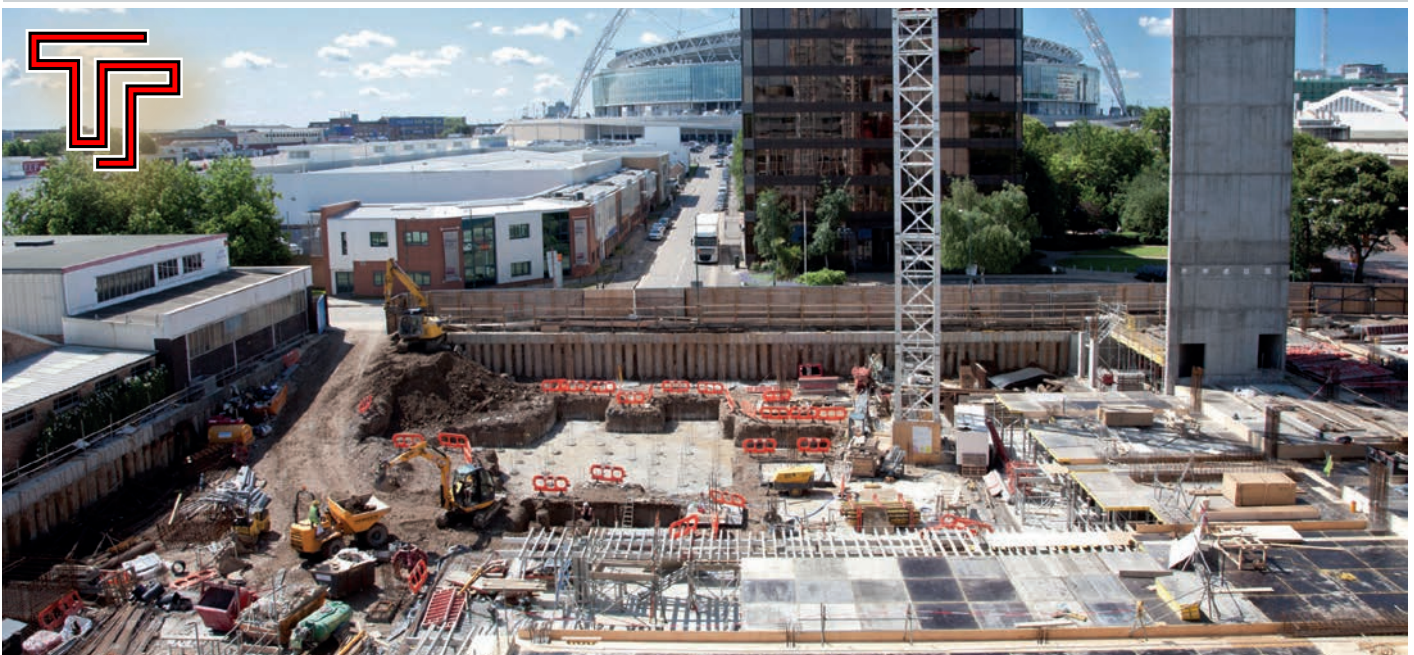




# TT WATERTIGHT CONCRETE AND JOINT SEALING SYSTEMS



NBS



Basement  
Waterproofing  
ASSOCIATION





# WYKAMOL GROUP LIMITED

For over 90 years the Wykamol Group has been the market leader in the field of property renovation and repair. Such is the strength of our name, Wykamol products are distributed and used throughout the UK, Europe, the Middle East and Australia.



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## Focusing on 4 main sectors - **Damp and Timber, Structural Waterproofing, Structural Repairs and gas protection.**

In 2023, **Wykamol Group** acquired **Triton Waterproofing Systems** to expand into the waterproof concrete market with its BBA accredited **TT-Admix** Crystalline Waterproof Concrete, which means the **Wykamol Group** now provide solutions in **Structural Waterproofing** under **Type A Barrier Protection, Type B Structural Integral** and **Type C Drainage Systems**.

The Wykamol Sales and Technical Departments have representatives up and down the country with years of experience in the construction industry, working on a range of complex projects. Challenging projects are Wykamol's forte, and with our team of CSSW, AMICT, CSTDB and NVQ Level 4 in Gas Protection we are with you each step of the way, from early design stage through to project completion.

**The Wykamol Group** provide PI and take on design responsibility for structural waterproofing.



# WYKAMOL GROUP

## OUR TEAM

### **Andrew Latimer**

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# 2024



A 3D map of the United Kingdom is shown in shades of green. Overlaid on the map are several concentric blue circles of varying sizes, each with a black dot at its center. Lines connect these dots to the names and contact information of technical sales managers for different regions.

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Technical Sales Manager  
07831 154 155

**Graham Hughes** CSSW CSRT  
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Technical Sales Manager  
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**Sasha Kosevic** CSSW BA (Hons)  
Southeast (West Counties)  
Technical Sales Manager  
07899 956 659

**Steve West** CSSW  
Technical Sales Manager  
07836 605 552

# WATER-PROOFING

## TYPE B

Structures will generally be reinforced or pre-stressed concrete.

Type B Waterproofing, as defined in BS8102:2022: Code of practice for Protection of Below-ground Structures Against Water Ingress, is where the structure itself is constructed as an integral water resistant shell. Invariably built of reinforced concrete, the basement structure must be designed within certain strict parameters to ensure it is water resistant. When considering and/or specifying a Type B integral system, only consult individuals with the knowledge and understanding of waterproofing in relation to BS8102:2022, and in the case of concrete structures, an understanding and competence in concrete construction. The water tightness of the Type B construction is reliant upon the design and construction of the basement as an integral shell, using a concrete of low permeability, and appropriate joint detailing. Defects can be minimised by correct specification and design and careful construction.

