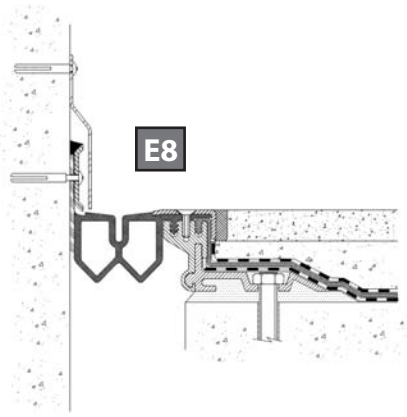
Factory-fabricated corners and transitions are part of the MIGUTAN system. Each change in plane or direction is constructed from field-supplied measurements to create a custom, watertight transition within the MIGUTAN system or where the joint requirement changes to other EMSEAL technologies.

Typical MIGUTAN Usage



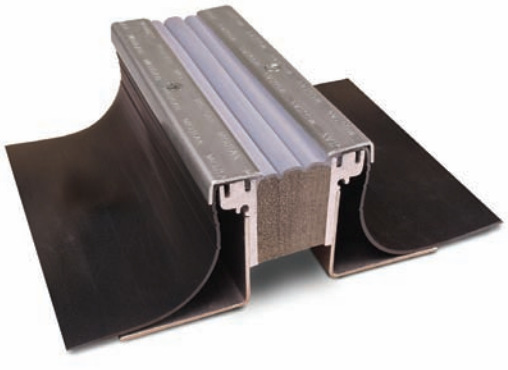
EMSEAL offers numerous options for MIGUTAN applications at deck-to-wall conditions as shown here in E2, E3 and E8 configurations. The EMSEAL technical service team can help you map a MIGUTAN solution to integrate deck-to-deck models to deck-to-wall models, and MIGUTAN can be configured to handle curved expansion joints and other hard-to-seal conditions.





Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

DSM-FP



DSM-FP is a versatile expansion joint for split-slab construction as well as split slab-to-solid slab applications. Fabricated transitions from deck to wall, at curbs, sidewalks, parapets, tees, and crosses are available with the DSM-FP.

DSM-FP is a trafficable joint system for plaza decks & split slabs designed to straddle joint gaps up to 4-inches (100mm). 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.

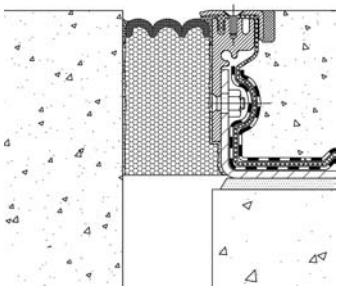
- Ideally suited to parking decks, stadium concourse, plazas, and other smaller-joint, waterproofed split-slab applications
- Exceptional durability under pedestrian traffic and extreme weather conditions
- Stainless steel flashing sheet capping strips
- Side flashing sheets are heat-weldable thermoplastic rubber (TPR)
- Factory fabricated changes in plane and direction
- Steel side legs available in many heights
- Aluminum or stainless steel coverplates available
- New construction or retrofit of failed older construction
- Movement of +30% and -25% (Total 55%) of nominal size

DSM-FP Sizing

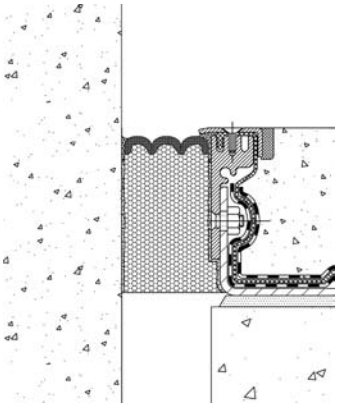
Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
1/2	(12)	1 1/2	(40)
5/8	(15)	1 1/2	(40)
3/4	(20)	1 1/2	(40)
1	(25)	2	(50)
2	(50)	2 1/2	(65)
3	(75)	2 3/4	(70)
4	(100)	3 1/2	(90)

DSM-FP sizes are available in 1/4" increments in nominal sizes from 1" to 4". Consult EMSEAL for larger sizes. Nominal size is equivalent to joint gap size at mean temperature.

Typical DSM-FP Usage

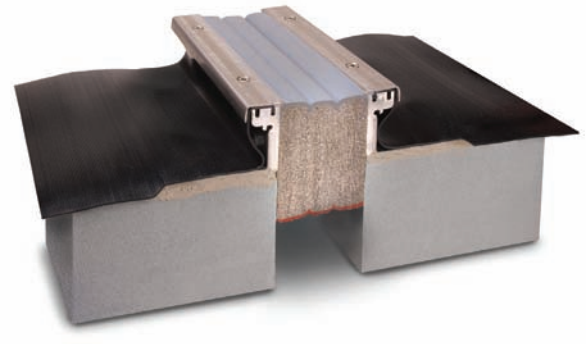


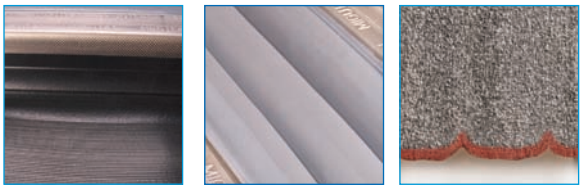
DSM-FP is an effective watertight expansion joint which can bridge split-slab and solid-slab construction. The connection to solid-slab construction is made directly to the slab substrate. The split-slab connection is made to the DSM-FP mounting leg. The split-slab connection incorporates an integral waterproofing flashing sidesheet embedded between layers of the deck waterproofing membrane on the structural slab and beneath the topping slab. Shown here are deck-to-deck (above) and deck-to-wall (below).



EMSHIELD DFR-FP

US Patent: 8,365,495





Heat-weldable TPR sidesheets (left) integrate with the deck waterproofing system. Silicone bellows provide a watertight top surface (center) of EMSHIELD UL/ULC fire-rated foam. The bottom of each foam stick is coated with fire-retardant intumescent (right).

EMSHIELD DFR-FP is a single unit fire-rated trafficable joint system for plaza decks & split slabs designed to straddle joint gaps up to 4-inches (100mm). DFR-FP expands the use of EMSHIELD DFR to waterproofed split-slab deck designs through the use of side flashing sheets that integrate with the deck waterproofing membrane. EMSHIELD DFR-FP has been certified by Underwriters Laboratories (UL) to the rigors of UL and ULC 2079.

