



## TECH DATA Horizontal Colorseal™

### Product Description

- **Horizontal Colorseal** is an evolution of EMSEAL's Colorseal product with reduced compression in the expanding foam backing, field-applied epoxy adhesive on the joint faces, and a field-applied silicone corner-bead between the silicone "bellows" sealing element and the substrates.
- Horizontal Colorseal is produced by coating an acrylic-impregnated open-cell poly-urethane foam with silicone.
- The expanding foam is an acrylic adhesive infused into the cellular foam base material. This new chemistry incorporates a hydrophobic microsphere component never before available in a sealant formulation.
- The silicone external facing is factory applied at a width greater than maximum joint extension and is cured before final compression.
- When compressed, a bellows is created in the coating. As the joint moves, the bellows fold and unfold; the silicone primary seal is thus virtually never in tension.
- Horizontal Colorseal is supplied in shrink-wrapped lengths (sticks). It is precompressed to less than the joint size. After insertion, it expands against the joint faces.
- Non-invasive anchoring and sealing against the substrate is achieved through a combination of the back-pressure caused by the stored strain energy of compression in the foam backing, the field-applied epoxy adhesive, and the field installation of a corner bead of silicone at the substrate-to-bellows interface.

### Uses and Applications

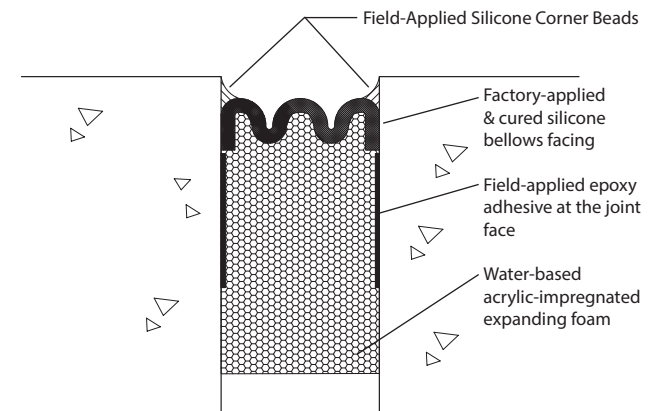
As a watertight seal in joints including:

- Decks: structural joints, perimeter joints, isolation joints at stair-towers/elevators
- Parapets, roofs
- Concrete covers on above-grade tunnels, wastewater tanks etc.
- Back-up seal beneath expansion joint-cover assemblies
- For aesthetically compatible transitions to joints in the vertical plane see tech data sheets for Seismic Colorseal

### Advantages

- Features the UV resistance, durability and impermeability of silicone.
- Virtually eliminates tensile stresses at sealant bond line and adverse effects of movement occurring before curing in typical sealant-and-backer-rod applications.
- Both mechanically and chemically anchored through back-pressure inherent in the permanently elastic open-cell foam and the adhesion of the epoxy adhesive and through the field-applied silicone corner bead.

**Figure 1: Horizontal Colorseal with field-applied epoxy and silicone corner beads. Substrates may vary.**



- Reduces installation labor and materials, such as need for accurate positioning of a backer-rod, site mixing, tooling, etc.
- Available in a wide range of standard and custom colors (consult EMSEAL).
- Supplied precompressed to less than joint size — no field compression required.

### Limitations

- Metal coverplates (by others) must be installed above Horizontal Colorseal where spiked-high-heel pedestrian traffic, or other high-point-load/small-contact-surface area loads are anticipated.
- As an alternative to cover plates for pedestrian heel-traffic applications, 'heel-traffic-resistant' wet sealant (by others) installed over a bond-breaker tape above recessed Horizontal Colorseal may be considered.
- If movement exceeds  $\pm 50\%$  (100% total) of joint-gap size at mean temperature, integrity of seal will be affected.
- Capable of lateral ("shear") movements up to  $\pm 50\%$  (total 100%) of joint size at mean temperature.
- Standard sizes from 1/2" (12mm) to 8" (200mm). Other sizes available subject to review of application: consult EMSEAL Technical Services.

