

# VOLCLAY WATERSTOP-RX<sup>®</sup>

## EXPANDING CONCRETE JOINT WATERSTOP

### DESCRIPTION

WATERSTOP-RX<sup>®</sup> is a sodium bentonite based waterstop designed to stop water infiltration through cast-in-place concrete construction joints by expanding upon contact with water to form a positive seal against the concrete. The key to WATERSTOP-RX's effectiveness is its 75% sodium bentonite content which provides superior expansion to seal and fill voids and cracks in the concrete. WATERSTOP-RX is an active bentonite/butyl-rubber based waterstop that is designed to replace passive PVC/Rubber dumbbell waterstops, thereby eliminating the requirement of special pieces, split-forming and seam welding. WATERSTOP-RX has been successfully tested by independent testing firms to over 200 Feet (60 meters) of hydrostatic water pressure, under both continuous immersion and wet/dry cycling.



Certified to  
ANSI/NSF 61

WATERSTOP-RX is certified by NSF International to conform with the requirements of NSF Standard 61 — Drinking Water System Components — Health Effects. WATERSTOP-RX is certified as a sealing material for concrete construction joints in potable water tanks.

WATERSTOP-RX is manufactured in light-weight, flexible coils that are easily installed by a single worker. The product is adhered to concrete, steel, and PVC (Pipes) with Volclay WB-ADHESIVE. Coil ends are butted together — not overlapped — to form a continuous waterstop.

WATERSTOP-RX is available in three sizes and shapes (see Product Table). WATERSTOP-RX 101 is produced in a rectangular shape measuring 1" x 3/4" (25 x 19mm). WATERSTOP-RX 101T is produced in a trapezoidal shape measuring 1-1/4" x 1/2" (31 x 12mm) with a reinforcing plastic scrim embedded in the top surface for high tensile strength. The patented trapezoidal shape distributes the expansive force over a greater area and allows the concrete to flow more readily over the product during placement. WATERSTOP-RX 102 is produced in a half-circle (Crescent) shape measuring 3/4" x 3/8" (19 x 9mm).

Each of the three products is also available in a Rapid Hydration (RH) formula. Rapid Hydration products are designed for high saline conditions, secondary chemical containment areas, and hydrostatic pressures above 40 Feet (12 Meters). Consult manufacturer for chemical compatibility.

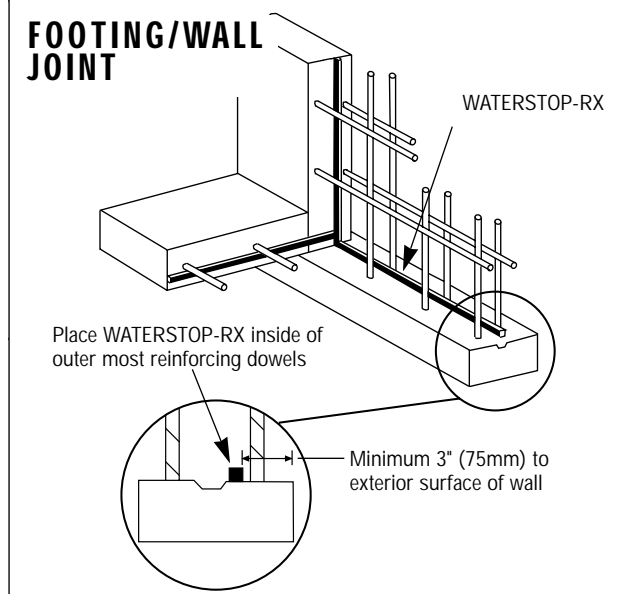
### APPLICATIONS

Applications include both vertical and horizontal non-moving concrete construction joints, new to existing concrete construction, irregular surfaces, and around through-wall penetrations, such as plumbing and utility pipes. Additionally it can seal around concrete pilings and steel I-beams passing through the slab. WATERSTOP-RX works in both continuous hydrostatic and intermittent hydrostatic conditions.