The most common defects are:

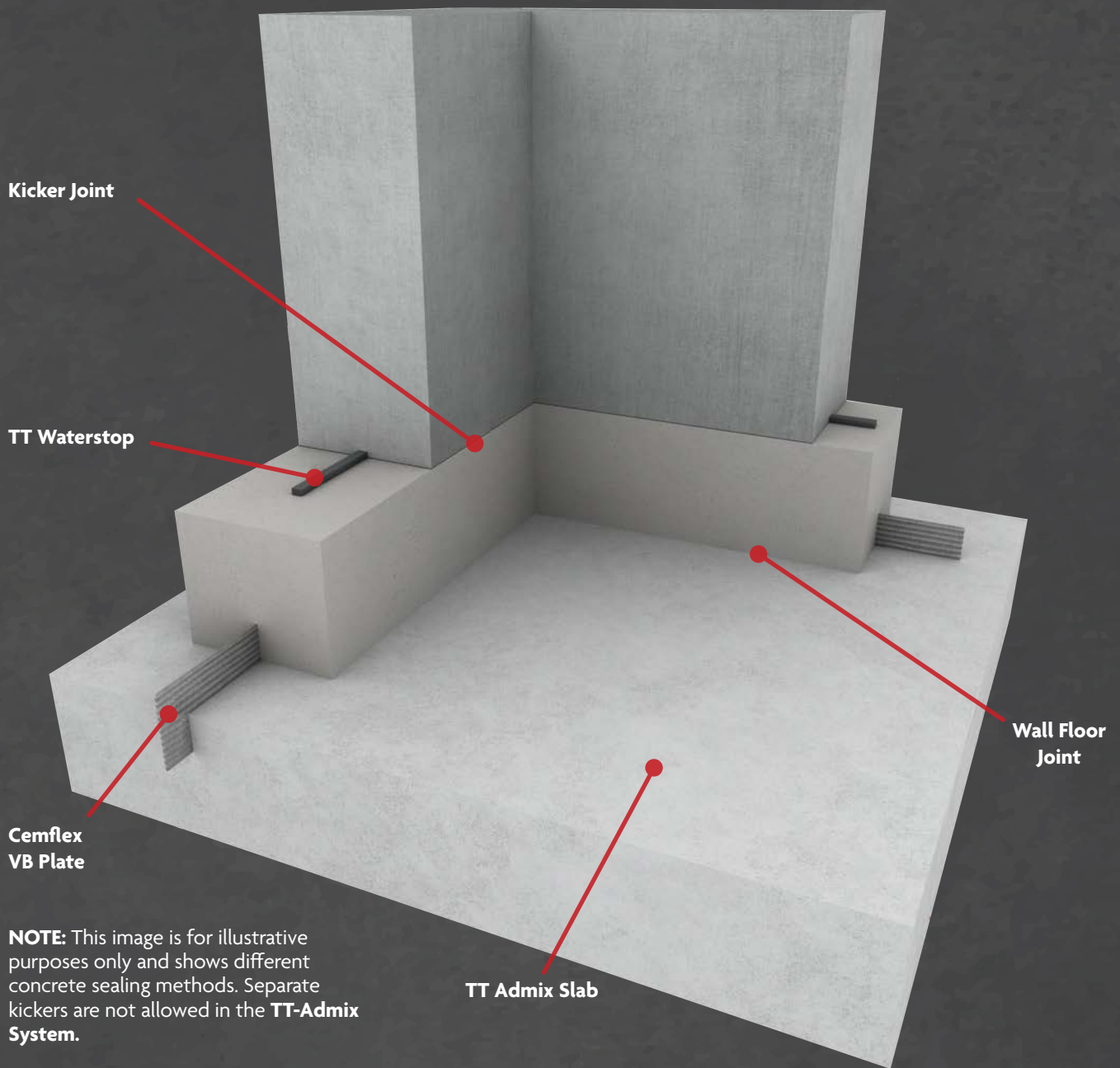
- Permeable concrete
- Honeycombing through lack of compaction
- Cracks due to thermal contraction and shrinkage
- Poor and inadequate placement of waterbars, hydrophilic strips and joints.

Construction joints, pour layouts, and curing of concrete need particular attention as they are vulnerable areas that are most commonly associated with leaks. While attention needs to be paid to jointing and positioning of water stops, great care is required in the placing and compaction of the concrete. An alternative method of controlling water ingress at construction joints is to use a crystallisation or hydrophobic system which react in the presence of water to seal the joint. The construction of a 'kicker' after pouring the floor slab should not be encouraged as it is difficult to construct without defects.

Therefore kickers should be cast with the slab, using appropriate edge formwork. Kickers require careful construction to obtain full compaction. Modern types of formwork and kicker-less construction techniques mean that kickers no longer need be part of the construction process. With a high water table, minor defects in the concrete usually result in only small amounts of water penetrating, and stopping these is usually straightforward. Remedial action may, depending on the form of construction, be carried out from the inside, so avoiding the need for external excavation. Variable water tables present a reduced problem, unless the water table stays high for a long time. In a free-draining site, it is rare for a defect to be so serious that the water comes through by capillary action. Defects are not always identified during construction stage and only become evident after completion, which is why we recommend using Type B waterproofing in conjunction with a Type C waterproofing system, where any water ingress is managed.









