



A SIKA COMPANY

PRODUCT DATA Backerseal

Secondary sealant to liquid sealants for joints in walls



Product Description

- **Backerseal (Greyflex)** is an economical preformed expanding foam sealant that provides watertight secondary sealing in applications: 1) behind conventionally installed liquid sealant and backer-rod or, 2) behind directly field-applied low-modulus liquid-sealants.
- When installed with directly-applied liquid sealant, a binary sealant system (combination of two technologies with performance that exceeds that of the individual components) is created.
- Backerseal consists of polyurethane foam infused with EMSEAL's microsphere-modified, hydrophobic acrylic.
- Backerseal is supplied in precompressed rolls in widths from 3 mm (1/8") up to 25mm (1 inch) and in shrink-wrapped lengths (sticks) in widths from 30mm (1 1/4 inches) up to 250 mm (10-inches).
- Supplied precompressed to less than the joint size with a mounting adhesive on one side. It is inserted into the joint and adhered to one joint-face. It then expands to seal the joint.
- Sealing against the substrate is achieved through a combination of the pressure-sensitive adhesive impregnation, and backpressure from the expanding foam.

Uses

- **Facades** – Backerseal can be used in vertical and horizontal joints in building facades of precast concrete, brick, natural stone, metal and most other substrates.
- **Brick and Block** – Backerseal provides waterproofing assurance in masonry control joints by backing up liquid sealants.
- **Precast, Stone, Metal and Other Panelized Systems** – Backerseal is ideally suited to sealing many other panelized cladding systems that rely on the "barrier-wall" sealing principle including metal cladding, window-wall systems, skylights, precast panels, etc.
- **EIFS** – The Backerseal binary sealant system is uniquely suited to properly sealing both new and retrofit joints in Exterior Insulation and Finish Systems (EIFS) because:
 - the acrylic impregnation is 100% compatible with EIFS substrates;
 - it places, as a result of its backpressure, minimal tension on the potentially weak substrate;

- it reduces the effects of air-pressure differential by virtue of its depth and resiliency;
- the binary sealant principle eliminates the moisture-trap area commonly created between wet sealants and backer rods;
- it thermally insulates the EIFS cladding at joints.
- **Acoustic and Anti-Vibration** – Backerseal is an effective anti-vibration and acoustic seal. It is used in many applications where sealing, weatherproofing, vibration absorption, noise reduction and thermal insulation are important.
- **Elimination of Stack (Chimney) Effect in Curtainwall Systems** – As a baffle in vertical mullions of curtainwall systems, Backerseal can mitigate moisture intrusion and the noisy movement of air within vertical mullions known as the "stack effect".

Advantages

- Provides an economical back-up seal in the event of puncturing or failure of the primary liquid sealant.
- Acrylic impregnation has proven compatibility with all major wet-sealants — will not contaminate substrate at wet-sealant bond area.
- Expanding foam maintains back-pressure on substrate.
- Provides directly-applied primary liquid-sealants with firm tooling surface while allowing liquid-sealant freedom of movement (no restraint of movement as a result of compression).
- Pre-formed and easy to install.
- Backerseal is odorless.

Figure 1: As a secondary sealant to liquid sealant with backer-rod.

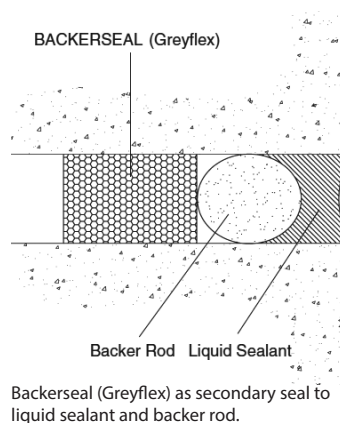


Figure 2: As part of a binary sealant system

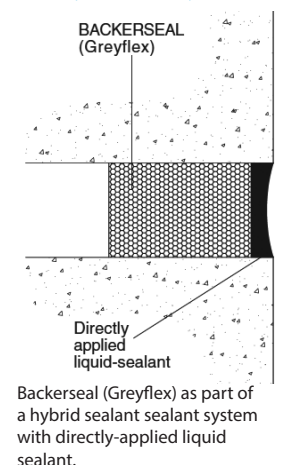


Table 1: Typical Physical Properties & Testing

Property / Test	Value	Test Method
Color	Charcoal Grey	
FOAM BASE Expanding Foam Sealant	Greyflex – Water-based, stabilized, acrylic impregnation	
Staining	None	ASTM C510
UV Resistance	Excellent	
Resistance to Aging	Excellent	
Mildew Resistance	Excellent	
Weatherometer	Xenon Arc Weatherometer 2000 hrs – No visible deterioration	ASTM G26-77
Intentional Damage Primary Surface	Xenon Arc Weatherometer 2000 hrs – No performance 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 ² -°F (0.05 w/m°C)	ASTM C518
Performance Tests:		
Rate of Air Leakage Through Curtain Walls	Passed	ASTM E283
Water Penetration of Curtain Walls by Uniform Static Air Pressure Difference	Passed: Up to 20.88 PSF	ASTM E331
Structural Performance of Curtain Walls by Uniform Air Pressure Difference (Gust Loads)	Passed: +62.66 PSF, -56.39 PSF	ASTM E330