## Installation

**IMPORTANT:** The following instruction-summary is generic. Refer to "Install Data: Horizontal Colorseal" and job-specific instruction of EMSEAL technician for complete procedures.

- Store indoors at room temperature. Expansion is quicker when warm, slower when cold.
- Ensure material nominal size matches joint size.
- Mix epoxy now and trowel onto joint faces.
- Remove shrink-wrap packaging, hardboard, and self-adhesive release paper.
- Wipe factory-applied release agent off silicone facing using clean, lint-free rag made damp with toluene.
- Apply thin bead of silicone sealant along edge of bellows at end where the material will join with next length.
- Insert material into joint with at least a 1/4" (6mm) recess and adhere to one side. Material expands to seal joint. (Wedge larger-sized material in place while it expands.)
- Blend silicone at joins into the silicone bellows to create a consistent finished appearance being sure not to restrict the folds of the bellows.
- Once material has equalized its expansion across the joint, gun and tool a 1/4" x 1/4" (4mm x 4mm) corner bead at the substrate-to-bellows interface (see Fig. 1). (Note: unpainted metal surfaces and some natural stone surfaces may require priming — consult EMSEAL.)

## CAD & Guide Specs

Guide specifications and CAD details are available online at emseal.com or by contacting EMSEAL.

## Warranty

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

## Availability & Price

Horizontal Colorseal is available for shipment internationally. Prices are available from local representatives or direct from the manufacturer. The product range is continually being updated, and accordingly EMSEAL® reserves the right to modify or withdraw any product without prior notice.

**Table 1: Typical Physical Properties & Testing**

Property / Test	Value	Test Method
Color	Standard: Precast white, limestone, black, gray, natural stone, bronze, sandstone, adobe tan, dusty rose, rustic brick, blue spruce, charcoal	
Durometer Hardness	Silicone Coating: Shore A, 15 pts.	ASTM D2240
Staining	None	ASTM C510
Weatherometer	Xenon Arc Weatherometer 2000 hrs — No visible deterioration	ASTM G26-77
Primary Surface Weathering	Atlas Weatherometer 6000 hrs—Minimal hardness change	ASTM G26-77
Temperature Range High Permanent Low Permanent	185°F (85°C) -40°F (-40°C)	ASTM C711
Tensile Strength	21 psi min; 145 kPa	ASTM D3574
Thermal Conductivity	0.34 Btu. in/hr. ft <sup>2</sup> °F (0.05 W/m.°C)	ASTM C518

**Table 2: Horizontal Colorseal Sizing**

Nominal Material Size (Joint Size at Mean T°F)		Depth of Seal	
1/2 in	(12mm)	1 1/2 in	(40mm)
3/4	(20mm)	1 1/2	(40mm)
1	(25mm)	1 1/2	(40mm)
1 1/2	(40mm)	2 1/4	(55mm)
2	(50mm)	2 1/2	(65mm)
2 1/2	(65mm)	2 3/4	(70mm)
3	(75mm)	3 1/2	(90mm)
3 1/2	(90mm)	3 3/4	(95mm)
4	(100mm)	4 1/2	(115mm)
4 1/2	(115mm)	5	(125mm)
5	(125mm)	5 1/2	(140mm)
5-1/2	(140mm)	5 3/4	(145mm)
6	(150mm)	6	(150mm)
6 1/2	(165mm)	6 1/2	(165mm)
7	(175mm)	7	(175mm)
7 1/2	(190mm)	7 1/2	(190mm)
8	(200mm)	8	(200mm)

Horizontal Colorseal is available in 1/4" sizes in addition to the sizing seen above. Sizes above 8" are also available. Consult EMSEAL Technical Services.

- Select nominal material size to correspond to joint-gap size at mean temperature.
- Material is supplied in shrink-wrapped sticks of 6.56 ft. (2 M).

"Dow Corning" is a registered trademark of Dow Corning Corporation, Midland, MI