# TT ADMIX

TT-Admix is a waterproofing, crystalline admixture that reduces the permeability of concrete and increases the strength and durability of standard concrete.

**TT Admix** from the **Wykamol Group Limited** offers several benefits for protecting structures from water ingress with its crystalline technology.

- 1. Waterproofing:** TT Admix provides integral waterproofing to concrete, ensuring that structures remain protected against water ingress. This is crucial for extending the lifespan of buildings and preventing costly damage from water penetration.
- 2. Durable:** The admixture enhances the durability of concrete, making it more resistant to various environmental factors such as freeze-thaw cycles, chemical exposure, and abrasion. This leads to longer-lasting structures with reduced maintenance requirements.
- 3. Increased Strength:** By improving the density and compactness of concrete, TT Admix enhances its compressive strength, making structures more robust and able to withstand heavy loads and stresses.
- 4. Crack Reduction:** The admixture helps in reducing shrinkage and cracking in concrete, which can occur during the curing process or as a result of temperature changes. This results in aesthetically pleasing and structurally sound surfaces.
- 5. Easy Application:** TT Admix is easy to incorporate into concrete mixes, allowing for seamless integration into construction projects without requiring significant changes to existing processes.
- 6. Cost-Effective:** Although initially, there may be some additional cost associated with using TT Admix, the long-term benefits such as reduced maintenance and repair costs make it a cost-effective solution for waterproofing and enhancing the durability of concrete structures.

TT-Admix offers a comprehensive waterproofing solution for improving the waterproofing performance and longevity of concrete structures, making TT-Admix the preferred choice for new build construction using Type B Structural Integral design.

## AVAILABLE SIZES

Code	TTSUPERADMIX4.1
Pack Size	6 x 4.1 kg per bucket
Dosage	4.1 kg/m <sup>3</sup>





# TT BETOCRETE CL-210

TT-Betocrete CL-210 is a crystalline waterproofing concrete admixture with hydrophobic effects



**TT-Betocrete CL-210** is a liquid admixture for designing a water-tight concrete with innovative '2 in 1' crystalline and hydrophobic technology. Initially it functions chemically and reduces the water absorption in the matrix.

Nano-scale crystals then form in the capillary system by special active catalysts, which become active on contact with water. This forms a concrete that is sustainable and permanently impermeable to water.

**TT-Betocrete CL-210** can be added to all concrete where water penetration should be permanently prevented. For example: basements, cooling towers at power stations, tanks and containers, retaining basins, swimming pools, car parks, foundations, sandwich units, waterproof concrete, sewer channels/manhole access points, tunnels, concrete pipes etc.



## FEATURES

- Liquid system suited to on-demand volumetric concrete supply
- Crack healing possible for penetrating cracks up to 0.4 mm and for map/pattern cracks up to 0.5 mm
- Improvement of the resistance to freeze/thaw
- Crystallization of the capillaries
- Reduces capillary absorption
- Reduction in chloride migration
- Minimization of maintenance and repair costs

Concrete Requirements	
Minimum cement content	CEM I 279 kg/m <sup>3</sup> CEM III/A 380 kg/m <sup>3</sup>
Pozzolanic cement with pozzolan content > 20%	300 kg/m <sup>3</sup>
Granulated slag	max. 100 kg/m <sup>3</sup>
Fly ash	max. 80 kg/m <sup>3</sup>

## AVAILABLE SIZES

Code	TTBETO25LTR
Pack Size	25 litre
Dosage	Consult technical data sheet



# WATER BARS

TT Waterstop and Wykamol Waterbar are advanced technology waterbars to seal concrete joints, service penetrations and many more application types in below ground concrete applications.



**WATERBARS** are a recognised joint sealing method in BS8102:2022, however waterbars must not be used in movement joint applications.

## TT WATERSTOP (BDA ACCREDITED SYSTEM)

A high performance sodium bentonite and butyl rubber waterstop which is the official waterstop when used in conjunction with **TT-Admix** Waterproof Concrete.

**TT Waterstop** will swell within its confinement when in contact with water, effectively sealing localised honeycombing and minor fissures.

- BDA Accredited
- Non-dimensional when swelling and sealing defects within the structure
- Resists in excess of 6 bar (60 m) of hydrostatic pressure
- Unaffected by freeze/thaw cycle

## WYKAMOL WATERBAR

A bentonite based water-stop tape which has a unique protection coating that prevents premature swelling of the tape for up to 3 days. **Wykamol Waterbar** is designed to prevent water ingress through non-movement joints in reinforced concrete structures.

## WATERBAR APPLICATIONS

- Seal service penetrations, pre-cast concrete and other areas
- Vertical and horizontal joints in pre-cast concrete wall panel systems, shield-driven tunnels such as subways, water supply and sewage systems, etc.
- Civil applications in both residential and commercial buildings - new build and refurbishment projects
- Within RC concrete basement construction for slabs, walls and pipe detailing.

