



TT WATERTIGHT CONCRETE AND JOINT SEALING SYSTEMS



WYKAMOL GROUP LIMITED

For almost 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 now distributed and used throughout the UK, Europe, the Middle East and Australia.

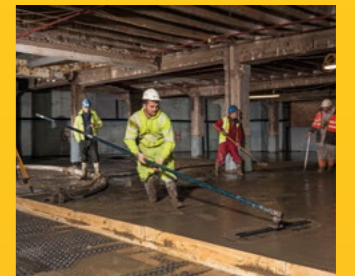


Focusing on 4 main sectors - Damp and Timber, structural waterproofing, structural repairs and gas protection.

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 enables the **Wykamol Group** to provide solutions in **Structural Waterproofing** under **Type A** barrier membranes, **Type B Structurally Integral** and **Type C Drainage Systems**.

Our technical team(s) up and down the country have years of experience in the construction industry, working on a range of complex projects. Challenging projects is what we thrive on and with our team of CSSW, AMICT, CSTDB and NVQ Level 2 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 as well as access to our very own in TUG Contractor Scheme and/or QANW IBG providing our large network of specialist installers / applicators peace of mind.



Contents

Our Team	4-5	TT-Sealing Strap	13
Type B Introduction	6-7	TT-Sealing Plug	14
TT-Admix	8	TT-Sealing UFO	15
TT-Betocrete CL-210	9	Universal Mortar	16
TT-Waterbars	10	TT-Water Stop	17
Cemflex VB Plate	11	Technical Support & Warranty	18
TT-Swellmastic S2	12	Case Studies	19

WYKAMOL GROUP OUR TEAM



Andrew Latimer

National Sales Director
07774 120 958

Liam Leonard AMICT CSSW

Head of Technical Services
07810 885 730

Mike Dunn WDS CSSW CSRT

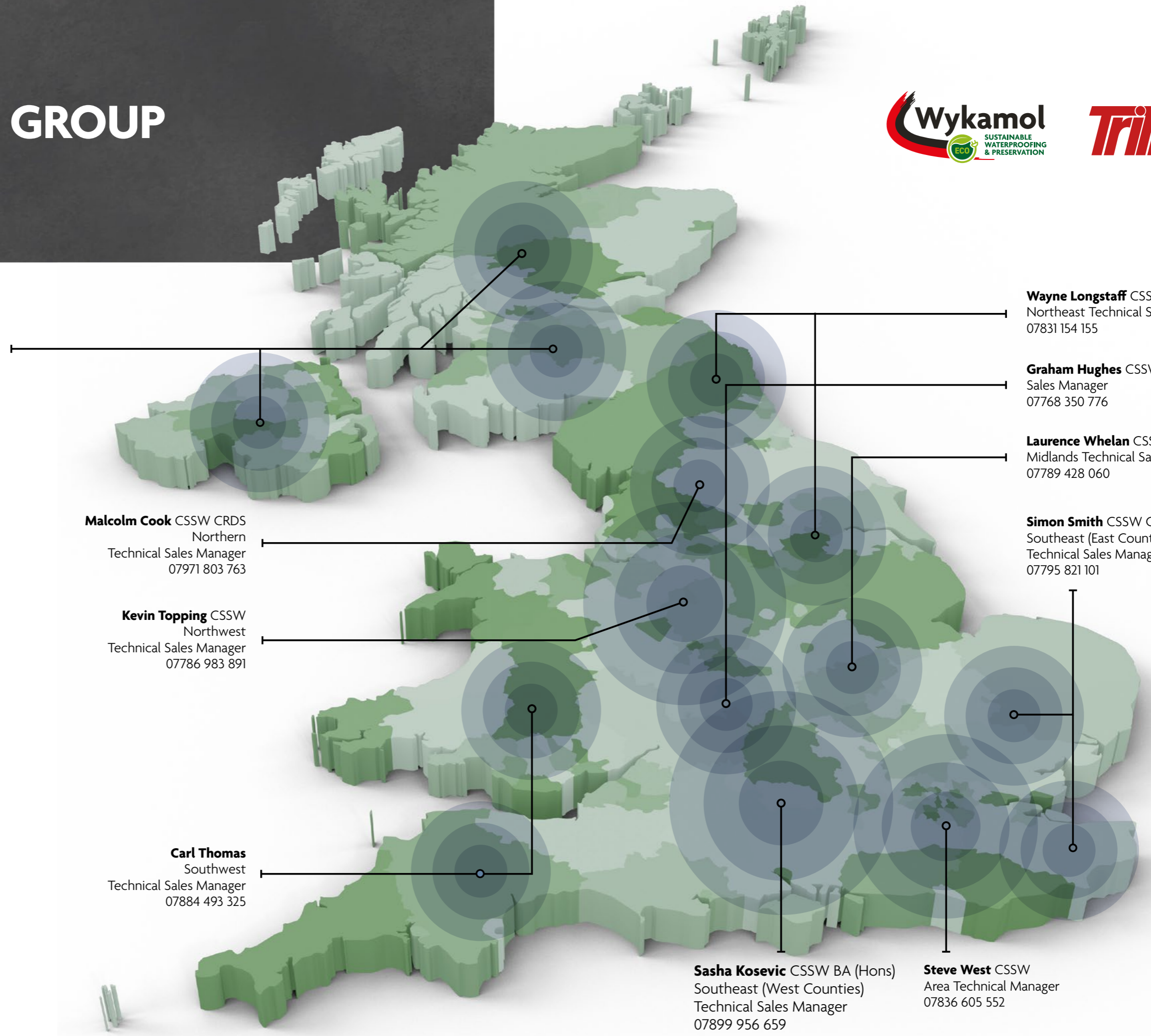
Structural Waterproofing
Specialist
07795 478 621