Installed entirely from the deck surface above -- allowing for easier installation without compromising continuity of the fire-barrier from obstructions (e.g. columns, HVAC, electrical, plumbing, etc.) DFR-FP provides a watertight, clean handling, UV stable, low-temperature-flexible, high-temperature-stable, traffic durable fire-rated joint seal.

- Warranted for watertightness
- Ideally suited to parking decks, plazas, stadium concourses, and other smaller-joint, fire-rated waterproofed split-slab applications
- Built-in UL-certified fire-rating
- Exceptional durability under pedestrian traffic and extreme weather conditions
- Eliminates traditional need for fire-blankets or gutters
- Stainless steel flashing sheet capping strips
- Side flashing sheets are heat-weldable thermoplastic rubber (TPR)
- Factory fabricated changes in plane and direction
- Steel side legs available in many heights
- New construction or retrofit of failed older construction
- Movement of +/- 25% (Total 50%) of nominal size

DFR-FP Sizing

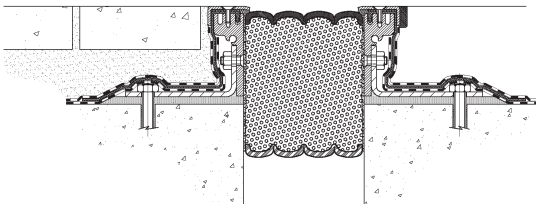
Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
1/2	(12)	5	(125)
5/8	(15)	5	(125)
3/4	(20)	5	(125)
1	(25)	5	(125)
2	(50)	5	(125)
3	(75)	5	(125)
4	(100)	5	(125)

DFR-FP sizes are available in 1/4" increments in nominal sizes from 1" to 4". Nominal size is equivalent to joint gap size at mean temperature. Leg heights are available from 1-inch (25mm) to 3-inches (75mm).

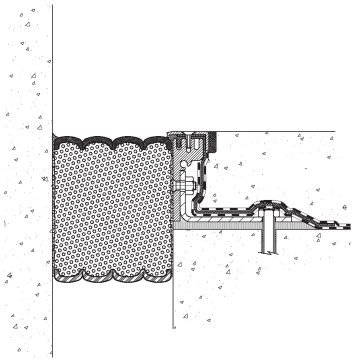
UL Systems
FF-D-0081, FF-D-1095
FW-D-0058, FW-D-1081

ULC Systems
JF147, JF151

Typical DFR-FP Usage



DFR-FP offers a fire-rated waterproof solution to split-slab deck-to-deck situations. Shown here in a 4-inch expansion gap bridged with a fire-rated expansion joint system. 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.



DFR-FP is an effective fire-rated watertight expansion joint which can bridge split-slab to solid-slab construction. The connection to solid-slab construction is made directly to the slab substrate. The split-slab connection is made to the DFR-FP mounting leg.

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

More Info @ Website

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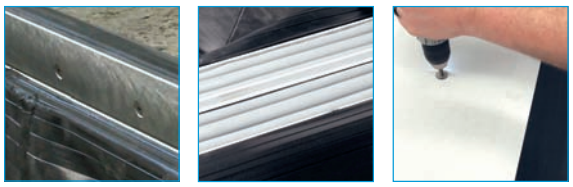
SJS-FP Seismic Joint System



SJS-FP installation consists of the two sub-assemblies which make up the system. The mounting leg assembly and integral waterproof sidesheets are installed onto the structural slab and integrated with the deck waterproofing system. The watertight, precompressed SJS assembly is installed between the rails of the mounting leg assembly and then capped with an aluminum or stainless steel coverplate.

SJS-FP expands the use of the SJS System to waterproofed split-slab deck designs through the use of side flashing sheets that integrate with the deck waterproofing membrane. The system is made up of two sub-assemblies which include the structural-slab mounted supporting legs with integral waterproofing side sheets and the joint sealing and coverplate assembly.

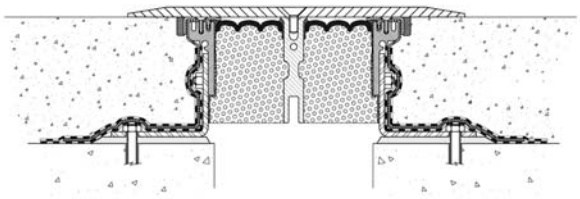
- Ideally suited to stadium concourse, roadway, plaza, and other large-joint, waterproofed split-slab applications
- Exceptional durability under vehicular traffic and extreme weather conditions
- Stainless steel flashing sheet capping strips
- Side flashing sheets are heat-weldable thermoplastic rubber (TPR)
- Factory fabricated changes in plane and direction
- Steel side leg available in many heights
- Aluminum or stainless steel coverplates available
- No hard connection between coverplate and concrete substrate
- The quietest coverplate system available
- Self-locking, vibration dampened screws
- Movement of +50% and -50% (Total 100%) of nominal size

SJS-FP Sizing

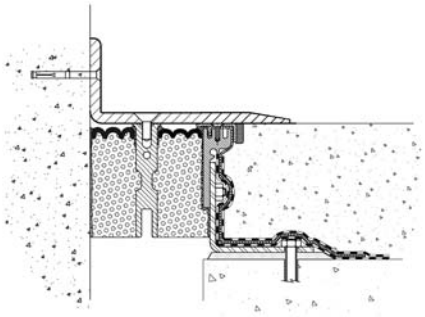
Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
4	(100)	4	(100)
5	(125)	4	(100)
6	(150)	4	(100)
7	(175)	4	(100)
8	(200)	4	(100)
9	(225)	5	(125)
10	(250)	5	(125)
11	(275)	5	(125)
12	(300)	5	(125)
13	(325)	5	(125)
14	(350)	5	(125)
15	(372)	5	(125)
16	(400)	5	(125)
17	(425)	5	(125)
18	(450)	5	(125)

SJS-FP can be straddle structural slab gaps from 1" to 24". In the topping slab, sizes are available in 1" increments in nominal sizes from 4" to 24". Consult EMSEAL for larger sizes. Nominal size is equivalent to joint at mean temperature.

Typical SJS-FP Usage



The SJS-FP system features the addition of side flashing sheets which are fully encapsulated in a static, watertight integration with the deck's buried waterproofing membrane.



Watertight configurations and factory-fabricated transitions and terminations are available for deck-to-wall and other conditions.