### AVAILABLE SIZES

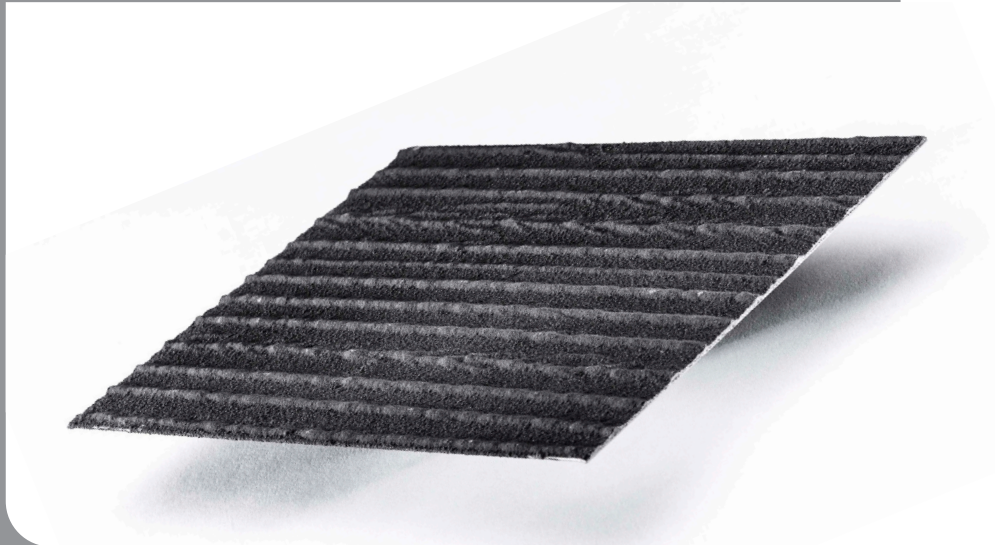
Code	TTWATER5M
Pack Size	20 m x 25 mm x 5 m rolls (Box 6 x 5 m rolls, 30 metres)

Code	WYKWSB5
Pack Size	20 mm x 25 mm x 20 m long (single rolls)



# CEMflex VB PLATE

Cemflex VB Plate Steel Waterbar is a galvanised steel plate encapsulated in a special patented coating that reacts only with the water within the concrete to provide a watertight joint.



**CEMflex VB** complies with BS 8102:2022 and has infinite sealing ability. Should water or moisture come into contact with the coating at any time, the coating will re-activate and repeat the sealing process.

## HOW DOES CEMFLEX VB PLATE WORK

When fresh concrete is placed around **CEMflex VB Plate** Waterstop, the alkalinity (pH11) of the concrete activates the patented coating producing a chemical reaction, causing the patented coating to soften and expand slightly, improving its osmotic effect. This allows it to penetrate deeply into any cracks in the concrete where it crystallises and seals the concrete

## ADVANTAGES

- Independently tested for use up to 5 bar water pressure.
- A highly effective waterstop, suitable for use in all non-movement construction joints within in-situ poured reinforced concrete.
- Installed before the concrete is placed and fixed to upper layer of reinforcement.
- Requires only 30 mm of concrete cover to function correctly.
- Suitable for both vertical and horizontal applications.
- No sticky protection tape to be removed from **CEMflex VB Plate** prior to use.
- Offers strength and agility
- Is quick and easy to install without welding or special fitting equipment.
- Excellent bond with the concrete.
- Patented coating with crystallization properties to further enhance protection of the construction joints.
- May be installed in all weather conditions, it is fully weatherproof.
- Covers large area in a single application process.

## AVAILABLE SIZES

Code	CEMFLEXVB2MX100MM
Pack Size	100 m x 1.25 mm x 2 m lengths (sold with clips)

Code	CEMFLEXOMEGACLIP(1)
Pack Size	singles (for fixing to reinforcement)





# TT SWELL MASTIC S2

A grey elastomeric swellable hydrophilic adhesive.



**TT Swellmastic S2** is a grey, elastomeric, swellable system which is applied into a pre-formed rebate within the concrete construction joint or when used with **TT Waterstop**. **TT Swellmastic S2** swells when it comes into contact with moisture, preventing the passage of water through concrete construction joints.

## USES

- Sealing of joints in pre-cast manhole covers, cable ducts and service penetrations.
- Can be applied to rough surfaces.
- Sealing around H beams or other steel columns which penetrate through concrete
- Adhesion for TT Waterstop

## ADVANTAGES

- Fast curing: Enables early concrete pour and rapid return to service. Allows hand-applied concrete cover within 2 hours on emergency repairs and large-scale concrete pour after 8 hours.
- Excellent seal on rough concrete: Gives improved water tightness. Plugs inequalities in rough concrete to produce a tight seal.
- Excellent adhesion: Quick and easy to apply to a variety of uneven joint surfaces remaining firmly in place during concrete pour.
- Water swellable: Expands by 200% producing a watertight compression seal.
- Durable: Excellent wet/dry cycle retaining elastomeric character and swelling performance

## PRODUCT DATA

Data	
Curing Rate	3 mm in 24 hours
Swell Ratio	200%
Shore A Hardness	10 – 15
Tack-free time	Approximately 1 hour (at 20°C / 50% RH)
Concrete pour	Allow between 2 – 8 hours (consult technical data sheet)

## AVAILABLE SIZES

Code	TTSWELLMAST600CC
Pack Size	10 x 600 ml per pack



# TT SEALING STRAP

This water swellable strip seal is specially designed to waterproof plastic pipes through concrete constructions.



**TT Sealing Strap** is designed to offer a more effective, quick and secure sealing solution than mastic or a length of water bar.

Designed to provide a secure seal around pipes installed through concrete floors or walls, **TT Sealing Strap** should be fixed around the pipes before the steel reinforcements are put in place. Easy to fit and tighten using the mechanical fastener, the straps can be used to seal around all pipes between 110 – 125 mm diameter.



