

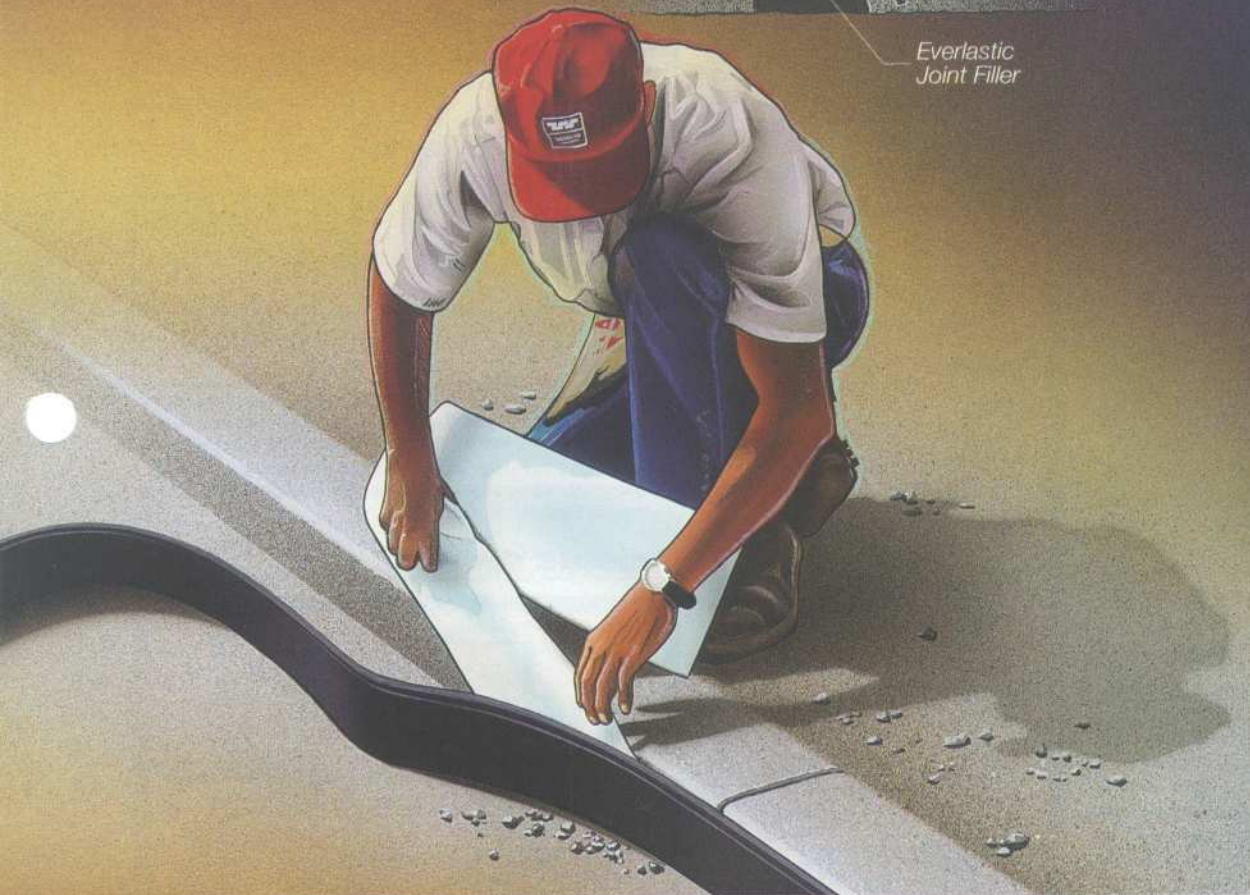
Everlastic®

HI-TENSILE RUBBER WATERSTOPS

Urethane Sealant

Cast in
place concrete

Everlastic
Joint Filler



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Product Presentation

"A Waterstop is usually a section of flexible waterproof material placed at any joint in concrete to prevent the passage of water." Williams Products, Inc. has been a pioneer supplier to constructors with the Williams Waterstop System since 1954.

SBR (Styrene Butadiene Rubber) is the industry standard and is used in most applications.

Williams SBR Hi-Tensile Rubber Waterstop meets Williams Products, Inc. specification 2010 and exceeds U.S. Army Corps of Engineers specification CRD-C 513-71.

Neoprene rubber is more expensive and is used where hostile environmental conditions are present and the Waterstop is exposed to continuous heavy concentrations of oil, gasoline, ozone, ultraviolet rays or injurious chemicals.

Williams Neoprene Hi-Tensile Rubber Waterstop meets Williams Products, Inc. specification 1025, exceeds U.S. Army Corps of Engineers specification CRD-C 513-74 and contains 100% neoprene polymer.