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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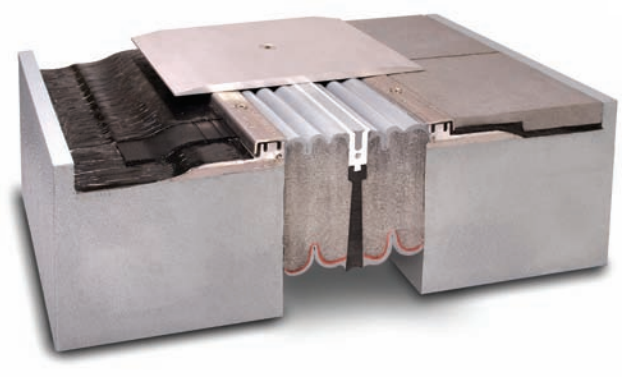
SJS-FP-FR

US Patent: 8,341,908



Heat-weldable TPR sidesheets (left) integrate with the deck waterproofing system. Watertight silicone bellows (center) sit under the trafficable coverplate. Spline (right) continues down through fire-retardant intumescent coating and silicone outer coating which line the SJS-FP-FR underside.

The **SJS-FP-FR System** is designed to provide a UL/ULC-certified fire-rated, watertight, trafficable joint system for use in seismic and large joint openings in decks of split-slab design. SJS-FP-FR expands the use of the SJS-FR SYSTEM through side flashing sheets that integrate with the deck waterproofing membrane.

The primary use is for plaza decks & split slabs designed to straddle joint gaps from 4-inches (100mm) to 10-inches (250mm). SJS-FP-FR has been certified by Underwriters Laboratories (UL) to the rigors of UL and ULC 2079.

Installation is entirely from the deck surface above -- allowing for easier installation without compromising continuity of the fire-barrier from obstructions (e.g. columns, HVAC, electrical, plumbing, etc.)

- Warranted for watertightness
- Built-in UL 2079-certified 1-hour or 2-hour fire-rating
- Eliminates traditional need for fire-blankets or gutters
- Exceptional durability under pedestrian traffic and extreme weather conditions
- Easy installation with non-invasive coverplate anchoring
- Side flashing sheets are heat-weldable thermoplastic rubber (TPR)
- Aluminum or stainless steel coverplates available
- Coverplate is easy to install with self-locating, vibration-dampening screws
- New construction or retrofit of failed older construction
- Movement of +50% and -50% (Total 100%) of nominal size

SJS-FP-FR Sizing

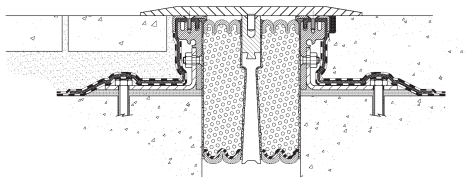
Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
4	(100)	6	(150)
5	(125)	6	(150)
6	(150)	6	(150)
7	(175)	6	(150)
8	(200)	6	(150)
9	(225)	6	(150)
10	(250)	6	(150)

SJS-FP-FR sizes are available in 1" increments in nominal sizes from 4" to 10". Nominal size is equivalent to joint gap size at mean temperature. Leg heights are available from 1-inch (25mm) to 3-inches (75mm).

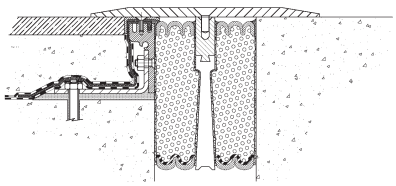
UL Systems
FF-D-1093, FF-D-2016
FW-D-1096, FW-D-2018

ULC Systems
JF143, JF148

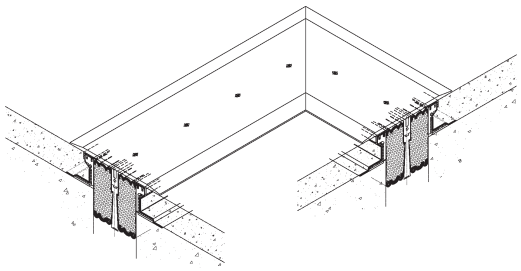
Typical SJS-FP-FR Usage



SJS-FP-FR offers a fire-rated waterproof solution to split-slab deck-to-deck situations (above). Shown here is an expansion gap bridged with a fire-rated expansion joint system installed in a concrete substrate (right) and a concrete slab with pavers (left).



SJS-FP-FR can also fit applications of split-slab decks to solid-slab decks. The back pressure of SJS foam provides the required anchoring and sealing against the solid-slab side (right) of the expansion gap.



Watertight trafficable transitions are also achievable with the SJS-FP-FR system. Shown here is a 90-degree horizontal transition.

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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More Info @ Website

Submerseal

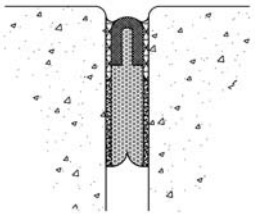
Submerseal is manufactured to seal joints which come in contact with chlorinated and contaminated water as found in pools, fountains and wastewater treatment plants. Because its silicone surface meets NSF/ANSI Standard 61 it is applicable for potable water tanks and storage structures.

Watertight Expansion Joint for Continuous Immersion in Chlorinated, Saline or Potable Water and Wastewater Environments

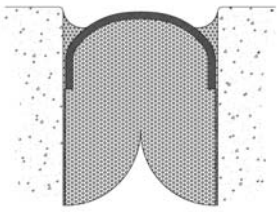
Submerseal is a water resistant, joint-face-adhered, precompressed, primary seal for retrofit and new structural expansion joints and construction joints where continuous or intermittent immersion or contact with chlorinated water (up to 5 ppm), saline water, potable water or wastewater is planned. Typical applications include swimming pools, fountains, water parks, water features, water tanks, etc.

- Warranted for watertightness
- Non-invasive anchoring
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- 100% free of wax or asphalt compounds
- NSF/ANSI STANDARD 61 compliant
- Resistant to chlorinated water (up to 5 ppm)
- Resistant to saline water
- Resistant to certain effluent concentrations *(contact EMSEAL)*
- Bellows is never under tension during joint movement
- No blockout required
- Movement of +/- 25% (Total 50%)

Typical Submerseal Usage



Submerseal is available in sizes to fit gaps as small as 1/2-inch (12mm).



Larger gaps up to 4-inches (10mm), submerged or that come in contact with chlorine or other contaminants, are typical Submerseal applications.