SPACE-SAVING  
STORAGE



NO INSTALLATION  
TOOLS NEEDED



FAST & EASY  
INSTALLATION

## AVAILABLE SIZES

Code	SEALSTRAP110/125(5)
Pack Size	5 per pack

Avoid the following  
ineffective installations





# TT SEALING PLUG

Water-swellable plug for a perfect seal of formwork spacers



**TT Sealing Plug is designed to provide a robust and effective method for sealing tie bolt hole sleeves in reinforced concrete walls.**

The 22 mm standard sized plugs are simply hammered in either or both ends of the formwork spacer. The swellable rubber cap prevents water infiltrating the spacer and the solid core provides a mechanical anchor under water pressures up to 6 bar.

## INSTALLATION IN 3 STEPS

**TT Sealing Plug** fits in spacers with an inner diameter of 22, 24 or 26 mm and can be customized to your specific formwork.



Position the **TT Sealing Plug** in the formwork spacer



Hammer the **TT Sealing Plug** into the formwork spacer. Insertion with a single hammer blow



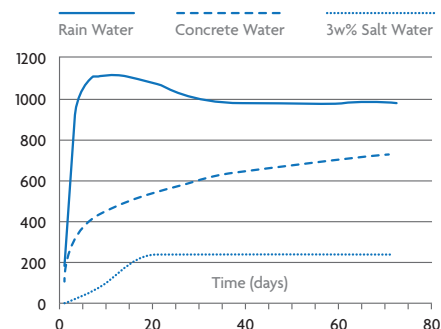
No additional finishing or after-treatment required

The water swellable sealing products are based on unique active sealing technology.

The plug expands on contact with water creating an active seal to combat moisture infiltration. It is self-correcting and therefore seals unevenness and imperfections in concrete.

## AVAILABLE SIZES

Code	SEALPLUG22MM(100)
Pack Size	Supplied in bags of 100





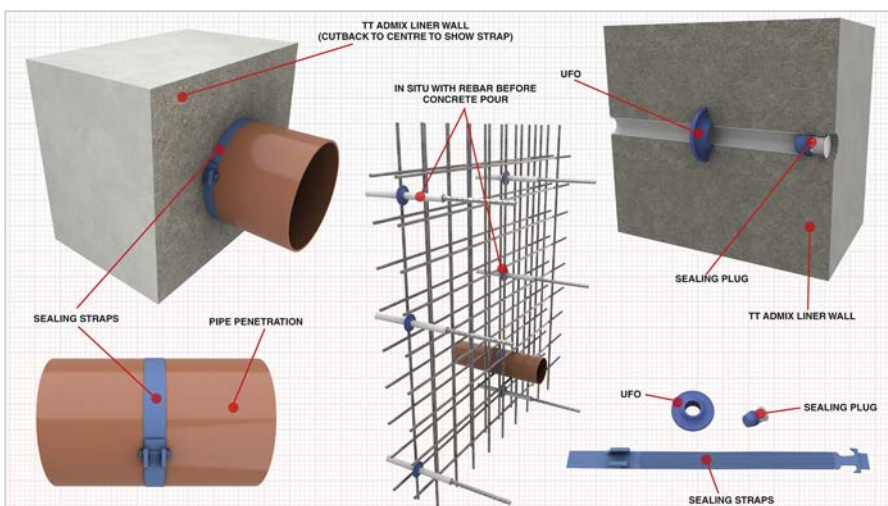
# TT SEALING UFO

A hydrophilic ring made from synthetic, water-swellaable rubber that fits securely around the exterior of the formwork spacer and presents water infiltrating through cracks in the surrounding concrete.



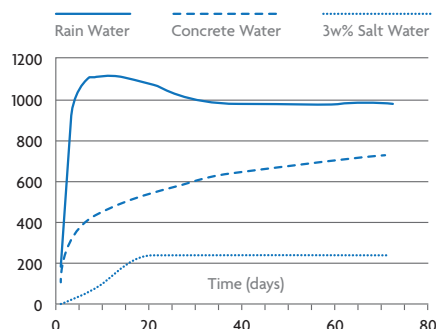
**TT Sealing UFO is designed to offer a more effective, quick and secure sealing solution than mastic or a length of water bar.**

A hydrophilic ring made from 24 mm of synthetic, water-swellaable rubber that fits securely around the formwork spacer and prevents water infiltrating through cracks in the surrounding concrete. The water-swellaable sealing products are based on unique active sealing technology, expanding on contact with water and self-correcting, thus also sealing the unevenness and imperfections of the concrete.



## AVAILABLE SIZES

Code	SEALUFO24MM(100)
Pack Size	Supplied in bags of 100



# HYDRADRY UNIVERSAL MORTAR

Universal Mortar is a single component, thixotropic, fibre-reinforced, polymer modified cementitious mortar.



**HydraDry Universal Mortar** is a high-performance, multi-purpose, fibre-reinforced, fair faced levelling coat, render and profiling mortar, with enhanced waterproofing properties.

## ADVANTAGES

- Ideal for use with specialist waterproofing systems such as HydraDry Tanking Slurry.
- Fibre re-inforced to give improved tensile and impact strength.
- High bond strength which ensures monolithic performance.
- Suitable for horizontal, vertical and overhead applications.
- Wide range of applications from a single product.
- Economic mortar which generally requires no substrate inter-layer priming.
- Dense matrix provides excellent protection from moisture and chlorides.
- Factory batched mortar which provides consistent quality.
- Easy to use, brush, roller or spray applied.

## USES

Waterproofing and protection against water and moisture.

Mortar for waterproofing, levelling and re-profiling.

Fillet at wall/floor/ceiling junctions. Foundations, slabs, retaining walls etc.

Drinking water structures when finished with HydraDry Tanking Slurry. High build repair mortar.

