



## Concrete Waterproofing Systems



Triton's concrete waterproofing systems are designed for the protection and waterproofing of new or existing concrete structures. The range includes integral waterproofing additives, in-depth crystalline waterproofers for new construction, surface applied coatings for existing concrete structures and products for dealing with construction joints, service entries and leak sealing.

This brochure is intended to help with the selection of the most appropriate product depending upon the method of construction, age of the building and proposed application method. Typical applications will include car parks, basements, lift pits and liquid retaining structures. As for all Triton products, more detailed technical data and health and safety information is downloadable from [www.triton-chemicals.com](http://www.triton-chemicals.com)



# Surface applied/admix systems

## TRITON TT SUPER/TRITON TT SUPER (WHITE)

A surface applied system which waterproofs and protects concrete in depth. Supplied as a powder which only needs mixing with water before application on: basements/retaining walls, concrete slabs (floor/roof/balcony), construction joints, water retaining structures, swimming pools, reservoirs, sewage treatment plants, channels and potable water tanks.

When applied to a concrete surface, the active chemicals combine with the free lime and moisture present in the capillary track to form insoluble crystals which block capillaries and minor shrinkage cracks to prevent any further water ingress (even under pressure). However the product still allows the passage of water vapour through the structure, allowing the concrete to 'breathe'. It also protects concrete against seawater, aggressive ground water and certain chemical solutions. Two versions of this product are available, please refer to the chart below before specification:

	Triton TT Super	Triton TT Super (White)
<b>Colour</b>	<b>Cement Grey</b>	<b>White</b>
Withstand Water Pressure	>12 bars @ 28 days	>7 bars @ 28 days
Bulk Density	Approx. 1.25	Approx. 1.20
Setting Time	60 minutes	120 – 180 minutes

### Composition

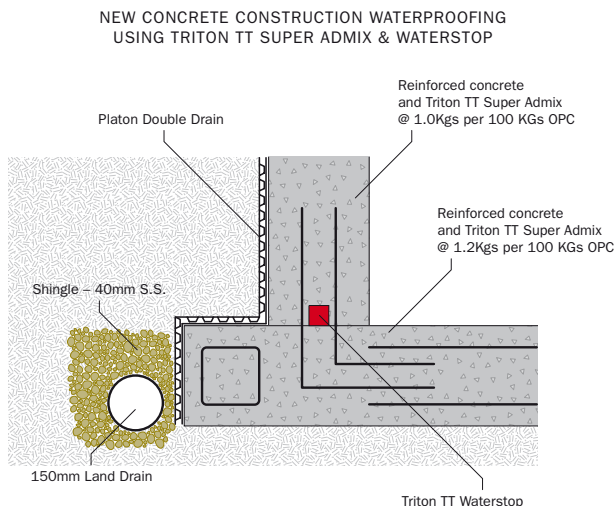
Grey or white Portland cement, specially treated quartz sand and a compound of active chemicals.

### Installation

Surfaces should be carefully prepared and pre-watered to provide a damp, but not wet, surface. The product should be mechanically mixed 2:5 water:powder (by volume) to the consistency of thick oil paint. One or two coats should be applied by masonry brush or power spray equipment. For horizontal surfaces only, the product can be distributed in powder form through a sieve and trowelled into the freshly placed concrete once it has reached initial set. Once Triton TT Super has reached initial set it should be moist cured with a fine fog spray of water two to three times per day for three days.

### Availability

Direct from Triton in 25kg pails or 25kg bags.



## TRITON TT SUPER ADMIX

A unique chemical treatment for the waterproofing and protection of concrete – designed to be used as an admix at the time of batching. The active chemicals in Triton TT Super Admix react with fresh concrete to generate a non-soluble crystalline formation which seals the concrete itself against the penetration of water or liquid, protecting it from the deterioration effect of harsh environmental conditions.

- Withstands extreme hydrostatic pressure
- Reduces shrinkage and cracking
- Exceptional durability
- Protects against chloride attack to steel reinforcing
- Improves workability of concrete
- Allows passage of air and water vapour

### Composition

Packed as a dry powder compound, Triton TT Super Admix consists of Portland cement, very fine treated silica sand and various active proprietary chemicals.

