

SANDELL'S POLYSEAL

PRODUCT DESCRIPTION

Polyseal is an impregnated preformed compressible sealant, produced by combining permanently elastic, high density open cell, polyurethane foam with stabilized acrylics. The products are supplied pre-compressed in a tape form with a PSA on one side.

BASIC USE

Polyseal is permanently elastic compressible expansion joint sealant for all types of movement joints in construction. It is ideally suited to high performance expansion joints and control joints (plaza decks, roof decks). It is installed flush or slightly recessed from the surface without the use of a protective coating. Due to the elastic nature, it is used extensively in vertical and horizontal joints in building facades, window perimeters, and large abutment joints between buildings.

ADVANTAGES

- Polyseal provides a permanently elastic weatherproof seal for all-prescribed construction conditions of joint movement.
- Excellent adhesion to concrete and other construction surfaces.
- Polyseal has constant depth of material in the joints.
- Polyseal follows the contours of the joints making it very suitable for irregular joints. It is ideal for retrofit applications.
- The material is very easy to install. Polyseal is precompressed to less than the actual joint opening size. After being inserted into the joint, Polyseal expands filling and sealing the joint.
- Polyseal has a flame-retarding polymer added to the impregnation.
- Polyseal is resistant to most salts, acids, gasoline and other industrial effluents.

LIMITATIONS

- Polyseal will not adhere to surfaces that are dirty, covered with dust or with surface contamination.
- Temperature stability range is -40°F to 212°F (-40°C to 100°C).

COMPOSITION & MATERIALS

Polyseal is a combination of permanently elastic, open-cell polyurethane foam with a chemically stabilized acrylic impregnation. A water based pressure sensitive adhesive is applied to one side to hold tape in place as the material

Expands filling and sealing the gap. Polyseal only works under compression, the greater the degree of compression, the greater the seal. As the density increases from the increased compression, it creates a product with weather-tight, thermal and acoustic properties.

SURFACE ADHESION

Adhesion takes place between the polyseal and joint surfaces under compression and insertion into the gap. The adhesion develops as the materials ages in the joint. The adhesion between the Polyseal and the joint sides are approximately the same as the tensile strength of the Polyseal. The Polyseal expands to form an effective

seal, conforming to the irregularities in the joint surfaces, and performs as a compression seal by continuously exerting back pressure to the joint surfaces.

COMPATIBILITY WITH OTHER MATERIALS

Polyseal is compatible with cement, block, brick, plastic, wood and other normal building and construction joint materials. Polyseal can be used as a secondary sealing condition, and will not bleed into the construction joint. It is compatible with wet sealants as well.

JOINT SEALANT DESIGN

Polyseal ability to seal is determined by the degree of compression the material has in the joint. A minimum compression of 50% is required to ensure the adhesion of polyseal to the joint surfaces to produce a seal for dust and draft. A compression of 33% of the original size of the polyseal will provide a thermal and acoustic seal.

INSTALLATION

During installation Polyseal should not be pulled or stretched, this will cause gaps to occur between successive lengths of the Polyseal. Vertical joints should be sealed from the bottom to the top to ensure the material does not stretch. During horizontal installations the successive pieces should be pushed into one another. Please contact our local representatives in your area for any assistance.

STORAGE

Polyseal should be stored inside at room temperature whenever possible. Shortly before using the Polyseal, remove only enough material to complete the section of the joint from the room temperature storage. This precaution is necessary because of the variations in the recovery rates due to the differences in the temperatures.

The Polyseal will expand quicker in warm temperatures and slower in cold temperatures. A heat gun can be used in cold temperatures to accelerate the expansion of the Polyseal and in warm temperatures the use of an ice box or dryice will reduce the expansion of the Polyseal.

SURFACE PREPARATIONS

The joint must be free of irregularities, rough particles, foreign materials such as dirt, snow, ice, water, and coatings such as grease, oil, release agents, lacquers.

AVAILABILITY & COST

Polyseal is available throughout the United States and Canada through the manufacturer's local representatives and stocking distributors. Cost information is available from the manufacturer's agent and local representatives.

WARRANTY

Subject to certain limitations, Sandell warrants the Polyseal against defects in the material for up to ten years for vertical applications, providing all limitations and recommendations from the manufacturer are met.