Submerseal Sizing

Joint Size at Mean T°F		Depth of Seal	
Inches	*(mm)*	*Inches*	*(mm)*
1/2	(12)	1 3/4	(45)
5/8	(15)	1 3/4	(45)
3/4	(20)	1 3/4	(45)
1	(25)	2 1/8	(55)
2	(50)	3	(75)
3	(75)	3 1/2	(90)
4	(100)	5	(125)

Submerseal sizes are available in 1/4" increments of nominal sizes from 1" to 4". Nominal size is equivalent to joint gap size at mean temperature.

Now Available
Submerseal UNIVERSAL-90's
Factory-Fabricated Transitions & Terminations
See page 25

Hydrostatic Head Pressure Resistance

Joint Size		Continuous Immersion Max. Allowable Liquid Depth	
Inches	(mm)	Feet	(meters)
1	(25)	30	(10)
2	(50)	20	(6)
3	(75)	15	(5)
4	(100)	10	(3)

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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CHEMSEAL System

Watertight by design©

The CHEMSEAL System remains watertight in contact with chemicals and chemical dilutions.

CHEMSEAL is a watertight expansion joint system which features a polysulfide bellows sealing surface backed by an integral pressure-resisting impregnated foam backing. The polysulfide bellows side provides resistance to many chemicals commonly found in non-pure solutions. This makes CHEMSEAL a solution for joints and seams occurring in waste water tanks, chlorinated water reservoirs, industrial testing tanks or where diluted-chemical contact may occur and where EMSEAL's more practical Submerseal is not suitable *(consult EMSEAL)*.

CHEMSEAL / DSF Features

- Warranted for watertightness
- 100% free of wax or asphalt compounds
- UV stable
- Non-invasive anchoring
- CHEMSEAL: Polysulfide bellows for chemical resistance
- DSF: NSF/ANSI-compliant silicone bellows formulated to avoid contamination of liquids or solids
- Low-temperature flexible, high-temperature stable
- Conforms to joint gap irregularities
- Movement of up to +25% and -25% (Total 50%) of nominal size

DSF System

Restaurants, food preparation and manufacturing facilities benefit from the DSF System which provides a watertight seal with NSF/ANSI-compliant silicone bellows which will not contaminate liquids.

DSF System is a joint-face-adhered, precompressed, primary seal for retrofit and new structural expansion joints and construction joints in walls and floors in food production and preparation environments.

Compliant to NSF/ANSI Standard 61 for contact with potable drinking water and with FDA Regulation CFR 177.2600 for indirect contact with food.

CHEMSEAL / DSF Sizing

Joint Size at Mean T°F		Depth of Seal		Notes
Inches	*(mm)*	*Inches*	*(mm)*	CHEMSEAL / DSF
1/2	(12)	1 1/2	(40)	CHEMSEAL / DSF
5/8	(15)	1 1/2	(40)	CHEMSEAL / DSF
3/4	(20)	1 1/2	(40)	CHEMSEAL / DSF
1	(25)	2	(50)	CHEMSEAL / DSF
2	(50)	2 1/2	(65)	CHEMSEAL / DSF
3	(75)	2 3/4	(70)	CHEMSEAL / DSF
4	(100)	3 1/2	(90)	CHEMSEAL / DSF
5	(125)	5 1/2	(140)	DSF
6	(150)	6	(150)	DSF
7	(175)	7	(175)	DSF
8	(200)	8	(200)	DSF

CHEMSEAL is available in nominal sizes of 1/2" to 4". DSF is available in nominal sizes of 1/2" to 8". Sizes are available in 1/4" increments. Nominal size is equivalent to joint gap size at mean temperature. Consult EMSEAL for larger size applications.

In submerged applications the amount of hydrostatic head pressure that can be resisted by CHEMSEAL or DSF is affected by joint width and depth of seal. Consult EMSEAL for size requirements.

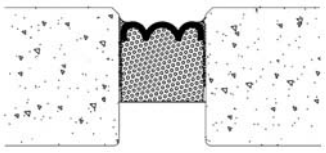
Now Available

CHEMSEAL and DSF UNIVERSAL-90's

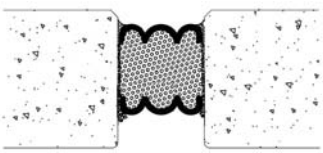
Factory-Fabricated Transitions & Terminations

See page 25

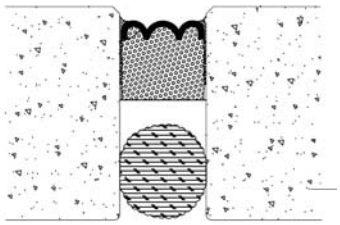
Typical CHEMSEAL and DSF Usage



CHEMSEAL and DSF are single-sided expansion joints located between joint faces acting as a single unit, primary seal. Liquid and chemical contacts with bellows face. Both CHEMSEAL and DSF can also be installed in a vertical wall.



CHEMSEAL and DSF can function as a double-sided expansion joint acting as a single unit, primary seal. Both CHEMSEAL and DSF can also be installed in a vertical wall.



As seen here CHEMSEAL can be used as an element in various waterproofing system designs. Shown above with oakum or open-cell backer rod soaked with hydrophobic polyurethane grout.

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

More Info @ Website

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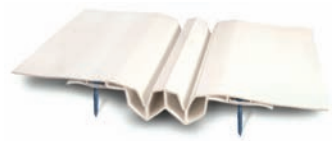
RoofJoint

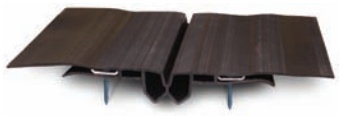
Watertight by design©

Patent Pending

RoofJoint RJ-0400 Black



RoofJoint RJ-0400 Reflective White



RoofJoint RJ-0200 Black

RoofJoint RJ-0200 Reflective White

EMSEAL RoofJoint, roof expansion joint, is a dual-seal, double-flanged, extruded thermoplastic rubber system for sealing expansion joints in roofs. Watertightness is achieved through positive integration with the roofing membrane and a purpose-designed system for transitioning between the joint in the roof and joints in walls.