WATERSTOP-RX is certified by NSF International for use in potable water tanks 1,000 gallons (3,785 l) or greater.

WATERSTOP-RX products are designed for reinforced structural concrete with a minimum of 3000 psi compressive strength. RX-101 and RX-101T products are designed for concrete 8" (200mm) thick or greater with two rows of reinforcing steel. RX-102 products are designed for vertical concrete 5" (125mm) thick or greater; and horizontal concrete no less than 4" (100mm) thick. RX-102 products should be used in concrete with one row of steel reinforcement, concrete curbs, planter walls, fountains, and light-weight structural concrete.

### GENERAL APPLICATION DETAIL



WATERSTOP-RX is an effective, simple and economical sealing material for cast-in-place concrete joints.

## INSTALLATION

**Surface preparation:** Surfaces should be clean and dry. Remove all dirt, rocks, rust, or other construction debris. Do not install WATERSTOP-RX in standing water or on an iced substrate.

**Primer:** Roller or brush apply WB-ADHESIVE a minimum of 5 mils thick, by the width of the product, along the entire surface length to receive WATERSTOP-RX. Allow adhesive to dry 5-10 minutes or until black. Temperatures below 55°F (13°C), or in damp conditions allow longer period to dry. Typical application rate of adhesive is 400-600 linear feet (120 meters) per gallon.

**Installation:** After allowing adhesive to dry black, remove release paper, then firmly press the entire length of WATERSTOP-RX onto the adhesive. For vertical and overhead applications, firmly press a minimum of 15 seconds to assure adhesion. For best results apply WATERSTOP-RX within two hours of adhesive turning black. Areas not receiving waterstop within six (6) hours should be recoated with adhesive. WB-ADHESIVE may be applied to damp surfaces, but not in standing water.

Tightly butt coil ends together to form a continuous waterstop — **Do not overlap coil ends.** Place in maximum practicable lengths to minimize coil end joints. Where required, cut coils with sharp knife or utility blade to fit coil ends together. Make horizontal to vertical transitions by abutting product coil sections together, no special accessory pieces are required.

At structural and pipe penetrations, cut into strips to fit around the penetration. Apply to cured adhesive and abutt coil ends together.

On irregular surfaces such as stone, make sure waterstop remains in direct contact with the substrate along the entire installation.

## LIMITATIONS

WATERSTOP-RX is not a self-adhering product. WB-ADHESIVE is required to secure WATERSTOP-RX to concrete, metal, or PVC (Pipe) surfaces. Mechanical fasteners should not be used to secure waterstop alone, but may be used in conjunction with WB-ADHESIVE.

WATERSTOP-RX is not designed, nor intended to function as an expansion joint sealant. Contact manufacturer for precast concrete applications, technical information and approval.

WATERSTOP-RX products are designed for structural concrete with a minimum of 3000 psi compressive strength. WATERSTOP-RX 101, 101RH, 101T and 101TRH require a minimum of 3" (75mm) of concrete coverage. WATERSTOP-RX 102 and 102RH require a minimum concrete coverage of 2" (50mm). WATERSTOP-RX should only be used in applications where the product is completely encapsulated within the concrete.

WATERSTOP-RX should not be prehydrated by being subjected to submersion or remain in contact with water prior to concrete pour. If the product exhibits considerable swell prior to confinement in the joint, it must be replaced with new material.

In conditions where severe ground water chemical contamination exists or is expected, consult manufacturer for compatibility information and approval.

## PACKAGING

WATERSTOP-RX is available in corrugated cartons, palletized 36 cartons per pallet. Carton labels are color coded for easy product identification. WB-ADHESIVE is available in one-gallon cans; four cans per carton.