MAINTENANCE

There is no special maintenance required.


TECHNICAL ASSISTANCE:

Call Sandell directly for technical assistance or product questions:

New York: 800.283.3888

Alabama: 877.726-3355

Wisconsin: 800.323-3565

 www.sandellmfg.com

Physical Characteristic	Polyseal
Description	Pre-compressed self expanding PUR-foam impregnated with a high quality modified acrylic, flame retardant
Color	Black
Density	10 lbs./cu. ft. 150kg/m ³ , 5-6 lbs. /cu. ft. 70kg/m ³
Flammability	UL 94 HF 1, Self extinguishing, DIN 4102, B1 compression of 50%, B2 uncompressed B2
Temperature Stability Range - Manufacturer's Lab	Minus 40°F to 212°F (Minus 40°C to 100°C)
Penetration of tree roots below grade applications: DIN 4062	Requirements met
Absorption: DIN 18055	Requirements met at a compression of 20-30% of the initial size Requirements met at a compression of 20% of the initial size
Air permeability: DIN 18055 DIN EN86	DIN requirements met
Weather resistance	Excellent
Package for Delivery	Rolls with PSA on one side, pre-compressed to the proper joint opening sizes (available in a non-compressed roll on request)

Sandell®'s Polyseal® Type C

Sandell®'s Polyseal® Type C is most commonly used to fill larger vertical and horizontal construction movement joints or joints where there is anticipated seismic movement. It is designed to make almost any joint waterproof. Sandell®'s Polyseal® Type C works under its own constant internal pressure to provide a permanent, watertight seal eliminating costly water damage as well as to allow for a greater degree of joint movement. Sandell®'s Polyseal® Type C is coated with a colorized, elastomeric coating which matches silicone colors. Primary applications are sealing precast panels, isolation joint, retrofit joints, and other larger joints requiring a resilient, waterproof joint.

Use:

Sandell®'s Polyseal® Type C primary applications are sealing pre-cast panels, retrofit joints, EIFS and other joints requiring a resilient, waterproof joint. Sandell®'s Polyseal® Type C is ideal for larger joints that require an architectural wide and it allows for up to 100% joint movement. Typical applications are vertical and horizontal movement, expansion, control and isolation joints. Retrofit joints, pre-cast concrete walls, tilt up walls, exterior panel systems, masonry, granite, metal, EIFS, and curtain walls. Interior vapor, dust, acoustical and air control, as well as all other joints requiring a watertight seal. Sandell®'s Polyseal® Type C is a polyurethane foam impregnated with waterproof polymer sealing compound that shall be applied to joint in a pre-compressed state with a silicone coating on the exposed face. After expansion, Sandell®'s Polyseal® Type C will produce a watertight joint.

Density: 10lb./ cu.ft. (160 kg/m³)
 Thermal Conductivity: 0.05 W/m. C
 Temperature Stability Range: 40 F to 212 F
 (40 C to 100 C) Bleeding None at 212 F at 20% compression

Tensile Strength: ASTM 3574, meets 21 psi min.
 Ultimate Elongation: ASTM 3574 125% 20% Resistance to Compression Set: Max 2.5%

Shear Strength: Min. 8N/cm²

POLYSEAL "C" INSTALLATION:

Surfaces to be sealed must be sound, dry, clean and free of oil, grease, laitance, rust and other foreign material that would prevent proper adhesion. Excessive moisture will defeat the selfadhesive application, but will not lessen the effectiveness of the expanded material as a seal. Remove dirt and other loose particles. Priming and masking is not required. Open product by cutting the shrink tubing and removing the trapping. Install Sandell®'s Polyseal® Type C along the joint to be sealed, removing release liner to expose adhesive side of product. Press adhesive side firmly against one side of full length of joint. Sandell®'s Polyseal® Type C can either be mitered or butted. When mitering or butting, leave an extra ½" of tape at each end to ensure proper sealing characteristics.

Upon installation Sandell®'s Polyseal® Type C will expand to fill the joint. The rate of expansion is somewhat dependent on the temperature to which the material is exposed. When installing Sandell®'s Polyseal® Type C in extreme heat, store in a cool place to give the installer sufficient time for placement. Installation instructions are available from Sandell Manufacturing. Remove all waste materials. Do not re-use waste material.