Chris Ingham BSc CSSW

(NVQ Level 4 Gas Protection)
National Specification Manager
07919 064 450

Jim McClelland

National Merchant Manager
07768 652 610



Wayne Longstaff CSSW
Northeast Technical Sales Manager
07831 154 155

Graham Hughes CSSW CSRT
Sales Manager
07768 350 776

Laurence Whelan CSSW CSRT
Midlands Technical Sales Manager
07789 428 060

Simon Smith CSSW CSRT
Southeast (East Counties)
Technical Sales Manager
07795 821 101

Malcolm Cook CSSW CRDS
Northern
Technical Sales Manager
07971 803 763

Kevin Topping CSSW
Northwest
Technical Sales Manager
07786 983 891

Carl Thomas
Southwest
Technical Sales Manager
07884 493 325

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

Steve West CSSW
Area Technical Manager
07836 605 552

20
24



WATER PROOFING

TYPE B

Structures will generally be reinforced or pre-stressed concrete.

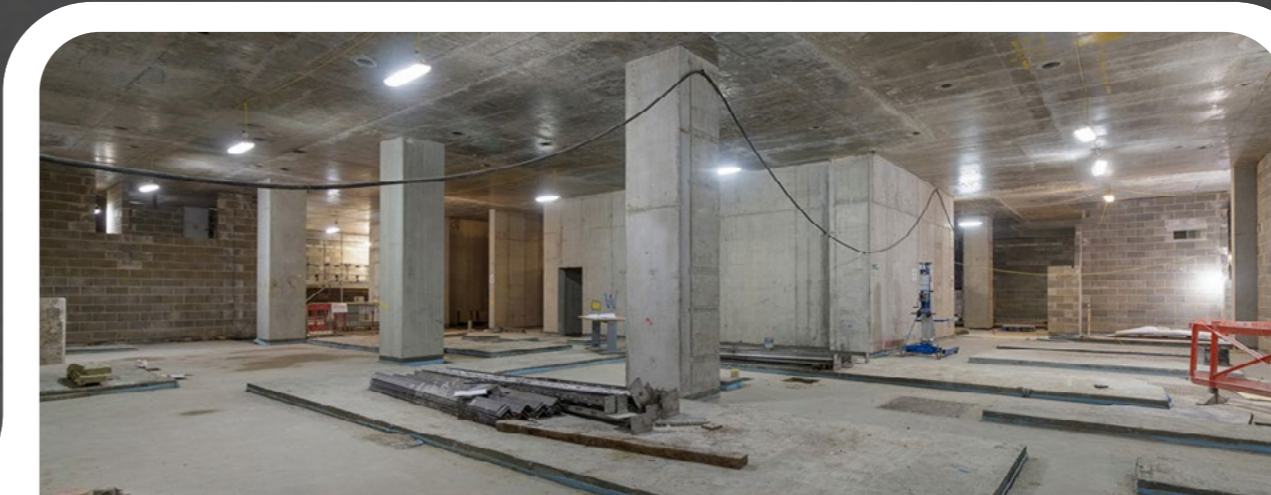