Limitations

- Backerseal will not adhere to joints that are dirty or dust-covered or to surfaces coated with oils or release agents.
- Backerseal is not resistant to sustained contact with petroleum solvents, oils, selected waxes, active chlorine, heavy oxidized acids or strong lyes.
- Backerseal is designed for use in vertical surfaces such as walls and facades. It is not intended for use in the horizontal plane such as floors or decks.

Joint Seal

Characteristics

- The joint-sealing capabilities — weathertight, acoustic, thermal, dust, etc., — of Backerseal are determined by the degree of compression of the material. Consult EMSEAL.
- Backerseal is rated for joint movement of +25%, -25% (total 50%) of nominal material width.

Joint Design

- Substrate faces must be parallel and have sufficient clear depth to fully support Backerseal as well as the liquid sealant to be applied.
- Substrates must be capable of resisting, without deflection, approximately 2.5 lb/in² (17 kPa) backpressure from the Backerseal.

Installation

IMPORTANT: The following instructions are a summary. Complete installation instructions are available at emseal.com or by contacting EMSEAL.

- Store Backerseal indoors at room temperature. Recovery is quicker when warm and slower when cold.
- Joint sides should be parallel without undue irregularities.
- Sides of joint to receive Backerseal should be clean, dry, sound and free from contaminants.
- Ensure correctly sized material is selected for joint-gap. Remove packaging and expose self-adhesive side by removing release liner.

For installation behind liquid-sealant and backer-rod:

- Set Backerseal sufficiently deep into joint to allow for installation of properly sized backer-rod set at its appropriate depth.

For installation behind directly-applied sealant:

- Set Backerseal 1/4" (6 mm) – 3/8" (10 mm) back from the face of the joint.
- Before applying primary wet sealant, ensure that Backerseal is firmly expanded in the joint.
- Primary sealant must be well tooled against Backerseal.
- To join two lengths, use a sharp knife to achieve correct lengths before butting tightly together.

Available sizes

See TABLE 2: Backerseal Sizing on page 3

Backerseal is available for joint-gap sizes from 3 mm (1/8-inches) up to 250 mm (10-inches).

For special sizes and depths consult EMSEAL.

- Select nominal material width to equal joint-gap width at mean temperature.

Material up to 15mm (5/8") is supplied in 4M (13.12 LF) reels, up to 25mm (1") in 2M (6.56 LF) reels, and over 25mm (1") in shrink-wrapped sticks of 2M (6.56 LF).

CAD & Guide Specs

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

Warranty

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

Availability & Price

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

Table 2: Backerseal Sizing

(see "Performance" for movement capabilities & limitations)

Nominal Material Size (Joint Size at Mean T°)	Depth of Seal
1/8" (3mm)	5/8" (15mm)
1/4" (6mm)	3/4" (20mm)
3/8" (10mm)	3/4" (20mm)
1/2" (12mm)	3/4" (20mm)
5/8" (15mm)	1" (25mm)
3/4" (20mm)	1" (25mm)
1" (25mm)	1 1/4" (30mm)
1-1/4" (30mm)	1 1/2" (40mm)
1-1/2" (40mm)	2" (50mm)
1-3/4" (45mm)	2" (50mm)
2" (50mm)	2 1/2" (65mm)
2-1/4" (55mm)	2 1/2" (65mm)
2-1/2" (65mm)	2-3/4" (70mm)
2-3/4" (70mm)	3-1/8" (75mm)
3" (75mm)	3-1/8" (75mm)
3-1/4" (85mm)	3-1/4" (80mm)
3-1/2" (90mm)	3-3/4" (95mm)
3-3/4" (95mm)	4" (100mm)
4" (100mm)	4" (100mm)
4-1/4" (105mm)	4 3/8" (110mm)
4-1/2" (115mm)	4 1/2" (115mm)
4-3/4" (120mm)	4 3/4" (120mm)
5" (125mm)	5" (75mm)
5-1/4" (135mm)	5-1/4" (135mm)
5-1/2" (140mm)	5-1/2" (140mm)
5-3/4" (145mm)	5-3/4" (145mm)
6" (150mm)	6" (150mm)

- For sizes not shown consult EMSEAL.
- Select nominal material size to correspond to joint-gap size at mean temperature.