## AVAILABLE SIZES

Code	UNIMORT
Pack Size	25 kg
Coverage	Up to 1.4 m <sup>2</sup> dependent on substrate at 10 mm



# HYDRADRY WATER STOP

Water Stop is a fast setting, expanding water stop plugging and repair mortar.



When mixed with clean water and applied correctly it is formulated for the rapid patching and plugging of active water leaks and seepage in concrete and masonry.

## ADVANTAGES

- Instantly stops leaks in concrete and masonry - tanking slurry waterproof system
- Provides a permanent watertight seal
- Fast setting and rapid curing
- Superior bond strength to concrete and masonry resists positive and negative water pressure
- Suitable for internal and external use
- Safe to use in contact with potable water suitable for use above and below-ground
- Resists positive and negative water pressure

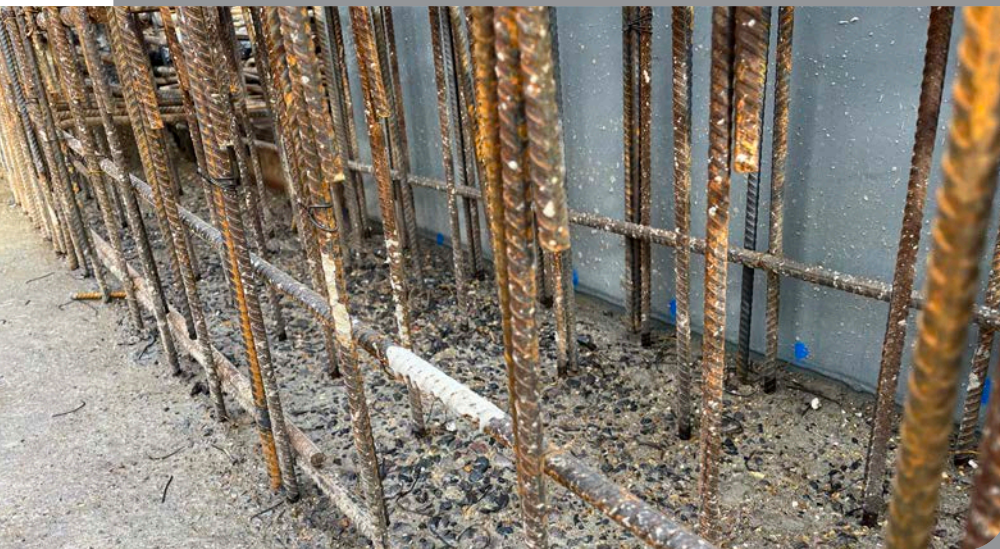


## USES

Stop active water leaks or seepage under pressure at holes, joints and cracks in concrete or masonry walls, including swimming pools, tunnels, fountains, cisterns, water channels, ponds, pipes, basements, foundations and retaining walls.

## AVAILABLE SIZES

Code	NMDWATERSTOP
Pack Size	5 kg
Coverage	Wide ranging depending on application type



# WYKAMOL LIQUID RETARDER

A liquid-based retarder for ease of concrete joint preparation. Compatible with both **TT Admix** and standard RC concrete.



**Wykamol Liquid Retarder** is an environmentally friendly top face concrete surface retarder for use with the **TT Admix System**. This aqueous liquid can be applied by spray to allow for easy removal of the surface cement matrix from freshly cast concrete. This product can also be used with standard RC concrete.

## ADVANTAGES

- Removes the need for scabbling concrete construction joints
- Contact with reinforcement will not prevent bond to concrete
- Provides an excellent key for any subsequent pours or treatments
- Once washed off, this product produces an exposed aggregate finish that is uniform
- Blue in colour to aid full coverage during application
- Eliminates time-consuming processes of concrete surface preparation

## CONDITIONS AND LIMITATIONS

- Protect from drying winds, UV rays and excessive heat to prevent the product from evaporating before penetration has completed.
- Ensure any absorbent coverings do not come into contact with the treated face
- Do not use on concrete containing accelerators

## AVAILABLE SIZES

Code	WYKLIQRET25
Pack Size	25 litre
Coverage	Up to 125 m <sup>2</sup>



# WYKAMOL GEL RETARDER

A gel-based retarder for ease of concrete joint preparation. Compatible with both **TT Admix** and standard RC concrete.



**Wykamol Gel Retarder** is a useful part of the **TT Admix System**, used to improve the concrete adhesion to surfaces by creating an excellent key. The gel consistency helps prevent run-off when applied to vertical surfaces and the blue pigment ensures adequate coverage across the substrate. This product can also be used with standard RC concrete.

## ADVANTAGES

- Exceptional non-slump properties when applying to vertical and horizontal timber stop-ends
- Suitable for all types of formwork, both absorbent and non-absorbent
- Adheres to treated surfaces after water carrier has evaporated
- Blue in colour to aid full coverage during application
- Cures to give a tough, resistant film that is not easily displaced during concrete placement
- Prevents hardening of concrete surface to allow for easy removal of stop-ends and jet washing
- Product can be easily removed by jet washing concrete construction joints
- Readily biodegradable

## CONDITIONS AND LIMITATIONS

- Retarder **MUST** be removed completely prior to the next concrete pour to avoid weak construction joint

### AVAILABLE SIZES

Code	WYKGELRET25
Pack Size	25 litre
Coverage	Up to 75 m <sup>2</sup>





# WYKAMOL CURE 90

Aluminised 90% high efficiency curing membrane for concrete.



**Wykamol Cure 90** is a highly efficient curing membrane for concrete, containing aluminium flakes to reflect solar heat away from the surface and resin based dispersion to retain the optimum amount of water (in excess of 90%) in fresh concrete to allow for full hydration of the cement. Tested in accordance with BS 7542:1992.