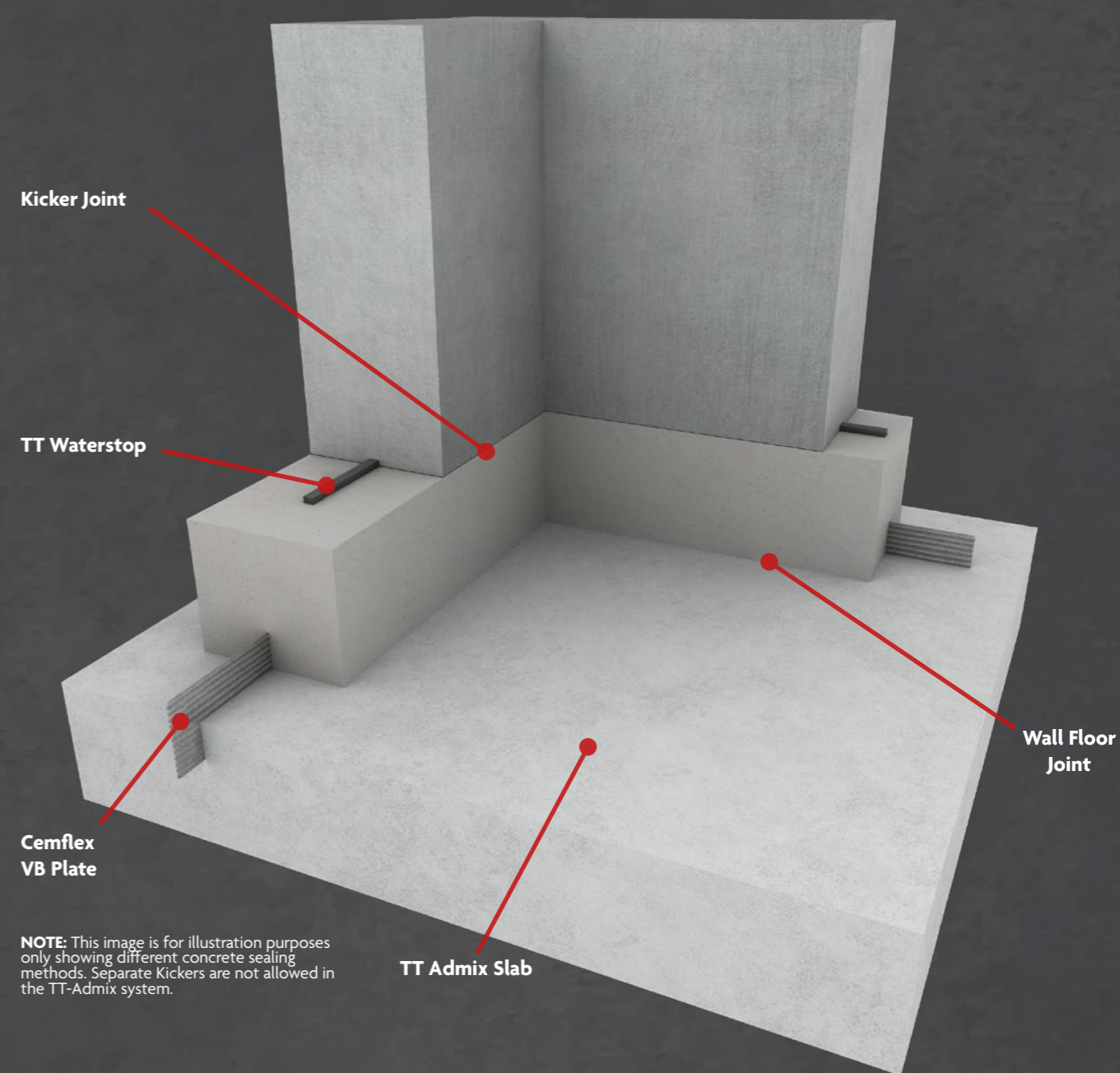
Type B Waterproofing as defined in BS8102:2022: Type B (structurally integral) protection as defined by BS8102:2022 (Code of practice for Protection of below ground structures against water ingress) where the structure itself is constructed as an integral water resistant shell. Invariably built of reinforced 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, this should only be carried out where there is 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 by 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 hydrophilic 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 but will 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 fairly 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. Type B - Structural integral protection - where the structure itself (waterproof reinforced concrete) is the protection.