## WATERSTOP-RX PRODUCT TABLE

PRODUCT	SIZE	SHAPE	HYDRATION TYPE	LN FT/ CARTON	CARTON WEIGHT
RX-101	1" x 3/4" x 16' 8"	Rectangle	Standard	100 lf. (30.4m)	53 lbs. (24.1 Kg)
RX-101RH	1" x 3/4" x 16' 8"	Rectangle	Rapid	100 lf. (30.4m)	53 lbs. (24.1 Kg)
RX-101T	1-1/4" x 1/2" x 16' 8"	Trapezoid with Poly Scrim Reinforcement	Standard	100 lf. (30.4m)	36 lbs. (16.3 Kg)
RX-101TRH	1-1/4" x 1/2" x 16' 8"	Trapezoid with Poly Scrim Reinforcement	Rapid	100 lf. (30.4m)	36 lbs. (16.3 Kg)
RX-102	3/4" x 3/8" x 25'	Half Circle	Standard	150 lf. (45.7m)	25 lbs. (11.3 Kg)
RX-102RH	3/4" x 3/8" x 25'	Half Circle	Rapid	150 lf. (45.7m)	25 lbs. (11.3 Kg)

## ACCESSORY PRODUCTS

WB-ADHESIVE is a water-based, latex adhesive specially formulated to adhere WATERSTOP-RX. Upon application, WB-ADHESIVE changes color from gray to black while curing. Install WATERSTOP-RX to cured, black adhesive within six (6) hours of turning black. WB-Adhesive is a non-flammable product with a flash point >200°F (93°C). Do not allow WB-Adhesive to freeze. Store in a warm, dry location prior to use.

### LIMITED WARRANTY

Specifications and other information contained herein supersedes all previously printed matter and are subject to change without notice.

All goods sold by seller are warranted to be free from defects in material and workmanship. The foregoing warranty is in lieu of and excludes all other warranties not expressly set forth herein, whether express or implied by operation of law or otherwise, including but not limited to any implied warranties of merchantability or fitness.

Seller shall not be liable for incidental or consequential losses, damages or expenses, directly or indirectly arising from the sale, handling or use of goods, or from any other cause relating thereto, and seller's liability hereunder in any case is expressly limited to the replacement (in the form originally shipped) of goods not complying with this agreement or at seller's election, to the repayment of, or crediting buyer with, an amount equal to the purchase price of such goods, whether such claims are for breach of warranty or negligence.

Any claim by buyer with reference to the goods sold hereunder for any cause shall be deemed waived by buyer unless submitted to seller in writing within thirty (30) days from the date buyer discovered or should of discovered, any claimed breach.

Materials should be inspected and tested by purchaser prior to their use if product quality is subject to verification after shipment. Performance guarantees are normally supplied by the applicator.

WATERSTOP-RX is not an expansion joint material nor should it be used as such. Expansion joints are the responsibility of others.

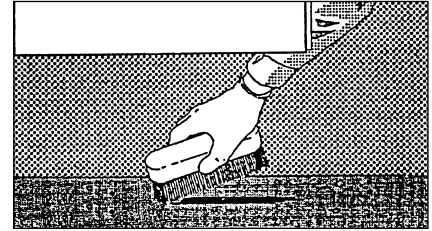
## TYPICAL PROPERTIES

PROPERTY	TEST METHOD	VALUE
Sodium Bentonite Content		75%
Hydrostatic Head Resistance	Independent Test	231 ft (70m)
Wet/Dry Cycling (25 cycles @ 231 ft)	Independent Test	No Effect
Specific Gravity @ 77°F	ASTM D71	1.57
Flash Point	ASTM D93-97	>300°F
Adhesion to Concrete using WB-Adhesive	Independent Test	Excellent

## 5 EASY INSTALLATION STEPS

### STEP 1

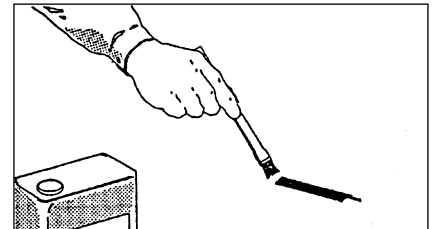
#### CLEAN SURFACE



REMOVE ALL DIRT AND DEBRIS.