Waterstops and fittings are manufactured in accordance with the Rubber Manufacturers Association Standards. Special situations may require special materials and designs. These are available from Williams Products, Inc.

The Williams System features sleeve type fittings that provide fast positive splicing and precise Waterstop alignment. Fittings are manufactured from the same elastomers/polymers as the Waterstop.

Uses & Applications

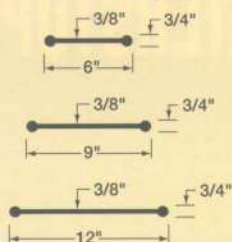
Joints in concrete structures, one side of which is subject to hydrostatic load, are generally provided with Waterstops bridging the joints and embedded in the concrete on either side. In concrete joints where expansion and contraction cause the joints to close and open, the Waterstop must be designed to accommodate itself to movement. The primary reason for specifying Rubber Waterstops rather than metal or PVC is the ability to withstand shear movements and to resist hydrostatic pressure.

Rubber Waterstops will elongate over four times original size (ASTM D 412-80) and will continue returning to near original shape after repeated movement. They have very low compression set and perform well at low temperatures.

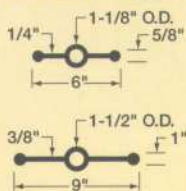
Typical installations include:

sewage plants, water filtration plants, aqueducts, reservoirs, locks, tanks, channels, swimming pools, culverts, tunnels, underpasses, bridge decks and abutments, roofs, dams, foundations, mine shafts, retaining walls and any concrete structure requiring watertight joints.

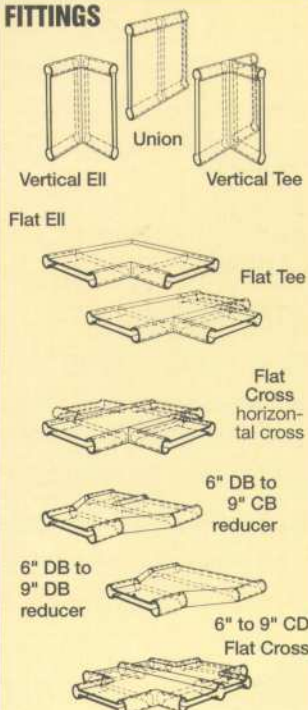
DUMBBELL TYPE (DB)



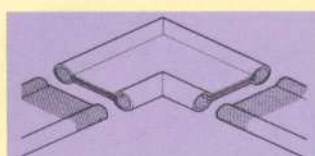
CENTERBULB TYPE (CB)



FITTINGS



Assembly Installation



EVERLASTIC SLEEVE-TYPE FITTINGS

Waterstop joining is simplified with this Williams pioneered system which requires no union fittings at corners. First, cut the waterstop ends square. Brush Williams waterstop adhesive onto cleaned, buffed surface of the waterstop and fitting, assemble, hold in place, allow to dry.

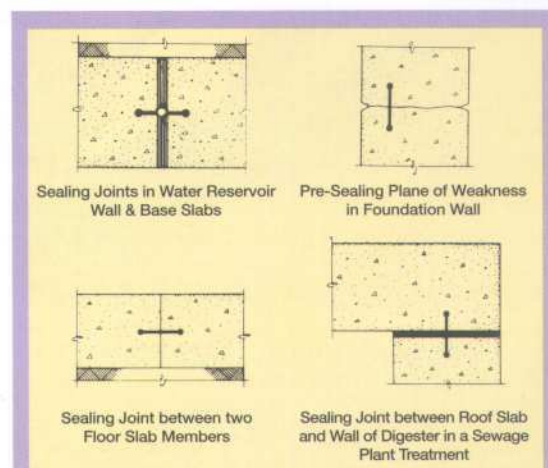
MATERIALS CHART

PHYSICAL PROPERTY	ASTM TEST METHOD	Williams Specification 2010	Williams Specification 1025
		Hi-Tensile (SBR) Styrene Butadiene	Hi-Tensile Neoprene
Tensile Strength, minimum (PSI)	ASTM D412-80	2500*	2500*
Ultimate Elongation, minimum (%)	ASTM D412-80	450	400
Hardness, Shore A durometer	ASTM 2240-81	65±5	65±5
Tensile Stress, minimum PSI to produce 300% elongation	ASTM D412-80	1150	1150
Water Absorption, Maximum % by weight after immersion 7 days at 73.4° ± 2°F	ASTM D471-79	5	5
Compression Set, Maximum (%) after 22 hours at 158°F	ASTM D395-78 Method B	30	30
Tensile Strength After Aging, minimum % of original after 7 days in air at 158°F ± 2°, or 158° ± 1.8°F, and 300 PSI	ASTM D572-81	80	80
Specific Gravity	ASTM D1817-81	1.17 ± .03	1.37 ± .03
Ozone Cracking Resistance, after 20% elongation for 7 days 0.5 p/m at 38° C (neoprene of 3 p/m)	ASTM1149-78a	no cracks	no cracks
Tensile Set % maximum after 200% elongation for 10 minutes at 23° ± C	ASTM D412-80	5	5