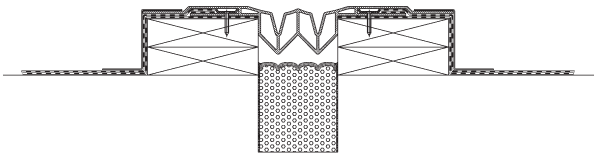
Unique to EMSEAL's RoofJoint is the double-level flange. This flange configuration facilitates multi-layered, watertight integration with the roofing membrane. The lower flange is welded or adhered to the roof membrane brought up to the joint. A termination bar and anchors mechanically lock the flange to the roof decking or blocking. The upper flange counterflashes the termination bar and underlying membrane ensuring that penetrations made by the attachment of the termination bar are completely sealed. The upper flange is further flashed to the roofing membrane by means of the roofing manufacturers' standard flashing tape or by overwelding a strip of roofing.

RJ-0200 for joint gaps of 1-2 inches (25-50mm) with movement capability of 2 1/2 inches (60mm).

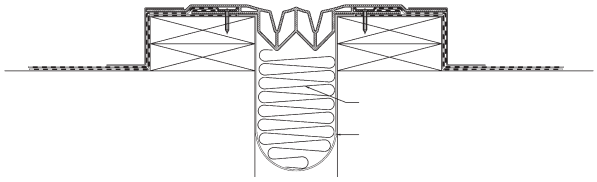
RJ-0400 for joint gaps of 2-4 inches (50-100mm) with movement capability of 5 inches (125mm).

- High movement
- Redundant sealing
- Double-level roof-membrane integration flange
- Redundant fastening—adhesion or welding & termination bar
- Heat welded transitions at tees, crosses, roof-to-wall, etc.
- Watertight transition to SEISMIC COLORSEAL wall joints
- Uniquely addresses wall joint to roof joint interface
- Available in TPV (to TPO) or NPVC (to PVC) for broadest liquid and sheet membrane compatibility
- Available in black or reflective white color

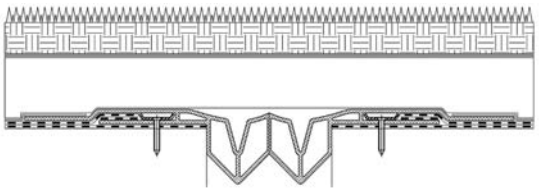
Typical RoofJoint Usage



HORIZONTAL COLORSEAL beneath RoofJoint ensures complete building envelope sealing, ensures thermal insulation, and adds a third water seal to the roof assembly.



RoofJoint installed over standard roofing material (by others) of fiberglass or mineral wool insulation batts. This solution provides no continuity or R-value with the wall expansion joint and is subject to insulation loss due to compression set and through moisture retention due to condensation accumulation in the batt insulation.



RoofJoint is ideally suited for use in sealing the structural slabs beneath green, vegetative roof assemblies.

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

More Info @ Website

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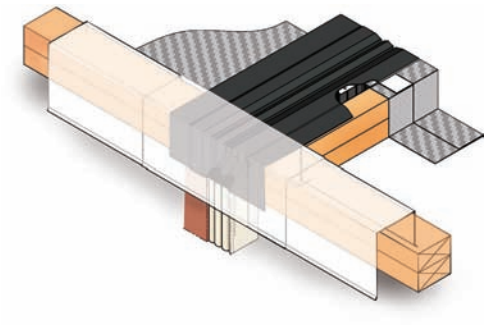
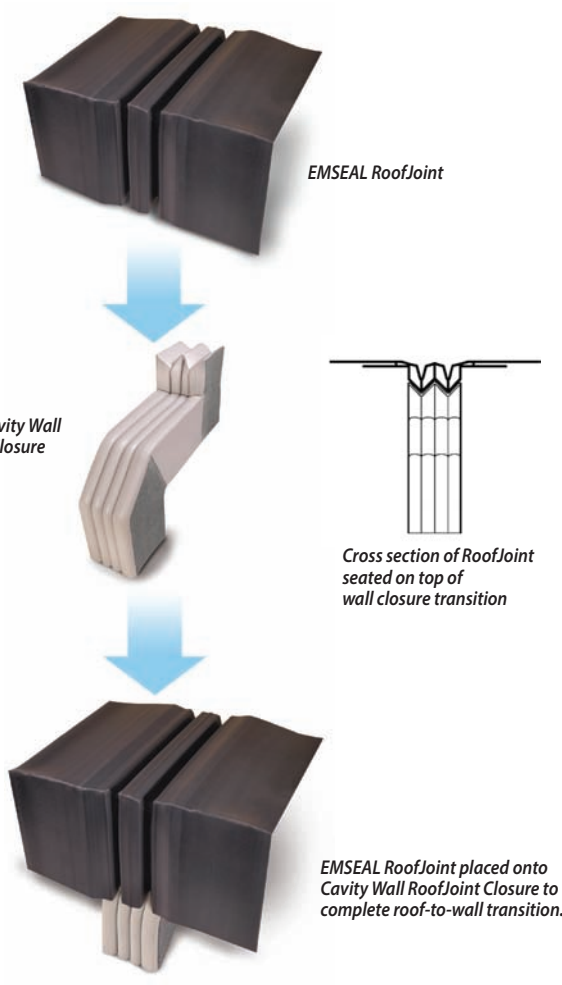
RoofJoint Wall Closure



RoofJoint solves the problem of a watertight transition from the roof to the wall expansion joint. The solution lies in the EMSEAL RoofJoint seated in the joint-gap, a factory welded downturn transition in the RoofJoint gland that is sealed at a ship-lapped 45-degree angle to mate with an interlocking factory-fabricated RoofJoint Wall Closure transition piece. The result is an integrated wall and roof expansion joint system that is watertight.



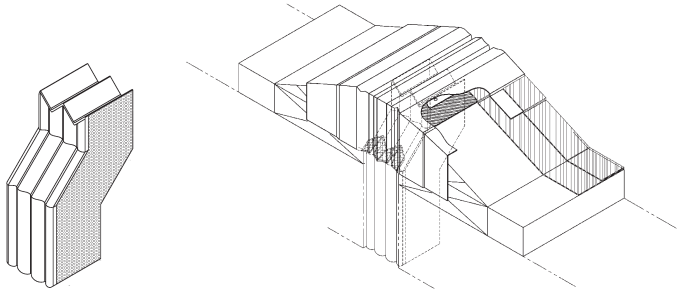
EMSEAL RoofJoint

EMSEAL Cavity Wall RoofJoint Closure

Cross section of RoofJoint seated on top of wall closure transition

EMSEAL RoofJoint placed onto Cavity Wall RoofJoint Closure to complete roof-to-wall transition.