TYPE B - WATERPROOFING



TT ADMIX

TT Admix is a unique crystalline admixture that reduces the permeability to less than that of standard concrete and improves durability. TT Admix also protects the concrete from aggressive ground conditions.

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 due to 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.



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 '2-1' crystalline and hydrophobic technology. Initially it functions chemically and reduces the water absorption in the matrix.

In the next step, nano-scale crystals are formed 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 and everywhere where water-tightness is needed.

FEATURES

- Liquid system suited to on-demand volumetric concrete supply.
- Crystallization of the capillaries
- Reduces capillary absorption
- 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
- Reduction in Chloride migration
- Minimization of maintenance and repair costs
- Time saving
- Simple and assured





WATER BARS

TT Waterstop, Swellmax Plus and Swellseal are advanced technology waterbars to seal concrete joints, service penetrations and many more application types in below ground concrete 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 can also be used to seal service penetrations, pre-cast concrete and many of forms of waterproofing. TT Waterstop must not be used in movement joint applications.

SWELLMAX PLUS WATERSTOP

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

SWELLSEAL

An extruded rubber compound made from butyl rubber, hydrophilic resin, polyethylene, silicone and special admixtures and used to seal joints on many poured-in-place and below ground pre-cast concrete applications.

SwellSeal produces a water-tight seal when under conditions of confinement as it moulds itself to the surrounding surfaces. On contact with water it is capable of swelling up to 4 times its own volume, even filling gaps which are uneven in size. This means **SwellSeal** can be used without the need for any high-compression force.

USES

Suitable for use in both vertical and horizontal joints in pre-cast concrete wall panel systems Shield-driven tunnels such as subways, water supply and sewage systems, tunnels, cable lying etc. Can be used in civil applications as well as residential and commercial buildings for both new and refurbishment projects. Within RC concrete basement construction for slabs, walls and pipe detailing.

AVAILABLE SIZES

TT Waterstop: 20mm x 25mm x 5m rolls (Box 6 x 5m rolls, 30 metres)	Swell Max: 20mm x 25mm x 30m long	Swell Max Plus: 20mm x 25mm x 20m long
---	---	--



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 Plate Waterstop consists of a galvanized steel plate encapsulated in a special patented coating which reacts with water to provide a watertight joint, for use in all non-movement construction joints in reinforced concrete.

CEMflex VB complies to BS 8102:2022

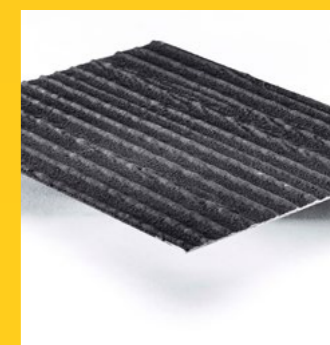
CEMflex VB Plate Waterstop is supplied in 2 metre length, it is available in a 100mm wide by 2m length and has an overall thickness of 1.25mm.

ADVANTAGES

- Independently tested for use up to 5 bar water pressure.
- A highly effective water-stop, 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 30mm of concrete cover to function correctly.
- Suitable for both Vertical and Horizontal applications.
- No sticky protection tape to be removed from **CEMflex VB Plate Waterstop** prior to use.
- Offers strength and agility, it 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.

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. Once installed, the patented coating on **CEMflex VB Plate Waterstop** has infinite sealing ability. Should water or moisture come into contact with the coating at any time in the future, the coating will re-activate and repeat the sealing process.





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 passage of water through concrete construction joints.

USES

- Fast curing.
- 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.

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 cycling retaining elastomeric character and swelling performance due to high tolerance of the cementitious environment.

