



# ULTRACHEM

For Construction Chemicals



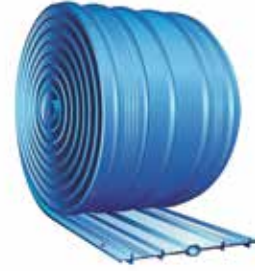
## Ultra Water-Stop

Centrally and externally placed PVC water-stops.

### ألترا ووتر ستوب

قواطع مياه فائقة الجودة من الـ بي في سي  
لفواصل الصب وفواصل التمدد في المنشآت الخرسانية.

Joint Sealants & Water Stop



## Ultra Water-Stop

Centrally and externally placed PVC water-stops.

### Uses

The **Ultra Water-stop** range of PVC water-stops is designed to provide an integral sealing system for movement and construction joints in concrete cast in-situ. These joints typically occur in the following types of structure:

#### Water retaining

- Reservoirs, water towers and sewage tanks.
- Dams, culverts, canals and spillways.
- Swimming pools.
- Bundled areas surrounding liquid retaining tanks.

#### Water excluding

- Basements and underground car parks.
- Tunnels and subways.
- Abutments and retaining walls.
- Roof decks and podium areas.

### Advantages

- Range of profiles to suit every need.
- Fully continuous 4 bulbed network.
- Reinforced eyeleted edge flanges for positive fixing.
- Simple on-site jointing.
- Full range of moulded and fabricated intersection pieces.
- WRC approval for use in contact with potable water.

The range consists of centrally placed profiles; **Ultra Water-stop** Hydrofoil, **Ultra Water-stop** Watafoil, **Ultra Water-stop** XHD Hydrofoil and **Ultra Water-stop** XHD Watafoil; and externally placed profiles; **Ultra Water-stop** Rearguard S, **Ultra Water-stop** Rearguard R, **Ultra Water-stop** Rearguard Kicker and **Ultra Water-stop** Angleguard.

### Standards compliance

**Ultra Water-stop** PVC is suitable for use in contact with potable water. "Water Byelaws Scheme approved product": listing number 8804054.

### Description

**Ultra Water-stop** is extruded from a high grade PVC compound which has been formulated to give excellent flexibility and longevity characteristics. They are available as straight lengths and factory produced intersections or as a factory prefabricated segment of a network to minimize site jointing.

#### Principles of water-stop function

**Ultra Water-stop** work because of two specific aspects of their design.

##### a) Valve principle

Simple **Ultra Water-stop** profiles based on dumbbells are cast into the edges of adjacent concrete panels, which act as baffles. In the event of joints opening as drying shrinkage or other movement occurs, the edge bulbs of the profile act as anchors.

These induce tensions across the **Ultra Water-stop** resulting in a sealing effect at the inner faces of the edge bulbs.



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### Design criteria

The choice of the width and thickness of water-stop is largely governed by concrete thickness, the position of the reinforcement, aggregate size and complexity of the pour. In general the 250 mm width of **Ultra Water-stop** is suited to wall thicknesses of 250 mm and over.

For concrete less than 250 mm thick, the use of a narrower **Ultra Water-stop** approximating to the wall thickness will be appropriate.

### Centrally placed water-stop

**Ultra Water-stop** is positioned within the thickness of the concrete components and as a result are supported by concrete on both sides. They are therefore able to withstand water pressure from either side. This makes them suitable for use in water retaining structures. They will prevent loss of water from within the tank and will prevent ingress of ground water when the tank is drained down.

### Externally placed water-stop

**Ultra Water-stop** is designed for use in basement, foundation and floor slab construction in vertical and horizontal joints in both water retaining and water excluding structures.

When used in walls, externally placed **Ultra Water-stop** will only resist water pressure from the face to which they are fixed.

When used below floor slabs, where the **Ultra Water-stop** is supported by the blinding concrete or when placed in vertical situations against permanent concrete shuttering, externally placed **Ultra Water-stop** will resist water pressure from either face.

### Properties

Form	:	Extruded thermoplastic sections
Color	:	Blue
Density	:	1.45 ± 0.15 kg/l
Hydrostatic head	:	Up to 100 m (10 bar)
Joint movement	:	Up to 10 mm
Tensile strength	:	Minimum 14.96 N/mm <sup>2</sup>
Elongation at break (ASTM D412)	:	Minimum 300%
Welding Temperature	:	200°C

#### Chemical Resistance Permanent:

Water, seawater, sewage, road salt solutions.

#### Temporarily:

Diluted inorganic alkalis, mineral acids and mineral oils.