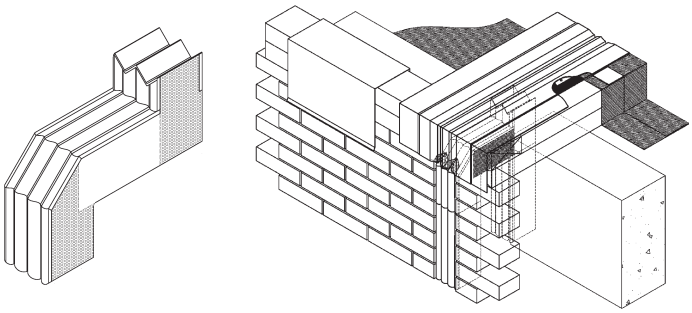
Two Options: Solid-Wall RoofJoint Closure or Cavity-Wall RoofJoint Closure



Solid-Wall RoofJoint Closure

This factory-fabricated transition piece is manufactured from EMSEAL's SEISMIC COLORSEAL wall-expansion joint material. This single unit piece has factory-coated silicone bellows on the top and upper-back face for integration with SEISMIC COLORSEAL in the wall and HORIZONTAL COLORSEAL as a secondary seal and insulator across the roof. The silicone-coated top side of the closure is shaped to match the underside of the RoofJoint extrusion.

The Solid-Wall RoofJoint Closure is installed before installing the RoofJoint. It is installed ¾" down from the roof deck or wood blocking surface. A sealant band of silicone is applied across the upper mating surface of the closure. The RoofJoint is then installed. The underside of the RoofJoint will mate with the top of the already installed closure.



Cavity-Wall RoofJoint Closure

Like the solid-wall closure, the cavity-wall RoofJoint closure is a factory-fabricated transition piece made from SEISMIC COLORSEAL. The difference is an extended, horizontal setback portion of foam to bridge the cavity from facade to structural backup wall. The sides of the "bridge" are additionally coated with silicone to seal them against moisture in the cavity and to constrain the lateral expansion of the foam into the cavity.

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

More Info @ Website

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www.emseal.com

QuietJoint

QuietJoint easily fills in gaps and joints between partitions, walls and windows, head of walls, and other non-moving locations.

Sound Attenuation STC 53 / OITC 38

Sound, Draft, Heat, Cold, and Dust Blocking Acoustic Joint Filler for Interior Non-moving Joints and Gaps.

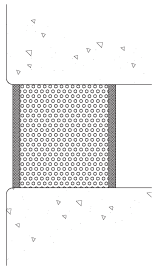
QuietJoint is colorized, versatile and ideally suited to fill gaps between the ends of permanent, semi-permanent, or movable partitions, head-of-wall and other conditions.

QuietJoint is supplied in uncompressed and slightly oversized full-story 10-foot lengths. Installation of QuietJoint is quick and easy requiring no mechanical anchors or epoxies. When installed the material is compressed by hand and squeezed into the gap or opening. The internal backpressure of the material secures it to the joint faces.

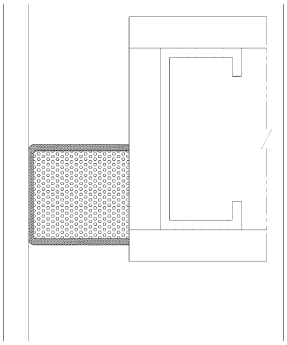
The product is composed of a self-extinguishing, fire-retardant*-acrylic-impregnated foam, factory pre-coated with high-quality silicone. QuietJoint makes an excellent sound attenuator which will conform to slight irregularities of gap construction.

- Acoustic dampening –
  STC rated 53 (in a STC 56 wall)
  OITC rated 38 (in a OITC 38 wall)
- Thermally insulating (R-value 5.96/inch of depth)
- Quick, easy installation
- Non-invasive anchoring
- 26 standard and custom colors (see page 15)
- Conforms to joint gap irregularities
- Size switching accommodates joint gap variations
- UV-stable
- Clean-handling, non-staining
- Won't suffer from compression set
- 100% free of wax or asphalt compounds

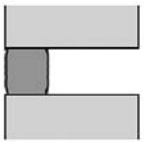
Typical QuietJoint Usage



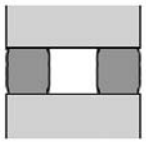
Two-sided SHH for use between opaque walls and partitions.



SHG is coated on three-sides for use in glass window-to-wall applications where one containing surface is transparent.



When filling a gap as a single unit, 2-inch QuietJoint displays impressive sound attenuation capabilities - STC 53 in a STC 56 wall and OITC 38 in an OITC 38 wall. It also has an R-value of 5.96 for its 1-inch of depth.

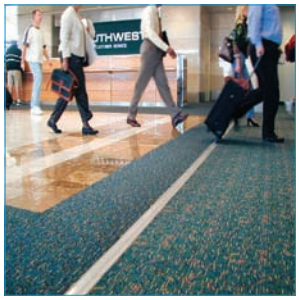


When two units of 2" QuietJoint are installed from both sides of a gap the sound dampening capabilities increase - STC 72 in a STC 72 wall and OITC 60 in an OITC 61 wall. It also has an R-value of 11.92 for its 2-inches of depth.

** QuietJoint is fire-retardant and does not promote the spread of flame or smoke, however it has not been UL-tested for fire-rating.*

Interior Products

EMSEAL offers more than 300 products or geometries for interior floors and walls to suit a variety of conditions or aesthetic requirements. For a complete listing and CAD details of interior joint solutions please visit www.emseal.com.



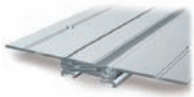
Interior Floor Joints

MIGUTRANS FS Series features heavy duty interlocking all-metal profiles for heavy point loads while the **FP Series** is designed to bridge various width joint gaps utilizing a robust rubber sealing insert. There are many configurations and leg height options within each series which permit installation into a pre-planned blockout. Also available are surface mount versions (**FN** and **FSN**), some with raised seals, so that tile or carpet can be installed flush to the top of the joint system for minimum visual disruption.

FS Series

FP Series

FN Series



FSN Series

FSC Series are made up of modular sections which slide together to increase the span of the joint. This series, along with the **Twinsert Series**, is designed for joints sized to seismic conditions and provide solutions for extremely large joint gaps by permitting insertion of the flooring materials as an inlay between rubber seals or metal inserts.