PRODUCT DATA

	COMPONENT A
Colour	Grey
Packaging	Supplied in boxes of 10 x 600ml sausage packs
Storage Conditions / Shelf-Life	Shelf life of 9 months if kept in a dry store at 10-20°C in original unopened packaging. If stored at high temperatures and/or high humidity, the shelf life may be significantly reduced.
Curing Rate	3mm 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 (see application instructions)



TT SEALING STRAP

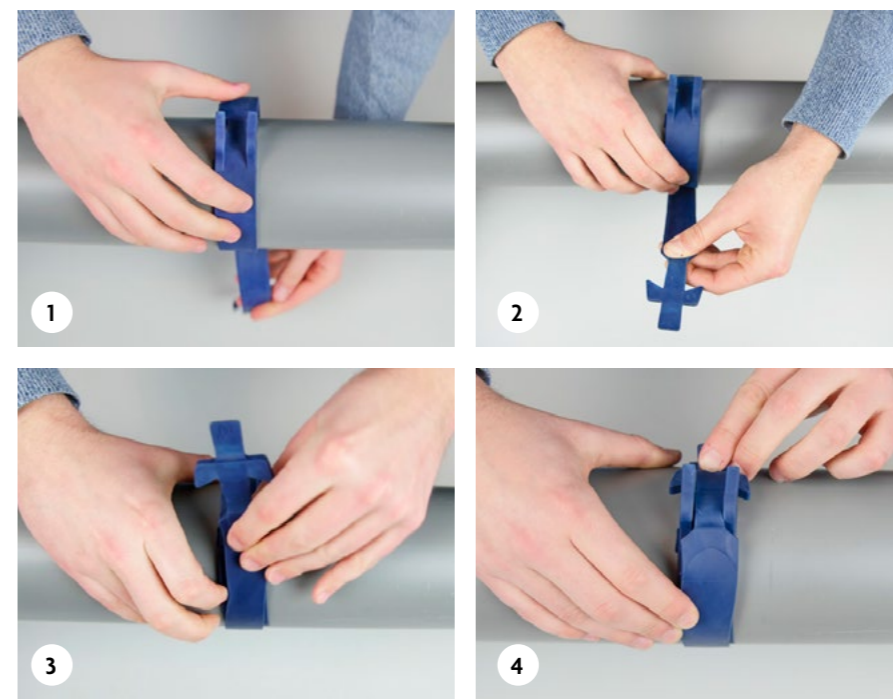
One-step seals for formwork spacers and pipes. Water swellable strip seal specially designed to waterproof plastic pipes through concrete constructions.



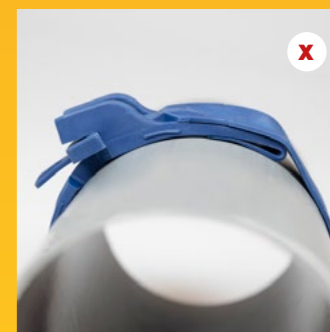
TT Sealing Strap is designed to offer a more effective, quick and secure sealing solution than mastic or a length of water bar – both of which can be dislodged during the concrete pour.

A key 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 – 125mm diameter.

Size: To fit pipes between 110mm to 125mm **Supplied:** As single units



Avoid the following ineffective installations





TT SEALING PLUG

Water-swellaible plug for a perfect seal of formwork spacers



TT Sealing Plug is designed to offer a more effective, quick and secure sealing solution than mastic or a length of water bar - both of which can be dislodged during the concrete pour.

The 22mm standard sized plugs are simply hammered in either or both ends of the formwork spacer. The swellaible 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 26mm 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



No additional finishing or after-treatment required



The innovation for sealing of formwork spacers



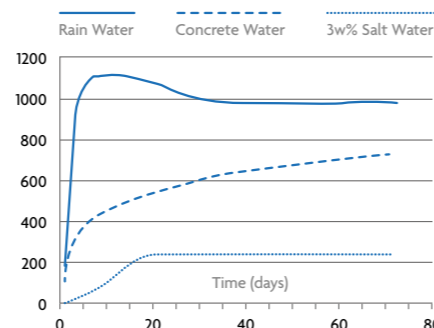
Insertion with a single hammer blow



No after-treatment required

The water swellaible sealing products are based on unique active Sealing technology.

Our products expand on contact with water. This is how they create an active seal to combat moisture infiltration. The products are self-correcting and thus also sealing the unevenness and imperfections of the concrete.