#### Alkali Resistance Passed.

Hardness:	:	Shore 'A' 80 to 90
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## Specification clauses

### 1 - Supplier specification


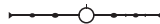
Where indicated on the drawings, PVC **Ultra Water-stop** shall be **Ultra Water-stop** .

All wall/floor **Ultra Water-stop** connections shall be made using **Ultra Water-stop** injection moulded transition pieces to ensure continuity of the four bulb profiles.

### 2 - Performance specification

Where indicated on the drawings, PVC **Ultra Water-stop** shall be made from extruded plasticised PVC compound. The compound used shall meet the US Corps of Engineers specification CRD-C 572-74. it shall have a tensile strength in excess of 14 MN/m<sup>2</sup> and an elongation at break in excess of 300%

## Types % Dimensions Of Water-Stop

-----	Type	Width (cm)	Roll Length (m)	Thickness (mm)	Max water heat (m)
<b>Construction Joint</b>					
	V-20	20	30	(From 2 - 4 mm) available in 6mm	(From 15m to 30m)
	V-24	24	30		
	V-32	32	20		
<b>Expansion Joint</b>					
	O-20	20	20	(From 4 to 7mm)	(From 15m to 30m)
	O-24	24	20		
<b>Surface Water-Stop: Installation on surface of concrete structures</b>					

## Installation instructions

### Ultra Water-stop Hydrofoil and Watafoil

**Ultra Water-stop** must be installed so that they are securely held in their correct position while the concrete is being placed. Concrete must be fully compacted around the **Ultra Water-stop** to ensure that no voids or porous areas remain. Where reinforcement is present, an adequate clearance must be left to permit proper compaction. The brass eyelets used for securing the **Ultra Water-stop** are located outside the edge bulbs so as not to create water paths around the profile.

Example of a kicker joint.

### Ultra Water-stop Rearguard

When used on ground slabs where the **Ultra Water-stop** is supported on blinding, Rearguard profiles usually require no fixing. Lay the **Ultra Water-stop** centrally over the line of the joint to be formed.

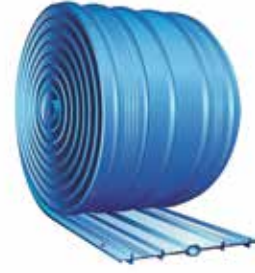
Fixing to vertical shuttering is done by nailing through the outer nailing flanges leaving the head of the nail proud so that it is held in the cured concrete. This prevents the **Ultra Water-stop** being displaced when the shuttering is struck. Fixing to vertical shutter.

### Fixing Supercast Kicker Ultra Water-stop

In addition to nailing to the external shutter, the Kicker profile is equipped with brass eyelets in the central rib. Twist short lengths of tying wire through these eyelets so that when the kicker is cast they act as anchors, holding the center of the **Ultra Water-stop** tight against the face of the concrete. This prevents the build-up of debris between the **Ultra Water-stop** and the kicker prior to the wall being poured.

### Ultra Water-stop Angleguard

Fixing in position is done in a similar manner to **Ultra Water-stop** Rearguard.



## Ultra Water-Stop

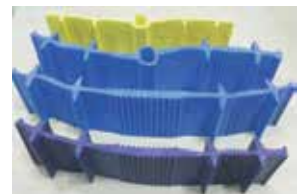
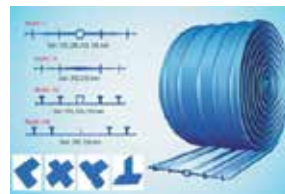
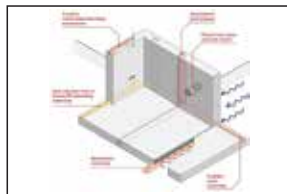
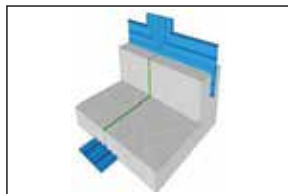
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### Supply

Packaging	15 m rolls. 30 m rolls
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### Health and safety

Hot weld site jointing of PVC **Ultra Water-stop** results in the liberation of hydrogen chloride mist and vapour. The OEL (operational exposure limit) of 5 ppm can be exceeded in still air confined spaces, therefore forced ventilation must be provided or a suitable respirator used.