## ADVANTAGES

- Reduces the risk of surface cracking, crazing and dusting
- Improves durability
- 90% minimum curing efficiency
- Complies with: ASTM C309.66, Department for Transport Specification for Highway Works Clause 1027, MoD DIO Specification 033 Clause 3.10.1 for Airfields
- Removes the need to cover with wet hessian, but can be used in combination with polythene sheeting and frost blankets
- Locks in moisture and reduces evaporation during hydration to optimise strength and durability of the concrete

## CONDITIONS AND LIMITATIONS

- Where concrete surface requires power floating or any form of float finish, delay application of curing agent until desired finish has been achieved.
- Success of curing is dependent on achieving the correct coverage and end user should adopt industry standards at all times.
- Reference to engineers specification on curing methods and industry guidelines is essential. Review 3rd party documents for more information

## AVAILABLE SIZES

Code	WYKCURE9025
Pack Size	25 litre
Coverage	Up to 125 m <sup>2</sup>



# TECHNICAL SUPPORT & WARRANTY

- Stage 1.** Early engagement at project design stage (requirements of BS8102:2022). Wykamol have a team of qualified CSSW experts who can, in detail go through all your project needs. Where necessary we can provide support and input on project specific waterproofing designs.
- Stage 2.** Once tender stage is complete, we work with all main contractors, principal designers and appointed ground workers / specialist installers to ensure everyone involved on the project are fully aware of the requirements needed on-site.
- Stage 3.** Prior to project commencement we will attend site with the sub-contractor installing **TT Admix** to ensure they are aware of their roles and responsibilities prior to placement of the concrete. This is to ensure compliance of the **TT Admix System**. We conduct a pre-start meeting and can attend site when required or offer remote based technical support throughout the project.
- Stage 4.** At project completion stage of **TT Admix**, we will attend site to carry out a final inspection of the project.
- Stage 5.** Product warranty is issued to the installing contractor. Where **TT Admix** has been installed in conjunction with Type C Cavity Drain System the product warranty is separate from the installation warranty provided by the specialist installer.



CASE - STUDIES



## WATERTIGHT CONCRETE BASEMENT FOR LUXURY WEMBLEY DEVELOPMENT

Two 20-storey buildings, one a hotel and the other a luxury residential and commercial apartment block, have been constructed a stone's throw from London's Wembley Stadium.

Triton was appointed by main contractor, Donban Construction, to supply a watertight concrete system (comprising type B method of waterproofing as defined in BS 8102 2022) for the large underground car park which will serve both buildings.

The watertight basement measures 80 m x 70 m x 4.5 m deep and is constructed from 2,000 m<sup>3</sup> of concrete incorporating **TT Admix** to form the ring beam - which can be seen in the photograph sitting on top of contiguous piles - the floor slab and the concrete liner wall.

**TT Admix** is a specialist chemical treatment for the waterproofing and protection of concrete – designed to be used as an admix at the time of batching.

The active chemicals react with fresh concrete to generate a non-soluble crystalline formation which seals the concrete itself against the penetration of water or liquid, inhibiting the ingress of water through small cracks and shrinkage, and protecting it from the deteriorating effect of harsh environmental conditions.

Triton's Technical Department worked closely with concrete suppliers, Cemex, and recommended a dosage rate of 4.1kg of **TT Admix** per 3 m<sup>3</sup> of concrete. Triton continued to provide support and advice to the main contractor and concreting sub-contractor (JNC Utilities) as the job progressed.

**TT Waterstop** (a water bar) and **TT Swellmastic S2**, was applied to all concrete construction joints and concrete interfaces. The application of these products was also overseen by Triton's Technical Department who monitored and recorded the application of every waterproofing element of the basement's construction, up to ground-level, prior to providing a warranty on the system.





## CASE - STUDIES



## TRITON SYSTEMS TANK WATERPROOF BEHEMOTH BASEMENT NEAR BIRMINGHAM

The creation of an extensive basement complex that has taken a year to construct, and which extends beneath an access road to link the main property with a separate building, is making use of multiple waterproofing products from the range of Triton Systems.

The main house tunnel, at 900 m<sup>2</sup>, and the adjacent house build of reinforced concrete sub-structure, has been excavated and formed by Leicester based Beautiful Basements, in a contract valued at £800K. The project will include a six-bedroom private residence with amenities including a swimming pool and gym.

Aside from the sheer scale of the property, the contractor has also had to deal with some difficult ground conditions including the sloping topography of the land.

Beautiful Basements built the structure in reinforced concrete with 400 mm thick walls – rising to a height of over 5.4 metres around the pool area, sitting on an equally thick ground bearing slab.

As well as using **TT Waterstop** in place of Adcor, and **CEMflex steel waterbar** products to provide continuity between the multiple sections, all of the ready-mixed concrete supplied to the site by Flomix Concrete incorporates **TT Admix** waterproofing admixture.

As the various areas of the basement are finished, the manufacturer's Triton TM8 Drainage Membrane is being used to line the walls, while Triton TM20 covers the floor, with edges sealed where they drain into the moulded PVC Aqua Channel around the perimeter. There a total of eight sumps containing Triton pumps to remove any water collected.

Additionally the project features the use of Triton's

special condensation traps, while the roof of the tunnel under the road has been treated with Triton Fastcoat: a single component, moisture curing elastomeric resin.