TT SEALING UFO

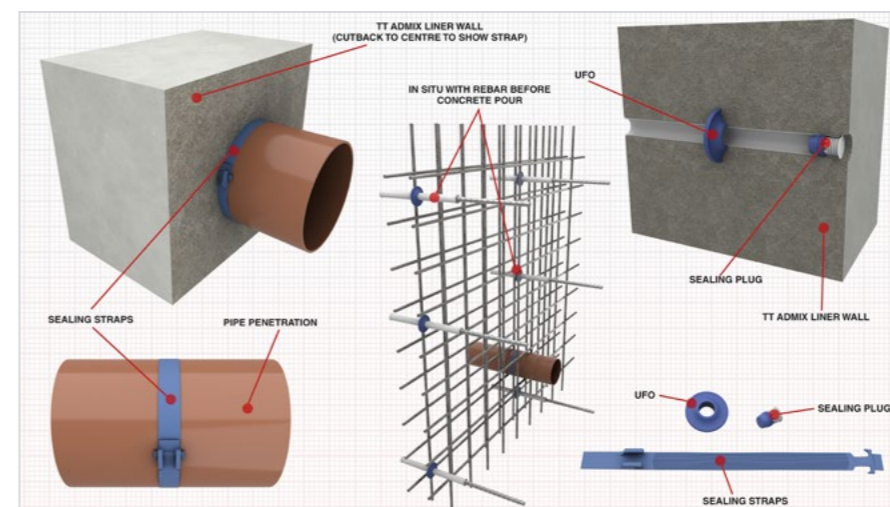
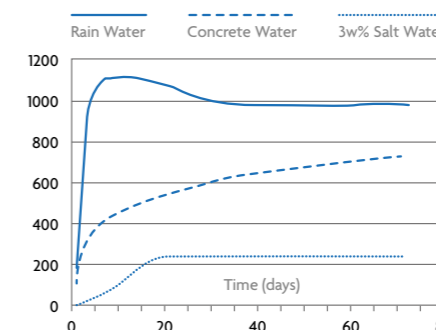
A hydrophilic ring made from synthetic, water-swellaible rubber that fits securely around the exterior of the formwork spacer and presents water infiltrating through cracks in the surrounding concrete.



TT Sealing UFO is designed to offer a more effective, quick and secure sealing solution than mastic or a length of water bar - both of which can be dislodged during the concrete pour.

A hydrophilic ring made from synthetic, water-swellaible rubber that fits securely around the formwork spacer and prevents water infiltrating through cracks in the surrounding concrete. The water swellaible sealing products are based on the unique Active Sealing technology. Our products expand on contact with water. This is how they create an active seal to combat moisture infiltration. The products are self-correcting and thus also sealing the unevenness and imperfections of the concrete.

Size 24mm Supplied in Bags of 100



UNIVERSAL MORTAR

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

The product cures to produce a high performance, **Universal Mortar**, 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 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

Pack Size:	25Kg
Coverage:	Up to 1.4m ² dependent on substrate at 10mm

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.

Water Stop is designed to expand as it sets to ensure a permanent water tight seal is achieved and in a cured form displays similar properties to concrete

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

APPLICATION

No priming is required but for dry repair applications, make sure the surface is Surface Saturated Dry (SSD).

To stop surface leaks or seepage not under pressure:

1. Starting at the top of the hole or crack, work your way down. Trowel apply or hand kneed the mixed mortar firmly into place, ensuring maximum contact with the substrate before the material sets.
2. Remove any excess material to form a uniform surface.

To stop leaks under pressure or under water:

3. Starting at the top of the hole or crack, work your way down. Trowel apply or hand kneed the mixed mortar firmly into place, ensuring maximum contact with the substrate before the material sets.
4. Maintain constant pressure on the applied material until final set has been achieved.
5. Remove any excess material to form a uniform surface.



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 2009) for the large underground car park which will serve both buildings.

The watertight basement measures 80m x 70m x 4.5m deep and is constructed from 2,000m³ 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, shrinkage etc. and protecting it from the deterioration effect of harsh environmental conditions.

Triton's technical team worked closely with concrete suppliers, Cemex, and recommended a dosage rate of 4.1kg of **TT-Admix** per 3m³ 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 team 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 900m². across main house tunnel and adjacent house reinforced concrete sub-structure to what will be a six-bedroom private residence, with amenities including a swimming pool and gym, has been excavated and formed by Leicester based

Beautiful Basements, in a contract valued at £800K. Aside from the sheer scale of the property, the contractor has also had to deal with some difficult ground conditions and the sloping topography of the land which was once stables, and offers views towards the outskirts of Birmingham.