SBR meets U.S. Corps of Engineers Spec. CRD-C513-71. Currently being installed at numerous nuclear power plants. Neoprene provides added resistance to Ozone, Sewage, Oils & Solvents. Meets CRD-C513-74. Contains 100% Neoprene Polymer.

*Tensile strength 2500 PSI from actual part, 3000 PSI from test sheets. Waterstop available manufactured from Ethylene propylene, NBR Nitrile (BUNA-N), Silicone & Thermoplastic Elastomeric Rubber.

Placement of Waterstop

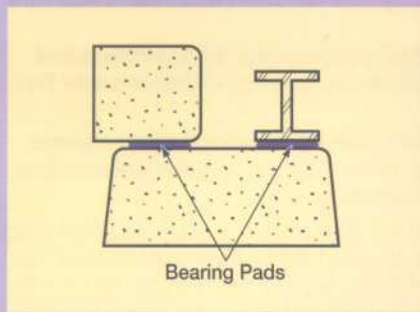


Waterstop is cut square, then jointed with Williams Everlastic Fittings and Williams No. 37 Adhesive per instruction.

Installation of Waterstop shown above involves split forms. The waterstop is so placed in a position that one bulb will be imbedded in each of two adjoining slabs or walls. The waterstop shall be held firmly in place with a block or other suitable arrangements on the outside of the split form (away from the concrete which is to be poured).

After the concrete has set up, the split forms and blocks may be removed. When the adjoining pour is made, care should be taken to support the waterstop.

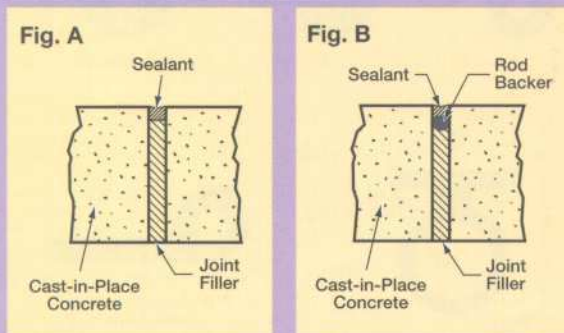
Everlastic® Bearing Pads



- Strip seals, pads and shims
- Precast and Cast-in-Place concrete
- Structural Isolation
- Bridge Bearing Pads
- Vibration Control

Product	Description	Specification
Com Pad, CP-100	Masticated rubber with random fibers	ASTM-D 2240
Bear Pad, BP-200	Masticated rubber with oriented fibers	ASTM-D 2240
Fab Pad, FP-300	Multiple Layers of Neoprene saturated Cotton Duck Fabric	AASHTO 18.10.2 Mil-C-882-E
1200 Series Dense Neoprene	Commerical Grade, Dense Neoprene	ASTM D 2000 BC610
AASHTO Grade Dense Neoprene	100% Virgin Neoprene with 2500 PSI Tensile Strength min.	AASHTO M251-90

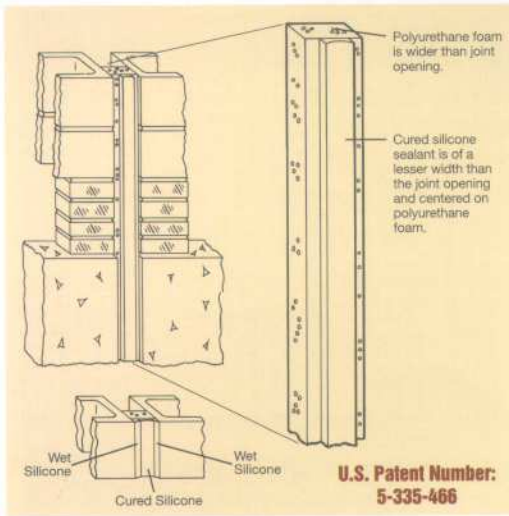
Everlastic® Expansion Joint Fillers



- Precast or Cast-in-Place
- Optional "tear tab" creates reveal for sealant
- Some are inherent bond breakers (see Fig A)
- Keeps debris from entering joint causing cracks
- Provides secondary seal and insulation