Joints must be sized by measuring every 5-7 feet (1.524-2.137 meters) to ensure gap opening is uniform and depth is sufficient for the supplies material. Do not install when substrate or ambient temperatures are below 14 F (-25 C) or above 95 F (35 C) If ambient storage temperatures are below 50 F (10 C) , store material at a minimum of 68 F (20 C) for a minimum of 24 hours prior to installation, regardless, of temperature at location of installation. Store materials in dry, enclosed areas, off the ground,



out of direct sunlight. Do not install when raining or snowing. Do not use scrap material. Do not unwrap material until ready for installation into joint as packaging maintains material in compression. Do not use Sandell®'s Polyseal® Type C in joints that are submerged in water, in contact with harsh chemicals, in roofing applications, in joints requiring pick resistance, cross joints copings or projecting stone work.

Sandell®'s Polyseal® Type H

Sandell®'s Polyseal® Type H is a pre-formed and impermeable compressible joint sealant. It is composed of a durable closed cell foam with a uniform colored skin on the exposed face.

Use:

Sandell®'s Polyseal® Type H has been specifically designed to perform under extreme conditions such as those found in vertical and horizontal applications including bridge and parking structure type expansion joints. The material is impermeable to water and once bonded in place provides a watertight seal. Typical applications include: bridge expansion joints, control joints, below grade applications, highway longitudinal and transverse joints, horizontal joints, parking structure and expansion joints, plaza decks, pre-cast, retrofit, joints, roof expansion joints / vertical joints. Sandell®'s Polyseal® Type H provides an impenetrable seal against extreme weather, moisture, vapor, air, sound and dust. It can accommodate more rapid rates of joint movement. One size material can function in a wider variety of joint openings. The product never loses its resiliency and is consistent in depth. With its unsurpassed movement capability the product permanently bonds the joint to the substrate. Sandell®'s Polyseal® Type H is environmentally safe in that it has no chloro-fluorocarbons. Sandell®'s Polyseal® Type H will not adhere to surfaces contaminated by oil or grease. It will conform to a variety of contours in materials forming the joint, provided such profile changes are not sudden or extreme. It must be in at least 25% compression after normal placement in the joint.

Sandell®'s Polyseal® Type H is a closed cell, stabilized polymer material with a durable PVC coating on the exterior surface. Common sizes range from 3/8" - 8" wide. It is available in exact sizes to meet necessary requirements. When determining the correct size of the material needed, simply specify the joint size. The standard colors are grey and black. Sandell®'s Polyseal® Type H will not react with cement, stone, brick, plastics, or metals. The product is unaffected by repeated cycles of expansion and compression. It will not shrink or dry out.

Physical Properties:

Tensile Elongation	250% ASTM D3575
Tensile Strength	120psi ASTM D3575
Tear Resistance	21.5lbs/in ASTM D624
Density	3.0lbs/cuft. ASTM D3575
Water Absorption	<.02lbs/sqft ASTM D3575

POLYSEAL "H" INSTALLATION:

Surfaces to be sealed should be sound, dry, clean and free of oil, grease, rust and other foreign materials. Use of heat guns or cooling devices are not necessary with Sandell®'s Polyseal® Type H. Apply either an epoxy gel or a high quality urethane sealant to the joint walls. Primer should be applied at least 2-1/2" deep on both sides of the joint. The primer will serve as a lubricant during installation and bonding agent after final cure. Compress Sandell®'s Polyseal® Type H and position the material in the joint. Apply urethane sealant at the joint splices to ensure a water tight seal. The natural resiliency of Sandell®'s Polyseal® Type H makes it expand against the joints surfaces, creating a positive water and weather tight seal.

Amendments / Notes:

Sandell Employee:

Date:

**CORPORATE OFFICE
NEW YORK
Toll Free: 800-283-3888
Fax: 518-357-9757**

**BRANCH OFFICE
ALABAMA
Toll Free: 877-SANDELL
Fax: 205-263-1033**

**BRANCH OFFICE
WISCONSIN
Toll Free: 800-323-3565
Fax: 414-764-6993**