The Managing Director of Beautiful Basements, Andy Parkes, commented: "This has been a long and complex contract but it is progressing well. We always use the Triton membranes and perimeter channels as our go-to solution for these sort of contracts, as we have enjoyed an excellent working relationship with the company going back more than a decade."

"With respect to the Triton drainage membranes, we had to install some sections of the TM8 ahead of the rest where the main contractor needed to erect blockwork walls to divide up different rooms within the basement. The TM8 will run all the way through the tunnel and ultimately link up to the bungalow.

It's a massive project with the three different builds all connected together giving continuous waterproofing integrity."

Beautiful Basements works across the country on commercial projects as well as large scale residential developments. This specialist contractor regularly employs half a dozen of Triton's well-proven products to create large-scale, fully waterproof sub-structures that offer a ten-year guarantee along with an insurance backed guarantee.

Triton TM8 and TM20 carry BBA certificates which are required by Third Party Building Warranty providers (NHBC, LABC etc.) They can be used within a standalone waterproofing system or as part of a combined strategy with other forms of waterproofing, depending on site conditions, and intended use of the basement or building.

**\*Please note: Some products referenced in these articles have been discontinued or rebranded with a different name.**

CASE - STUDIES



## BASEMENT SPECIALIST SPECIFIES TRITON SYSTEMS FOR VINTAGE PROJECT

A prolific user of Triton Systems Waterproofing products has made use of the manufacturer's waterproofing and sealant products in constructing a large wine cellar as the semi-buried basement structure beneath a new five-bedroom property in North London.

Harkmac Construction Limited undertook the new build in the Stanmore area on behalf of Inspired Designs, a Residential Design and Build company and recommended the use of **TT Admix** to the project structural engineer along with **TT Swellmastic S2** to address the day joints.

The Luton based groundworker and civil engineering company has been successfully employing the Triton products since 2021, undertaking contracts from South Wales, right across England to the South-East.

Harkmac's Contract Manager on the Stanmore job, Anthony Anderson, comments: "This was a large basement – measuring 10 metres by 5 metres – built into sharply sloping ground, and although the clay soils are fairly dry, we recommended the addition of **TT Admix** to the structural engineer, which Triton then supplied to our ready-mixed concrete supplier. The mix design for waterproof concrete was then used for the basement

slab and walls, as well as the floor slab over the top: forming a complete box for the wine cellar.

"We work right across the country from Cardiff, down to Portsmouth and up to Coventry and have utilised the Triton range on a variety of domestic and commercial projects, including several of the David Lloyd gymnasium extensions. The products are very easy to use and we get excellent technical back up from Triton, including site visits and the supply of drawings or special details when needed."

Anthony Anderson and his colleagues have now moved on to another project at Holdsworth Crescent in Coventry, where they are again employing the **TT Admix** for the construction of raft foundation slabs on new build properties.

As a long-established manufacturer with a very successful track record, Triton Systems offers a wide range of well proven products to cover damp-proofing problems, timber protection, structural repairs, condensation control and the prevention of gas penetration, such as radon and methane. Triton's Technical Department is also able to offer advice on specific project requirements as well as guidance on relevant product compliances.





## CASE - STUDIES



## WATERTIGHT PARKING UNDER LUXURY DEVELOPMENT

This North West London development comprises seven luxurious new build apartments, finished to the highest specification.

The large basement will accommodate residents' car parking, maintenance offices and plant rooms.

The basement was constructed by Together Construction Ltd (TCL) using 450 m<sup>3</sup> of concrete waterproofed by the inclusion of **TT Admix** (Type B waterproofing as defined by BS 8102 2022) and Triton's associated construction joint sealing products.

**TT Admix** was added to the mix at a ratio of 4.1 kg per m<sup>3</sup> of concrete with a minimum cement content of 350 kg per m<sup>3</sup> of concrete (C35 type concrete). **TT Waterstop** was set in to pre-formed recesses within all construction joints/interfaces and subsequently filled with **TT Swellseal Mastic S2** to prevent ground water entering the structure at these vulnerable points.

The active chemicals in **TT Admix** react with free lime within fresh concrete to generate a non-soluble crystalline formation which seals the concrete against

the penetration of water or liquid, protecting it and the steelwork within, from deterioration and carbonisation.

**TT Waterstop** is a pre-formed waterstop/waterbar, supplied in a ready to use roll. When fully encapsulated by poured concrete, the expansive forces form a seal against the concrete surfaces to resist hydrostatic pressure and to stop water from entering the sub-structures. It is capable of swelling up to 700% of its original size! **TT Waterstop** returns to its original size if the concrete is completely dry but re-expands to seal potential leaking joints when water or moisture is re-introduced.

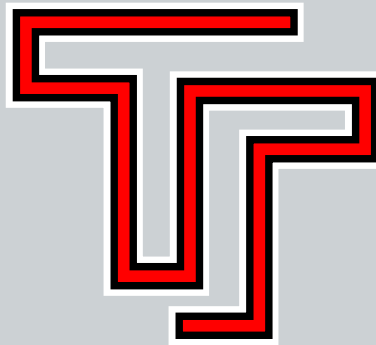
**TT Swellseal Mastic S2** is a gun applied, single-component hydroreactive expansion sealant for waterproofing joints in concrete. It will swell up to 100% when in contact with water and offers long lasting adhesive with hydro-swelling properties.

Sourcing all the components for a watertight concrete system from the same supplier offers significant benefits to all parties. Most notably it avoids the split responsibility and compatibility issues often encountered when waterproofing system components are sourced from multiple suppliers.





# TT WATERTIGHT CONCRETE AND JOINT SEALING SYSTEMS



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