### Installation

The recommended addition rate is 0.8% - 1.2% by weight of cement. For enhanced chemical resistance please consult Triton's technical department. Please refer to product data sheet (available direct from Triton or at [www.triton-chemicals.com](http://www.triton-chemicals.com)) for sequence of procedures for addition to batch plant equipment.

### Availability

Direct from Triton in 20kg drums or 3kg water soluble bags.



# Expansion systems

## TRITON TT WATERSTOP

A pre-formed waterstop available in a ready to use roll which swells up to 700% when in contact with water. When fully encapsulated by poured concrete, the expansive forces form a seal against concrete surfaces to resist hydrostatic pressure and to stop water from entering the sub-structures. Triton TT Waterstop returns to its original size if the concrete and substrate is completely dry but re-expands to seal the potential leaking joints when water or moisture is re-introduced. Its service life is indefinite with a permanent water tight function and excellent resistance to acid and alkaline conditions. The product is extruded in a rectangular shape for optimal adhesion. The built in delay system means Waterstop will activate approximately two days after constant exposure to water and will withstand up to a 40 metre head of pressure.

### Composition

Sodium Bentonite, Butyl Rubber.

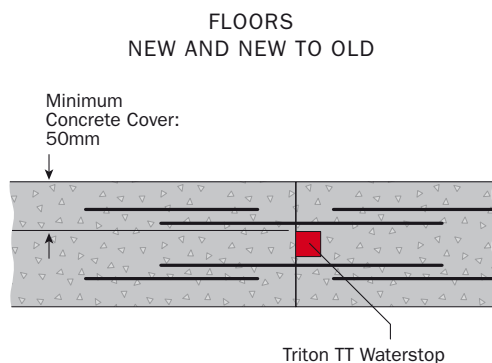
### Areas of Application

- Poured in-situ construction joints
- Box culverts and retaining walls
- Cut and cover tunnel construction
- Underground (utility) vault seal
- New to old concrete

Refer to drawing overleaf for typical application.

### Availability

Direct from Triton in 25M x 20mm rolls.



## TRITON TT SWELL MASTIC

A gun applied, one component hydro-reactive expansion sealant for waterproofing joints in concrete. It will swell up to 100% when in contact with water to create a durable waterstop with long lasting adhesive and hydro-swelling properties. In contact with sea water, Triton TT Swell Mastic will expand between 50 and 70%.

- Single component, direct application
- Useful in difficult access areas
- Fast curing, enabling early concrete pour and rapid return to service
- Excellent seal on rough, smooth, damp or dry surfaces
- Durable, retains elastic character and swelling performance
- Good chemical resistance

### Areas of Application

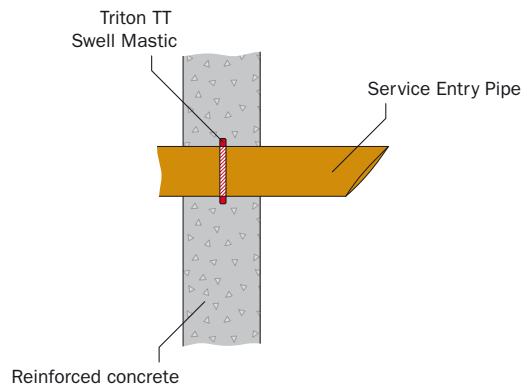
- Pipe penetrations (concrete, PVC etc)
- Waterproofing of joints between pre-cast concrete elements
- Waterproofing of H-beam penetration through slab floors
- Adhesion of waterstops on an irregular surface
- Sealing around conventional PVC waterstop providing a belt seal prior to concrete pour

### Availability

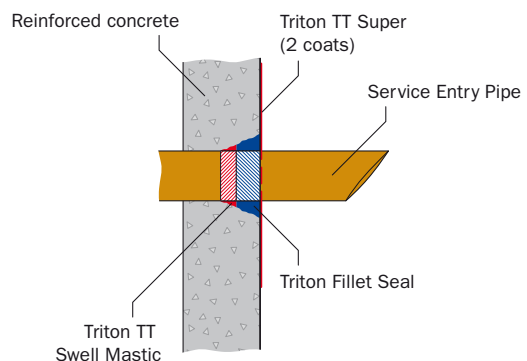
Direct from Triton in 300ml cartridges.