### Quality You Can Trust

Aboraewash - Industrial Area  
Cairo - Alex. Road Km. 26  
Adel Wali St. Land No. 91

Tel.: 0100 931 8094 - 0100 044 9257  
Email: [sales@ultrachem-eg.com](mailto:sales@ultrachem-eg.com)  
website: [www.ultrachem-eg.com](http://www.ultrachem-eg.com)



المنطقة الصناعية - أبو رواش - الكيلو 26  
طريق القاهرة الإسكندرية الصحراوي  
شارع عادل والي - قطعة رقم 91



## ألترا ووتر ستوب

قواطع مياه فائقة الجودة من الـ بي في سي لفواصل الصب وفواصل التمدد في المنشآت الخرسانية.

### وصف المنتج

شرائح فائقة الجودة من الـ بي في سي المرنة متوافرة بأنواع وأحجام واللوان متعددة وفقا لطبيعة الإستعمال.

### الإستعمالات

يستعمل الفواصل الصب وفواصل التمدد في المنشآت الخرسانية الحاجزة للماء مثل :

- خزانات ماء الشرب والحريق والصرف الصحي.
- السدود والقنوات وحمامات السباحة.
- لأنفاق والحوائط الحاجزة للماء.

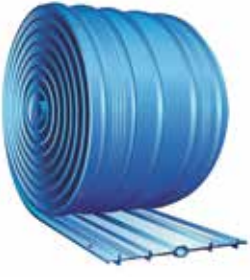
### المميزات

- سهولة التركيب واللحام في المواقع.
- يتحمل الضغط العالي للماء.
- عالي المرونة فيسهل تشكيله داخل القطاع الخرساني.

### البيانات الفنية

(عند 25 درجة مئوية)

المظهر	: شرائح مرنة ملونه من البي في سي.
الكثافة	: 1,45 ± 0,15
المحتوى الصلب بالوزن	: 100 %
قوة الشد	: 15 نيوتن/م
الإستطالة عند الكسر	: < 300 %
التعبئة	: لفات بطول 30 متر
الصلاحية	: غير محدد المدة في ظروف تخزين مناسبة.
التخزين	: يخزن في الظل في درجات الحرارة العادية بعيدا عن أشعة الشمس.



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### التطبيق والإستخدام

#### التثبيت

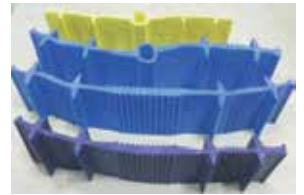
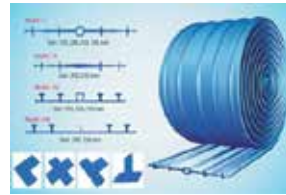
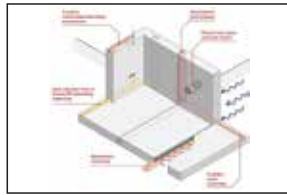
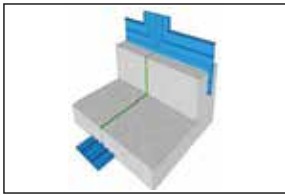
يتم التثبيت بإستخدام الكلبسات أو الكانات في القطع الخرساني حسب التصميم قبل صب الخرسانة.

#### اللاحم

تم اللحام بتجميع نهايتي الطرفين بالقاعدة الخشبية الخاصة لكل نوع ثم يتم تسخين نهايتي الطرفين بماكينه لحام او بسكينه لحام حتى يتم لحام الطرفين.

#### التطبيق

يفضل أن يكون العرض النهائي لموانع التسرب أقل أو مساوي لسماك طبقة الخرسانة التي سيوضع عليها كما يفضل وضع موانع التسرب المائية في المنتصف للحصول على أعلى كفاءة تشغيل.



### تعليمات الأمان

- يتم تنظيف أدوات التطبيق بعد إنتهاء الإستخدم مباشرة قبل الجفاف وإل سيتم التنظيف ميكانيكا بعد الجفاف.
- غير سامة طبقا لقواعد الصحة والأمان السائدة.
- يجب إرتداء الملابس الواقية المناسبة والقفازات وحماية العين ومعدات حماية الجهاز التنفسي.
- عند التلامس مع الجلد يجب الغسل فوراً بالماء والصابون وإذا حدث تلامس مع العين أو الأغشية المخاطية يجب الشطف بالماء الدافىء وإستشارة الطبيب المختص.

لمزيد من التفاصيل ارجع إلى الداتا شيت باللغة الانجليزية أو اتصل على الإدارة الفنية.

### جودة تستحق الثقة



Aboraewash - Industrial Area  
Cairo - Alex. Road Km. 26  
Adel Wali St. Land No. 91

Tel.: 0100 931 8094 - 0100 044 9257

Email: sales@ultrachem-eg.com

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