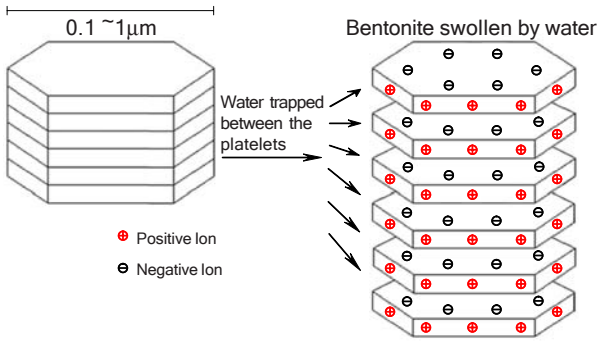
Contite® Waterstop

HYDROPHILIC CONSTRUCTION JOINT WATERSTOP

DESCRIPTION

A flexible hydrophilic natural rubber waterstop for construction joints and sealing precast elements that expands in a controlled fashion on contact with water.

The bentonite clay in **Contite Waterstop** consists of tightly packed charged microscopic platelets. Between and within these platelets there is a separation of charges positive and negative. Water molecules are attracted to the unique clay structure of positive and negative charges and wedge themselves between the platelets causing them to separate & swell. The hydrated bentonite forms a seal preventing further migration of water. As hydrostatic pressure is increased the platelets compact forming a tighter seal.



USES & ADVANTAGES

Contite Waterstop is used to stop water infiltration through both vertical and horizontal non moving construction joints, irregular surfaces and around penetrations through concrete. It is not intended as an expansion joint sealant. It is designed to replace conventional waterstops in construction joints. The sodium bentonite in **Contite Waterstop** is the key to its success. Bentonite swells when in contact with waterblocking pores, capillaries, minor cracks & other paths for water forming a permanent impermeable barrier.

Typical areas of application include:-

Below and above grade structures such as water tanks, waste water treatment plants, tunnels, basements, lift shafts, underground stations, subway systems, manholes, culverts, reservoirs, potable water treatment plants, swimming pools, canals etc.

Advantages include:-

- Light weight flexible coils easy to install.
- Eliminates seem welding & split forming associated with PVC/rubber waterbars.
- Butt end joining, continuous waterstop.
- Withstands hydrostatic water head up to 70 metres.
- Forms a positive seal, sealing cracks & small voids.
- May use in potable water tanks. Non toxic.
- Can apply to irregular concrete surfaces. No need to level.
- Compressible and malleable allowing for good contact in precast applications.
- Unaffected by repeated wetting & drying cycles. Permanently active system.
- Does not deteriorate lasts life of structure.
- Fast installation.
- Permanently active system.
- Ecologically safe & can be used in structures in contact with potable water. A “green” product.
- Self healing.

TYPICAL PROPERTIES

Hydrostatic Head Resistance	: > 70 m
S.G.	: 1.5-1.6 ASTM D297
Wet / Dry Cycling	: No effect
Service Temperatures	: -40°C to 80°C
Elongation	: >300%
Colour	: Black other colours available min. volumes apply
Adhesion to Clean Dry Concrete	: Excellent
Penetration Cone	: 4±5 ASTM D-217
Expansion	: >300% within 7 days in cement water

Note*

- *Expansion is related to the quality of water, temperatures, age of material and storage conditions.*
- *Properties are typical under laboratory conditions and do not constitute a specification. Field trials are recommended.*
- *Do not use in expansion joints.*

INSTALLATION OF CONTITE WATERSTOP

Surface Preparation

The surface should be clean and dry with all dirt, aggregate, rust, debris or standing water removed.

Surface preparation/cleaning by water blasting

General Installation Instructions

Apply by brush **Contite Waterstop** adhesive along the concrete by the width of **Contite Waterstop**. One litre of adhesive will cover approximately 30 metres. Whilst still tacky (within 10-15 minutes) apply the **Contite Waterstop**.

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Remove the release paper and press the **Contite Waterstop** firmly to the surface for several seconds. At the highest coil end on vertical sections pay particular attention. If the adhesive has dried out reapply to the surface. Mechanical fasteners may be used in conjunction with adhesive. Tightly butt end together to form a continuous waterstop. Do not prehydrate or submerge in water. If severe ground water chemicals or salts exist consult with Cormix International Limited.

