

SWELLSEAL[®]

Hydrophilic Waterstop Solutions



Waterproofing the WORLD

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CONSTRUCTION CHEMICALS, INC.

SWELLSEAL® PRODUCTS - Why Hydrophilic Waterstops?

SWELLSEAL® hydrophilic waterstops expand upon contact with water to fill a void or joint and create a compression seal waterstop. Unlike traditional molded waterstops that are a fixed sized and must be placed in fresh concrete, **SWELLSEAL®** hydrophilic waterstops can be placed in any joint or interface. Old to new concrete, concrete to steel joints, between precast concrete members, or even steel to steel interfaces are no problem for **SWELLSEAL®** hydrophilic waterstops. Available in extruded rubber shapes or as a gun grade paste, **SWELLSEAL®** hydrophilic waterstops offer effective solutions for difficult surface to surface sealing applications.

Scope of SWELLSEAL® Applications:

- Waterproofing cold joints
- Waterproofing construction joints
- Waterproofing joints between precast elements
- Sealing pipe penetrations
- Sealing encased steel H-beam penetrations
- Sealing steel to steel and steel to concrete joints

Typical SWELLSEAL® Applications:

- Wastewater treatment plants
- Water purification plants & reservoirs
- Manhole covers & grade rings
- Box culverts
- Underground parking structures
- Reservoirs
- Sheet pile interlocks
- Water tanks
- Precast manhole sections
- Sewer systems
- Underground structures
- Tunnel and metro works
- Swimming Pools



Seals horizontal and vertical cold joints



Seals between precast members

SWELLSEAL® 8

Properties and Advantages:

- Up to 800% expansion in water
- Greatest expansion of **SWELLSEAL®** products
- Flat profile $\frac{3}{4}$ " x $\frac{1}{8}$ "
- Round profile $\frac{1}{4}$ " diameter
- 600% Elongation
- Requires only 6 inches of fresh concrete cover
- Good chemical resistance
- Concrete can be placed immediately after installation
- Easy installation with nails, screws, or adhesives

Ideal applications for SWELLSEAL® 8:

• SWELLSEAL® 8 F

- Between pre-cast members
- Thick wall pours
- Blockout repairs
- Poured in place concrete joints

• SWELLSEAL® 8 R

- Gasket forming material around pre-cast members
- Manhole covers
- Sheet pile interlocks

SWELLSEAL® 2010

Properties and Advantages:

- 200% Expansion in water
- Rectangular preformed profile of $\frac{3}{8}$ " x $\frac{3}{4}$ "
- 600% Elongation
- Requires only 4 inches of fresh concrete cover*
- Delayed reaction in water - full expansion in 10 days
- Good chemical resistance
- Concrete can be placed immediately after installation
- Easy installation with nails, screws, or adhesives

Ideal Applications for SWELLSEAL® 2010:

- Poured in place concrete joints
- Slow expansion is desired
- Low pressure from expansion is required.

* Cover can be reduced to 3.28 inches in all directions if concrete strength is at least 4260 psi or greater



Specially treated for delayed reaction in water



Seals against highest head pressure



Seals with least expansion pressure on structure

SWELLSEAL® JOINT

Properties and Advantages:

- Up to 670% expansion in water
- Highest head pressure resistance
- Rectangular in overall shape **SWELLSEAL® JOINT** contains an inner compression seal for the purpose of balancing pressure during expansion of the outer hydrophilic shoulders
- Excellent chemical resistance
- Highest of tensile strengths among **SWELLSEAL®** products
- Lowest in overall pressure exertion on structure during expansion
- Concrete can be placed immediately after installation
- Easy installation with nails, screws, or adhesives

Ideal applications for SWELLSEAL® JOINT:

- Poured in place concrete joints
- Tunnel and metro works
- Wastewater treatment plants

SWELLSEAL® WA

Properties and Advantages:

- 200% Expansion in water
- Gunnable paste ideal for rough, irregular surfaces
- Adjustable bead size and shape
- Withstands head pressures in excess of 330 feet
- Elongation greater than 600%
- Excellent adhesive qualities, can be used to adhere preformed materials in place
- Good chemical resistance
- May be placed underwater if concrete can be poured immediately upon installation



Seals pipe penetrations and uneven surfaces

Ideal applications for SWELLSEAL® WA:

- Sheet pile interlocks
- Pipe penetrations
- Manhole covers
- Sealing encased steel H-beam penetrations
- Precast members
- Sealing steel to steel and steel to concrete joints
- Concrete wall ties
- Between rough repair concrete and new pours



SWELLSEAL® PRODUCT COMPARISON CHART

	SWELLSEAL® 8F	SWELLSEAL® 8R	SWELLSEAL® 2010	SWELLSEAL® JOINT	SWELLSEAL® WA
Physical form	preformed flat	preformed round	preformed rectangle	preformed rectangle	gunnable mastic
Profile	3/4" x 1/8"	1/4" diameter	3/8" x 3/4"	1" x 5/16"	minimum 3/8" bead
Minimum Concrete Cover (inches)	6	6	4	3-3/4	3
Expansion in Water	580% 1 Day 785% 4 Days	340% 1 Day 720% 4 Days	200% 10 Days	Joint 100% 4 Days Shoulders 540% 4 Days	200%
Tensile Strength (psi)	1109	1109	1493	Joint 1706 Shoulders 1308	312
Elongation at Break	600%	620%	600%	Joint 610% Shoulders 670%	625%
Shore A Hardness	53	53	52	Joint 53 Shoulders 50	22
Specific Density	1.2	1.2	1.2	1.23-1.27	1.45
Maximum Head Pressure	> 100 ft	> 100 ft	> 100 ft	>660 ft.	>330 ft.
Cure Time Before Pour	immediate	immediate	immediate	immediate	immediate

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