### SERVICE ENTRY SEALING TO CONCRETE STRUCTURES

#### NEW CONSTRUCTION



#### EXISTING STRUCTURE



For technical enquiries  
please contact Triton direct  
on 020 8310 3929 or  
email [info@triton-chemicals.com](mailto:info@triton-chemicals.com)

# Tanking systems/associated products

## TRITON TT55

Triton TT55 is a single component, polymer modified cement 'tanking system' for walls and floors. It forms a highly effective damp proof membrane for brickwork, concrete or any cementitious substrate.

### Installation

Surfaces to be treated with TT55 should be correctly prepared, free from all loose materials and contaminants and be in a sound and solid condition. For application to concrete floors and walls, TT55 should be applied directly to the structural concrete. For other substrates, e.g. brick/block, TT55 should be sandwiched between sand/cement render coats. For all TT55 applications, special attention should be given to wall/floor junctions. (Please see Triton Fillet Seal below and drawings overleaf).

### Availability

Direct from Triton in 25kg bags or pails.



*Triton Fillet Seal used to form wall to soffit junction in basement renovation*

## TRITON TANKING MIX ELASTIFIER (TTME)

TTME is a plasticiser-free dispersion which is designed to be mixed with TT55 to produce a flexible waterproofing coating suitable for either vertical or horizontal surfaces. It is ideal for areas which are liable to cracking or deformation of the surface, and can also be successfully used at wall/floor junctions.

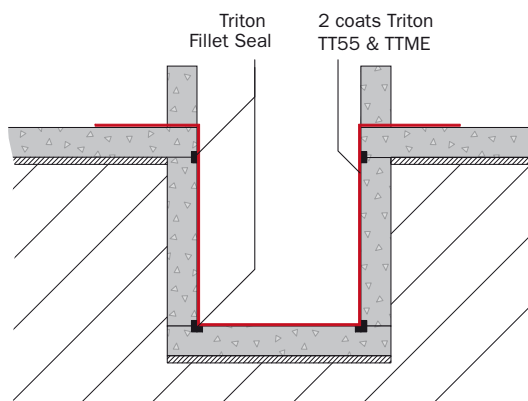
### Installation

10kg of TTME should be added to 25kg of TT55 and mixed thoroughly for approximately five minutes with a mechanical whisk. It can be applied by trowel, brush or mortar gun. Refer to drawing overleaf for typical application.

### Availability

Direct from Triton in 10kg containers.

### WATERPROOFING CONSTRUCTION JOINT



## TRITON FILLET SEAL

A pre-packed cement based and polymer modified product for use as a floor to wall junction seal during waterproofing works when using cementitious slurry coatings such as Triton TT55 and Triton TT Super. The use of Fillet Seal helps to ensure a smooth transition between horizontal and vertical surfaces which minimises the risk of leaving gaps or holes unsealed during the waterproofing works.

### Installation

In most circumstances, Fillet Seal need only be mixed with water for use. Where extra adhesion is required, Triton SBR may be used. Where water is leaking or seeping the use of Triton Quick Set is advised. Situations where the Fillet Seal will be employed should already have been prepared in accordance with the slurry coating or render specification. In the majority of instances, the Fillet Seal will be applied on to the slurry coated surface.

### Availability

Triton Fillet Seal is available in 25 kg pails.

## TRITON QUICK SET

A plugging compound developed to stem water flow, but which can also be used as an all purpose instant setting repair mortar with a wide range of applications.

### Installation

Triton Quick Set is simply mixed with water to a mortar consistency and applied by trowel or gloved hand. Constant even pressure should be applied until set.

### Availability

Direct from Triton in 15 kg pails.

# Vapour barrier system

## TRITON TT VAPOUR MEMBRANE

A ready blended coating that once cured, provides a waterproof Methane and Carbon Dioxide barrier. Triton TT Vapour Barrier can be retro-applied as a waterproof and gas-proof membrane to concrete, masonry and brick substrates or as an alternative to sheet membranes in new construction. It can be applied by airless spray, roller or brush to walls, floors or soffits.

- Excellent adhesion, bonds to porous and non-porous substrates
- Flexible, but cannot be punctured as fully bonded
- Easily repaired by locally over-coating
- Can be painted, plastered or screeded over
- Rapid drying – two coats can be applied in same day
- Can be applied to damp and 'green' substrates

## Performance Criteria

The performance of Triton TT Vapour Membrane is illustrated below with the accepted criteria for diffusivity (test work done at 0.2 bar).