Contite Waterstop is not self adhering.

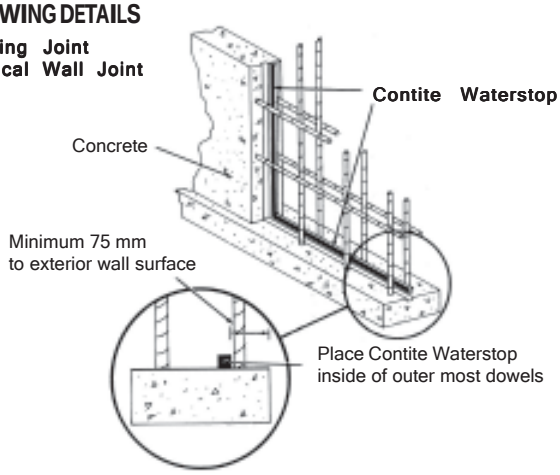
Nailing in place **Contite Waterstop** to rough surface

Installing **Contite Waterstop** Around Pipes

Installed **Contite Waterstop** Around King Post

DRAWING DETAILS

Footing Joint
Vertical Wall Joint



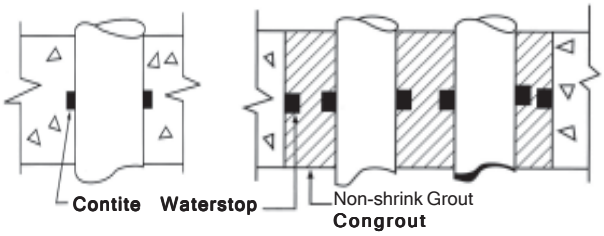
Typical placement of Contite Waterstop at concrete construction joints

PENETRATIONS

For penetration follow the general installation procedures.

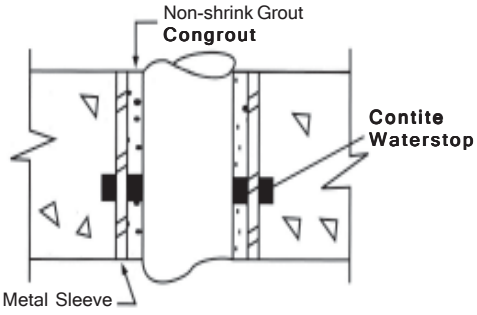
Single Pipe: Install around outer diameter of the pipe.

Multiple pipe: install around each pipe as well as around block out box construction.



Single & Multiple pipe penetration

Sleeved Pipe: Install around the outer diameter of the sleeve. Install another strip between sleeve's inner diameter & the pipe if there is an excessive gap between inner diameter of the sleeve & the pipe 2 separate waterstops may require installing one on the inner diameter & the other on the pipe. The void should be filled with **Congrout** non shrink cementitious grout.



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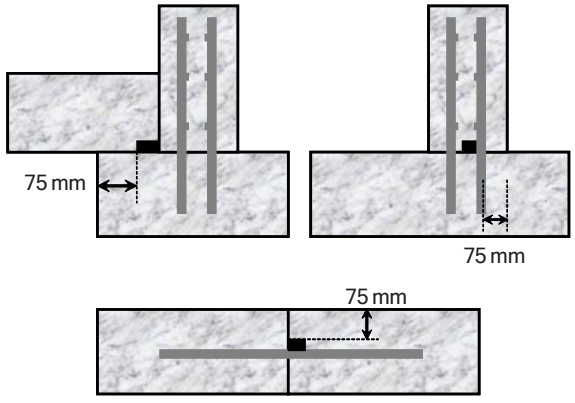
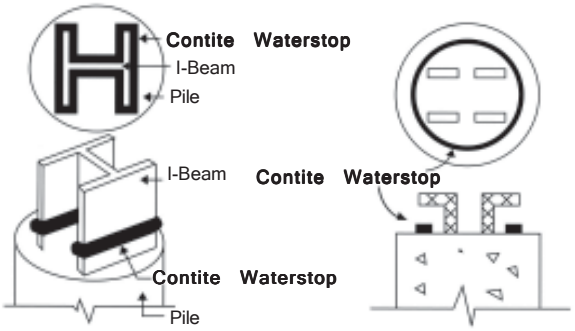
Placement of **Contite Waterstop** (19x25 mm.) at typical construction joints