### STEP 2

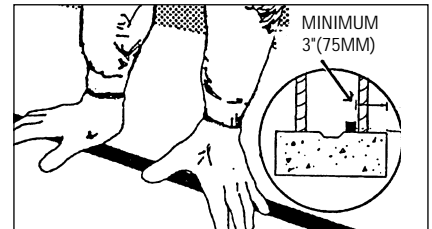
#### APPLY ADHESIVE



APPLY WB-ADHESIVE AND ALLOW TO CURE BLACK.

### STEP 3

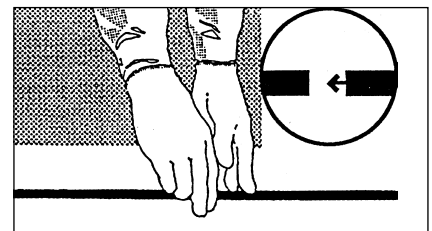
#### PLACE WATERSTOP



REMOVE RELEASE PAPER, THEN PRESS FIRMLY AGAINST ADHESIVE. MAINTAIN PROPER CONCRETE COVERAGE DEPTH.

### STEP 4

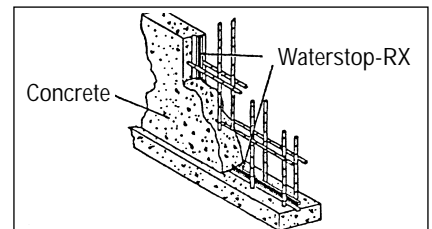
#### BUTT COIL ENDS



TIGHTLY BUTT COIL ENDS TO FORM A CONTINUOUS WATERSTOP. DO NOT OVERLAP COIL ENDS.

### STEP 5

#### POUR CONCRETE



POUR AND VIBRATE CONCRETE.

# VOLCLAY WATERSTOP-RX™

## GENERAL APPLICATIONS AND DETAILS

### PRODUCT APPLICATIONS

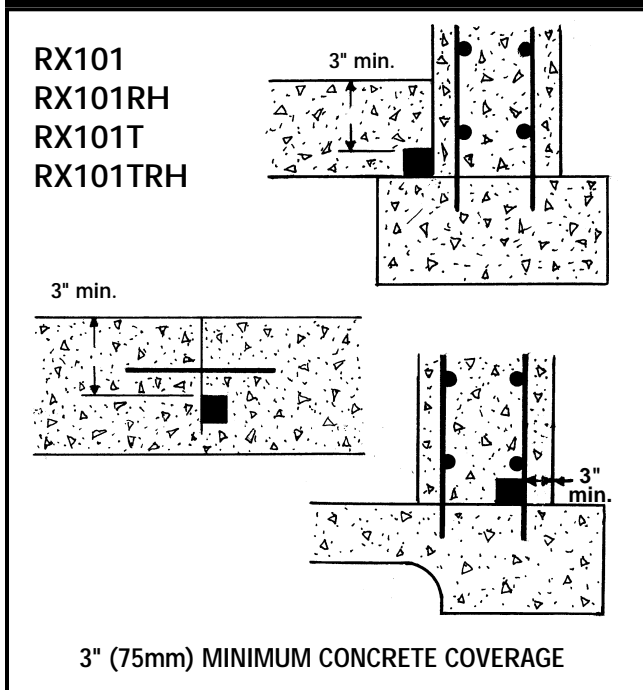
#### RX101, RX101RH, RX101T, RX101TRH

- Vertical and horizontal concrete 8" (200mm) thick or greater.
- Concrete with two rows of steel reinforcement
- High hydrostatic pressures
- Tie-back plates and penetrations