Product	Description	Sealants	Specification
Econ-O-Foam	Closed Cell Polyethylene Foam	Inherent bond breaker to most cold applied sealants	ASTM D 3575
Expand-O-Foam 1380 Series	Closed Cell Polyethylene Foam	Inherent bond breaker to most cold applied sealants	ASTM D 3575
EJ-2000	Crossed Link Polyolifin Foam	Inherent bond breaker to most hot or cold applied sealants	ASTM D 3575
EVA 200	Ethylene-Vinyl-Acetate Foam	Inherent bond breaker to most hot or cold applied sealants	ASTM D 3575
NN-1, 1040 Series	Closed Cell Neoprene Sponge	Requires bond breaker for cold applied sealants	ASTM D 1056 2C1
Concrete Gray Sponge 1300 Series	Open Cell Sponge Rubber	Requires bond breaker for cold applied sealants	ASTM D 1752, Type 1
1400 Series	Open Cell Neoprene Sponge Rubber	Requires bond breaker for cold applied sealants	ASTM D 1056 1C1

Finally! A WIDE JOINT SEAL that really works...and lasts.



Description: Everlastic Wide Joint Seal is a factory cured strip of silicone sealant adhered to rectangular polyurethane backer. The polyurethane backer is wider than the joint opening.

Basic Use: Everlastic Wide Joint Seal is designed for sealing in vertical expansion joints and horizontal non-traffic joints. It forms a durable, flexible weather-resistance silicone rubber when exposed to atmospheric moisture.

Installation: 6' Material is compressed and recessed 1/4" into joint opening. A wet silicone sealant is caulked into reveals. Material can be butted to bond lengths required (see instructions). Clean all joints prior to installing seal from loose particles, dust, foreign matter, grease, frost, water, etc.

Size Requirement: Contact Williams Products Engineering Department for size applicable for your needs.

Color: Available in standard silicone colors.

Maintenance: None should be required.

PANEL & JOINT SEALS

Williams Everlastic Panel Seals have been developed for use with pre-cast concrete and prefabricated wall panels and are adaptable to a wide range of sealing applications.

Materials

Panel seals are extruded from expanded closed cell neoprene grade rubber which meets ASTM Specification D-1056. The design and structure of this material gives excellent resiliency for continuous pressure-contact sealing in joints.

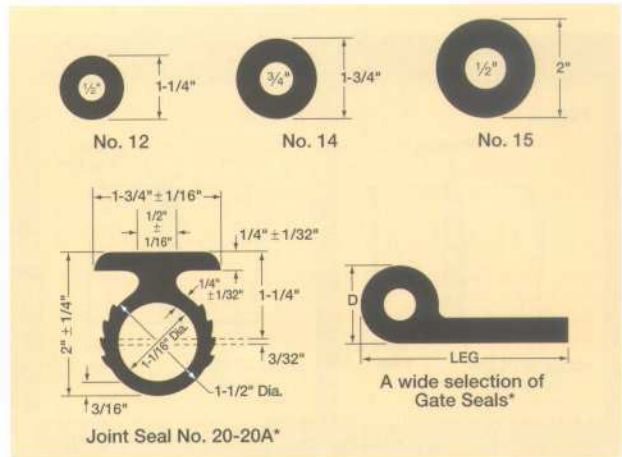
Joint seals are extruded from dense neoprene. All pictured items and other custom shapes can be extruded from custom material formulations.

Seal for any Job

The wide choice of Everlastic Panel Seals gives more flexibility in proper seal adaptation to job requirements. Used singly or in combination Everlastic panel seals work in joints up to 1" wide. Everlastic panel seals compensate for variations in joint width, irregular joint surfaces and the usual adjustments of dimensions during construction. Williams Engineering Department is ready to help you adapt panel seals to window glazing, weather stripping, pipe and tube insulation, as expansion joint backup material, waterstops and seals, and in masonry control joints.

Installation

Williams suggests that plans for sealing precast panel joints be included with precast designs and specifications. Seals should be factory



installed by panel manufacturers while joint faces are still clean. You should select Everlastic Panel Seals assuming they will be compressed 25% and not more than 50% in the joint width specified. They should be located to provide a mean caulking depth one half the width of the joint opening. Williams Everlastic Panel Seals are compatible with most sealants, including Thiokol and other rubber base compounds.

PIONEERING: Williams Products continues pioneering of new products, materials, and methods.

CUSTOMIZING: Williams Products has the capabilities to fabricate and manufacture custom products for specialized problem applications.

EQUALIZING: Williams Products can furnish equal or better than competitive products.



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