Beautiful Basements has built the structure in reinforced concrete with 400mm thick walls – rising to a height of over five point four metres around the pool area – sitting on the equally thick ground bearing slab. As well as use **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 also 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 their edges being 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 sorts of contracts, as we have enjoyed an excellent working relationship with the company going back more than a decade."element of the basement's construction up to ground level prior to providing a warranty on the system.

"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 right across the country on commercial projects as well as large residential developments, while as an approved installer of the Triton systems, the specialist regularly employs half a dozen of the well-proven products to create large-scale, fully waterproof sub-structures that offer a ten-year guarantee along with insurance backed guarantee.

Triton TM8 and TM20 carry BBA certificates which are required by Third Party Building Warranty providers (NHBC, LABC etc) it 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 planned use of the basement or building.

CASE - STUDIES



BASEMENT SPECIALIST SPECIFIES TRITON SYSTEMS FOR VINTAGE PROJECT

One of Triton Systems approved installers 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 **TT-Admix** to the structural engineer, which Triton then supplied to our ready mixed concrete supplier. That 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.

And we also used the Triton mastic, along with water bar for sealing all of the day joints.

"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 good 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 for 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 penetration of gases such as radon and methane. Its technical advisory service is also able to offer advice on specific project requirements as well as guidance on relevant product compliances.



CASE - STUDIES



WINE CELLAR MADE WATERTIGHT BY TRITON

Triton has supplied Type B and C systems to waterproof a small basement below a luxury new build dwelling in the Midlands.

The 6 x 5m basement will be used as a wine cellar and has been constructed from concrete made watertight by the addition of **TT-Admix**.

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

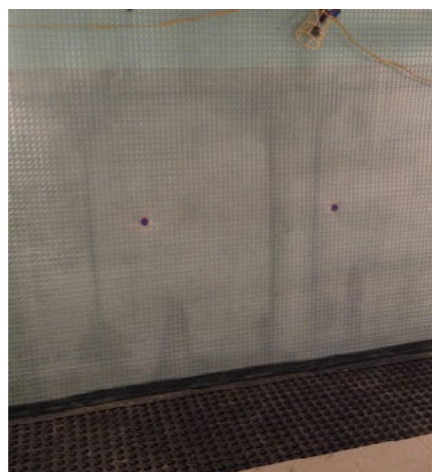
The active chemicals react with fresh concrete to generate a non-soluble crystalline formation which seals the concrete against the penetration of water or liquid, protecting it from the deterioration effect of harsh environmental conditions.

All construction joints were waterproofed using **TT-Waterstop** (a hydrophilic strip) embedded in **TT-Swellmastic S2**.

This basement will also benefit from an internal Platon Cavity Membrane system with deep studded Platon P20 laid on the floor and Platon P8 fixed to the walls. Aqua Channel drainage and two mains powered Aqua Pump Pro pumps within a concrete sump have been installed to drain and pump away any water that may enter the basement behind the membranes.

Cavity drain membranes work on the principle of allowing water to continue to penetrate the structure but control it in the air gap and divert it to a suitable drainage point. They do not allow pressure to build up against the internal construction and the air gap behind the membrane allows the structure to breathe. Once the membrane has been fitted, wall surfaces can be dry lined or plastered directly and floors can be screeded or a floating dry board system installed.

Triton's technical team offers specification advice to architects to ensure the most appropriate waterproofing is selected and will provide installation and testing support on site for contractors.



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 Togher Construction Ltd (TCL) using 450 m³ of concrete waterproofed by the inclusion of **TT-Admix** (Type B waterproofing as defined by BS 8102 2009) and Triton's associated construction joint sealing products.

TT-Admix was added to the mix at a ratio of 4.1Kg per m³ of concrete with a minimum cement content of 350Kg per m³ 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 hydro-reactive expansion sealant for waterproofing joints in concrete. It will swell up to 100% when in contact with water and offers long lasting adhesive and 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

Wykamol Group

Unit 3, Boran Court, Network 65 Business Park, Hapton, Burnley, Lancashire BB11 5TH
t: +44 (0)1282 473 100 www.wykamol.com e: info@wykamol.com

Triton Systems

Unit 3-5, Crayford Commercial Centre, Greyhound Way, Crayford, Kent DA1 4HF
t: +44 (0)1322 318830 www.tritonsystems.co.uk e: info@tritonsystems.co.uk