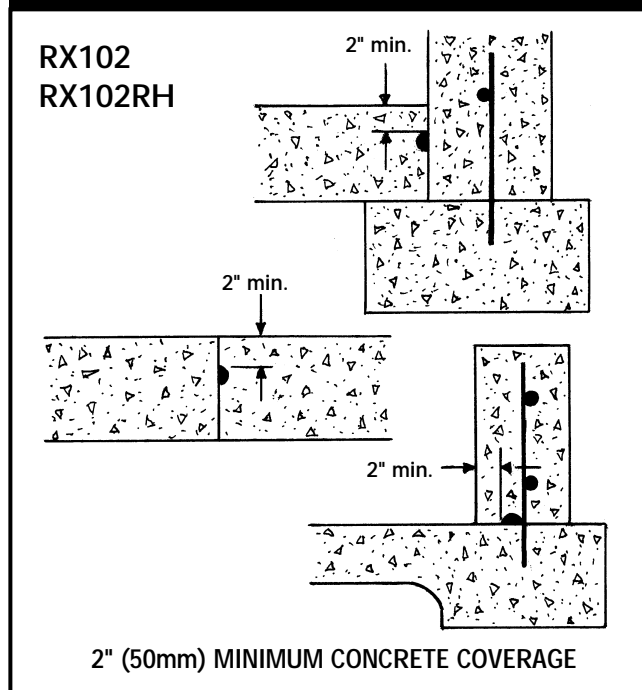
#### RX102, RX102RH

- Vertical concrete 5" (125mm) thick or greater.
- Horizontal concrete 4" (100mm) thick or greater
- Concrete with one row of steel reinforcement
- Slabs containing only wire mesh
- Fountains / Planter Boxes / Curbs.

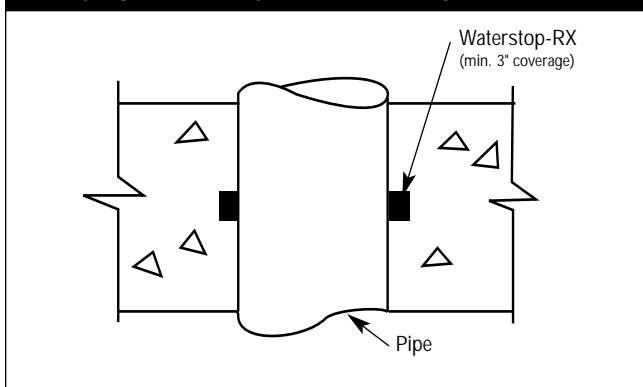
#### TYPICAL RX-101/RX 101T FOUNDATION DETAILS



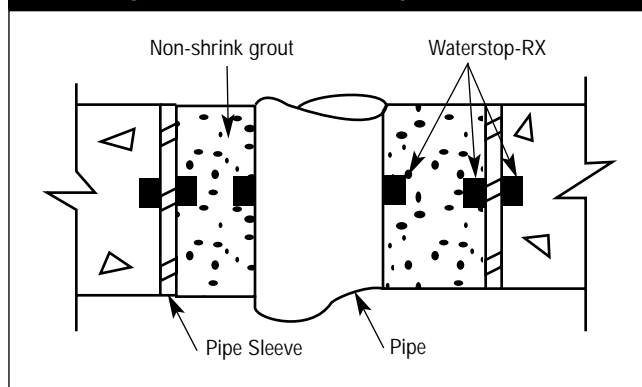
#### TYPICAL RX 102 FOUNDATION DETAILS



#### CAST-IN-PLACE PENETRATION DETAIL



#### SLEEVED PENETRATION DETAIL



**May 2002 (Supersedes all previous versions)**

The information contained herein supersedes all previous versions printed prior to May 2002, and is believed to be accurate and reliable. Consult manufacturer for current data, additional installation instructions, technical information, and comments on design conditions not covered herein. CETCO reserves the right to update information without notice.

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