FSC Series

Twinsert Series

Interior Wall Joints

The wall selections include easy to install snap-cover all-metal versions such as the **WP Series** in a variety of joint sizes as well as the **KF Series**--all-metal or elastomeric-coated covers featuring rapid spring-anchor fastening.

WP Series

KF Series

Interior Floor Joints

Joint Sizes (up to)	Load Rating	Movement Capability	Composition	EMSEAL Product	Note	Image
9/16"	Heavy	**3/16"** (+1/8", - 1/16")	Solid Aluminum	**ESF 27**		
3/4" - 1"	Standard	**3/16"** (+1/8", - 1/16")	Alum/Elastomeric	**FN 20/12**	Surface Mount	
	Standard	**3/16"** (+1/8", - 1/16")	Alum/Elastomeric	**FKN 20/12**	Surface Mount	
	Standard	**3/16"** (+1/8", - 1/16")	Alum/Elastomeric	**FTN 20/12**	Surface Mount	
1 1/4"	Standard	**3/8"** (±3/16")	Alum/Elastomeric	**FV 35**		
	Standard	**3/8"** (±3/16")	Alum/Elastomeric	**FN 35/15**	Surface Mount	
	Standard	**3/8"** (±3/16")	Alum/Elastomeric	**FKN 35/15**	Surface Mount	
	Standard	**3/8"** (±3/16")	Alum/Elastomeric	**FTN 35/15**	Surface Mount	
	Medium	**3/8"** (±3/16")	Solid Aluminum	**FS 50**		
1 3/8"	Medium	**3/8"** (±3/16")	Solid Aluminum	**FS 40**		
1 1/2"	Standard	**3/8"** (±3/16")	Alum/Elastomeric	**FN 35/15**	Surface Mount	
	Standard	**3/8"** (±3/16")	Alum/Elastomeric	**FTN 35/15**	Surface Mount	
	Standard	**3/8"** (±3/16")	Alum/Elastomeric	**FKN 35/15**	Surface Mount	

EMSEAL offers an extended range of products. For more detailed information and drawings on any products found in these charts please visit www.emseal.com

More Info @ Website

Standard CAD details are available online at www.emseal.com. For application specific CAD details contact EMSEAL directly.

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Interior Floor Joints *(continued)*

Joint Sizes (up to)	Load Rating	Movement Capability	Composition	EMSEAL Product	Note	Image
2″	Medium	**3/4″** (±3/8″)	Solid Aluminum	**FSN 46**	Surface Mount	
	Heavy	**3/4″** (±3/8″)	Solid Aluminum	**FS 75**		
	Standard	**5/8″** (±5/16″)	Alum/Elastomeric	**FP 55**		
	Standard	**5/8″** (±5/16″)	Alum/Brass/Elastomeric	**FP 55 MS**	Brass Caps	
	Standard	**5/8″** (±5/16″)	Alum/SS/Elastomeric	**FP 55 Ni**	Stainless Capped	
	Medium	**1/4″** (±1/8″)	Alum/Elastomeric	**FPG 55**	Smooth Insert	
	Standard	**5/8″** (±5/16″)	Alum/Elastomeric	**FN 50/20**	Surface Mount	
	Standard	**5/8″** (±5/16″)	Alum/Elastomeric	**FKN 50/20**	Surface Mount	
2 1/8″	Medium	**7/8″** (±7/16″)	Alum/Elastomeric	**FP 65**		
	Medium	**3/8″** (±3/16″)	Solid Aluminum	**FSN 50/15**	Surface Mount	
2 1/2″	Medium	**5/8″** (±5/16″)	Alum/Elastomeric	**FN 50/20**	Surface Mount	
	Standard	**5/8″** (±5/16″)	Alum/Elastomeric	**FKN 50/20**	Surface Mount	
2 3/4″	Medium	**1 1/2″** (±3/4″)	Solid Aluminum	**FS 99**		
3″	Medium	**1 1/4″** (±5/8″)	Alum/Elastomeric	**FP 85**		
	Heavy	**1 1/4″** (±5/8″)	Solid Aluminum	**FS 110**		
	Standard	**1″** (+5/8″, - 3/8″)	Alum/Elastomeric	**FN 65/20**	Surface Mount	

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Interior Floor Joints *(continued)*

Joint Sizes (up to)	Load Rating	Movement Capability	Composition	EMSEAL Product	Note	Image
3 1/2"	Heavy	**3/4"** (±3/8")	Solid Aluminum	**FSN 75**	Surface Mount	
4"	Heavy	**1 1/2"** (±3/4")	Solid Aluminum	**FS 130**		
	Standard	**1 1/4"** (±5/8")	Alum/Elastomeric	**FSC 250/100**		
	Medium	**1 1/2"** (±3/4")	Alum/Elastomeric	**FP105**		
4 1/2	Medium	**2"** (±1")	Solid Aluminum	**FS 146**		
4 3/4"	Extra Heavy	**1 1/2"** (±3/4")	Solid Aluminum	**FS 155**		
	Heavy	**1 1/4"** (±5/8")	Solid Aluminum	**FSN 110**	Surface Mount	
5"	Heavy	**2 3/8"** (±1 3/16")	Solid Aluminum	**FS 160**		
5 1/2"	Heavy	**2 1/2"** (±1 1/4")	Solid Aluminum	**FS 185**		
	Heavy	**1 1/2"** (±3/4")	Solid Aluminum	**FSN 130**	Surface Mount	
6"	Heavy	**2 1/2"** (±1 1/4")	Solid Aluminum	**FSV 235**		
	Medium	**2"** (±1")	Solid Aluminum	**FSN 146**	Surface Mount	
6 1/2"	Heavy	**1 1/2"** (±3/4")	Solid Aluminum	**FSN 155**	Surface Mount	
8"	Standard	**1 1/4"** (±5/8")	Alum/Elastomeric	**FSC 350/200**		

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Interior Floor Joints *(continued)*

Joint Sizes (up to)	Load Rating	Movement Capability	Composition	EMSEAL Product	Note	Image
16″	Standard	**1 1/4″** (±5/8″)	Alum/Elastomeric	**FSC 550/250**		
Up to 24″	Standard	**Various**	Alum/Elastomeric	**FP/FP**		
	Medium	**Various**	Alum/Elastomeric	**FP/FP**		
	Heavy	**Various**	Solid Aluminum	**FS/FS**		 **Twinsert**
	Extra Heavy	**Various**	Solid Aluminum	**FS/FS**		
	Standard	**Various**	Alum/Elastomeric	**FSC**		

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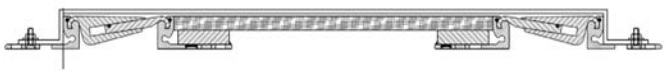
TWINSERT Interior Expansion Joint System
(shown with optional brushed aluminum insert)

The unique design of TWINSERT allows for the inclusion of decorative flooring material between the mechanical elements including tile, carpet, brushed aluminum or stainless steel. This allows for a final expansion joint to match the interior design of the adjacent surfaces.