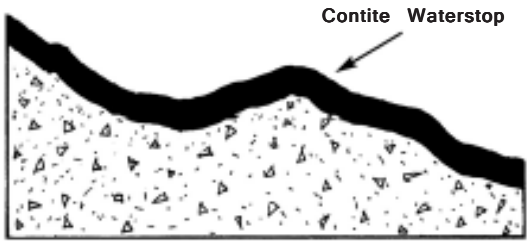
75 mm minimum concrete coverage

Pile Caps & Grade Beams: Follow the general instructions above. Install to all construction joints around or adjacent to pile caps & grade beams. Install **Contite Waterstop** around pile caps and grade beams above waterproofing. Wrap around all I-beams extending out of pile cap & encircle reinforcement out of pile cap.



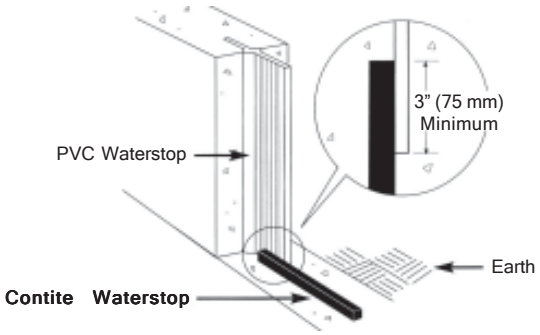
Encircling pile caps
metal I-beam and reinforcement

Irregular Concrete Surfaces: Follow general instructions above. Press **Contite Waterstop** against irregular contours filling cavities and cracks do not leave gaps between water bar and surface. It may prove necesary to install in an irregular direction to avoid major depressions or cracks.



Contour Concrete

Joining to PVC Waterstop: Follow general instructions above. Install **Contite Waterstop** on the interior side of the PVC water bar place in direct contact and overlap the PVC water bar by at least 7.5 cm.
For detailed drawings and for conditions not shown below contact Cormix International Limited.



Contite Waterstop Delay Coating

If rain is anticipated before the pouring of concrete **Contite Waterstop** may be protected by **Contite Waterstop Delay Coating.** The delay coating is applied to the surface of **Contite Waterstop** either by brush or spray and will delay swelling for up to several days.

Contite Waterstop Delay Coating
application by spray

Contite Waterstop Delay Coating
application by brush

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SPECIFICATION

The waterstop to be used in all construction joints shall be **Contite Waterstop** or equal approved material. The waterstop shall consist of sodium bentonite in natural rubber and expand by at least 300%. It shall be capable of being butt ended, shall not be overlapped nor create a packing effect in the concrete, it shall be pliable so that it follows the contours of the concrete and may be installed to all penetrations. The material will form a positive seal, form a continuous waterstop and withstand hydrostatic pressure up to 70 m.

PACKAGING & SIZES

Standard size approximately :-

25 x 19 mm. x 5.0 LM
20 x 20 mm. x 4.6 LM
20 x 15 mm. x 6.0 LM
20 x 10 mm. x 9.0 LM
20 x 5 mm. x 13.0 LM
6 rolls per carton.

Primer / Adhesive : 5 litre plastic pails
1 litre per 25-35 LM of standard profile 19x25 mm.
Delay Coating : 5 litre plastic pails
1 litre per 10-12 LM of standard profile 19x25 mm.

STORAGE & SHELF LIFE

Store dry in original boxes undercover protected from direct sunlight and rain. The shelflife is at least 12 months.

HEALTH & SAFETY

There are no known hazards associated with **Contite Waterstop** during normal use. Refer to product material safety data sheet.

LIMITATIONS

Standard **Contite Waterstop** should only be used in applications where ground water is not contaminated. In areas where saltwater or organic contaminated water is expected contact Cormix International Limited. for recommendations. **Contite Waterstop** should be used in areas fully confined in concrete by a minimum of 75 mm cover. To achieve success the installation instructions should be followed. Any hydrated material should be allowed to dry before placement of concrete.

TECHNICAL SERVICE

The Cormix International Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

Certified by

TÜV CERT
ISO 9001 : 2000
Cert . No. 04100 2001 0136
Quality Management System Certified

CONTACT DETAILS

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