The TWINSERT system for interior expansion joints bridges the widest range of joint gaps.

More Info @ Website

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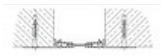
Wall and Ceiling Joints

Joint Sizes (up to)	Movement Capability	Composition	EMSEAL Product	Note	Image
3/4" to 1"	**3/16"** (+1/8", - 1/16")	Alum/Elastomeric	**FN 20/12**	Surface Mount	
1/2" to 1 1/2"	Maximum open joint: 1 3/4" Minimum closed joint: 1/4"	Elastomeric Covered	**KF 55/1530**	Surface Mount	
1 1/2" to 2 1/2"	Maximum open joint: 2 3/4" Minimum closed joint: 1/4"	Elastomeric Covered	**KF 55/3560**	Surface Mount	
1/2" to 3 1/4"	Maximum open joint: 3 1/4" Minimum closed joint: 1/4"	Solid Aluminum	**KF 250**	Surface Mount	
		Coated Aluminum	**FA-AL**	Surface Mount	
1 1/4" to 1 1/2"	**3/8"** (±3/16")	Alum/Elastomeric	**FN 35/15**	Surface Mount	
2" to 2 1/2"	**5/8"** (±5/16")	Alum/Elastomeric	**FN 50/20**	Surface Mount	
2 1/8" to 2 1/2"	**3/8"** (±3/16")	Alum/Elastomeric	**FSN 50/20**	Surface Mount	
2 1/2" to 3"	**1"** (±3/16")	Solid Aluminum	**FN 65/20**	Surface Mount	
3 3/4" to 4 1/4"	**1 1/4"** (±5/8")	Solid Aluminum	**FSN 99/20**	Surface Mount	
4"	**2"** (±1")	Solid Aluminum	**WP 255**		
8"	**2"** (±1")	Solid Aluminum	**WP 255 E2**	Corner Joints	

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Checklist PDF in English and Spanish available online at www.EMSEAL.com

THE EMSEAL CHECKLIST

Name_____ **Company**_____ **Date**_____

Phone_____ **Fax**_____ **Email**_____

Job Name_____ **Job Location (City & State)** _____

INSTALLATION LOCATION

☐ Interior
☐ Exterior
1

☐ Wall
☐ Floor/Deck
2

☐ Above Grade
☐ Below Grade
☐ Submerged
3

CONSTRUCTION TYPE

☐ New Construction
☐ Retrofit Construction
4

FIRE RATING

☐ No Fire Rating
Fire Rating: ☐1-hr ☐2-hr ☐3-hr
5

EXPANSION GAP INFORMATION

Joint Gap Width(s): _____
Varies from: _____ *to* _____ *(over its length)*
6

Joint Substrate Depth:
_____
7

Total Footage:
_____
8

Have Gap Dimensions Been Field Measured? ☐ Yes / ☐ No
Substrate Surface Temp. _____ Ambient Temp. _____
9

Substrate Composition: _____
(e.g., concrete, brick, metal, etc.)
Metal Pour Stops?: ☐ Yes / ☐ No
10

Movement *(if known):*
_____
(e.g., ± 1" thermal; ± .5" shear, etc.)
11

Joint is: ☐Primary Seal
☐Secondary Seal
12

Joint Will Seal Out: ☐Rain/Water ☐ Cold/Heat
☐Sound ☐Air ☐Vermin ☐Other _____
13

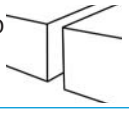
Are There Transitions? ☐ Yes *(explain)* / ☐ No
_____
14

How Does the Joint Terminate?
_____
15

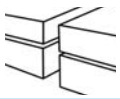
FOR HORIZONTAL DECK/FLOOR JOINTS (ONLY)

DECK CONSTRUCTION

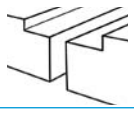
Is this a Solid Slab Condition?
☐ Yes / ☐ No



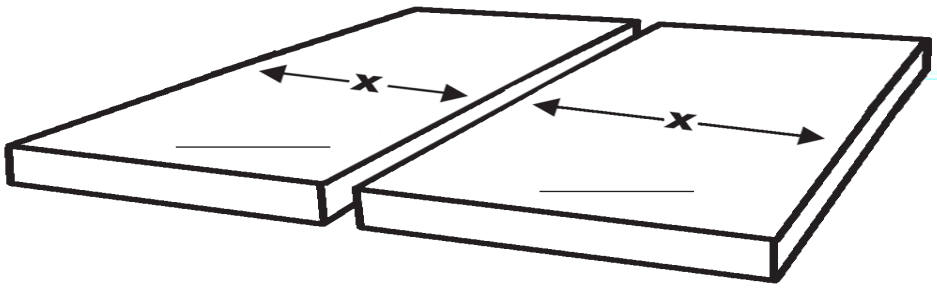
Is this a Split Slab Condition?
☐ Yes / ☐ No



Does the Joint have Blockouts?
☐ Yes / ☐ No



16



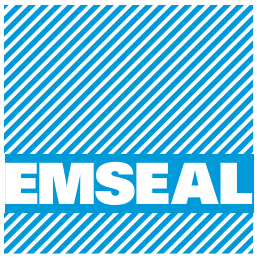
Traffic Types *(check all that apply)*:
☐Car ☐Bus ☐Pedestrian ☐None
☐Other _____
17

Please fill in the slab width dimemsions at each "x" . If one substrate of your joint is a wall instead of a slab, please denote that "x" as "Wall" instead of giving a dimension. If more than one joint occurs within the same immediate area, please draw them and the appropriate dimensions. Attach additional drawings as needed.

Please include any relevant details when submitting checklist to EMSEAL

Architect: _____ **Engineer:** _____ **Contractor:** _____ **Owner/Developer:** _____

Please FAX or Email to EMSEAL ***Fax: (508) 836-0281 / Email: techinfo@emseal.com / Phone: (508) 836-0280***



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Rev 8.0 4/14 Web