Accepted Criteria	Triton TT Vapour Membrane
R>50M	357.5M

Where R = air diffusion equivalent for Carbon Dioxide in metres. Gas (Methane) permeability <math>< 1.40 \times 10^{-1}</math> kg/M/S.

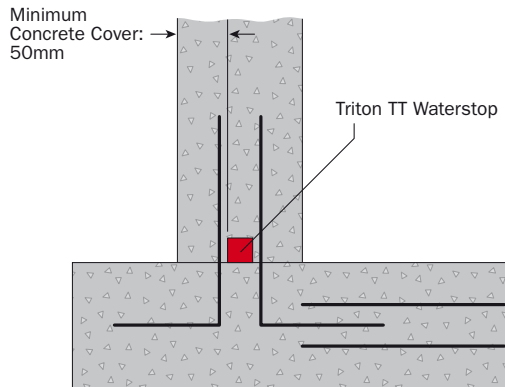
## Installation

Prior to application, surfaces must be clean with all cracks repaired. The product should be agitated for five minutes using a slow speed paddle mixer. Triton TT Vapour Membrane can be applied by stiff brush, roller or airless spray (spraying is especially suitable for less accessible locations and uneven substrates). Two coats should be applied with the total application thickness not exceeding 4mm.

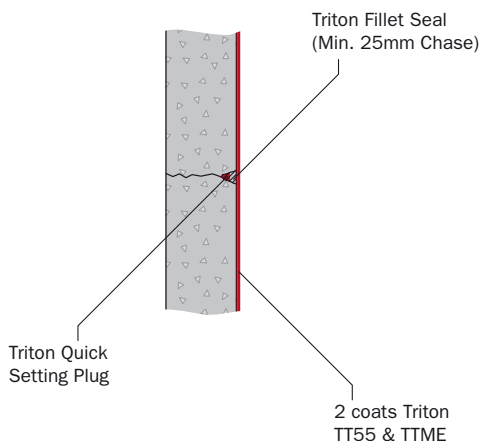
## Availability

Direct from Triton in 20 litre pails.

### WALL TO FLOOR

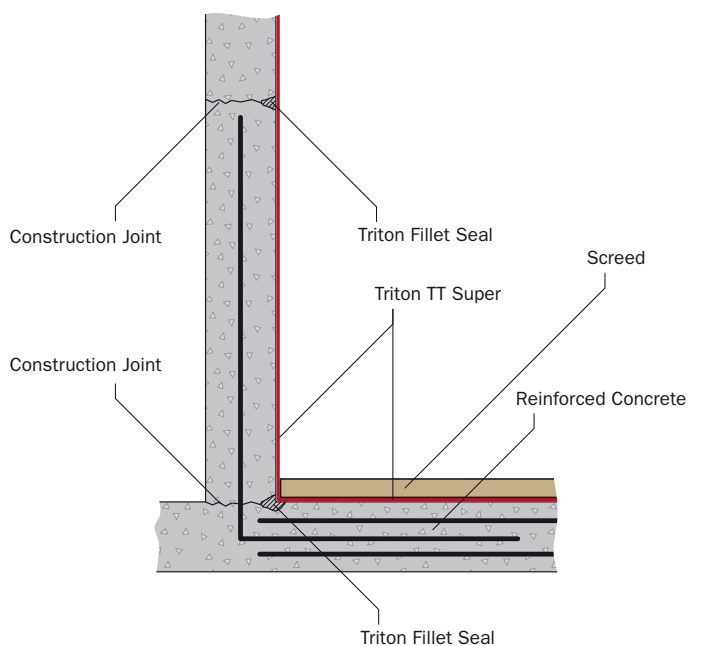


### WATERPROOFING CONSTRUCTION JOINT



## Further Typical Applications

### STRUCTURAL WATERPROOFING TRITON TT SUPER



For further drawings please visit the Triton website.



### **NBS Specification**

Triton is a member of the RIBA Manufacturers' Network and therefore products in this brochure can be specified via NBS Plus. Links to the relevant specification clauses below can be found on Triton's website at [www.triton-chemicals.com](http://www.triton-chemicals.com) where further technical and safety data about each product is also listed.

#### **Product:**

Triton TT Waterstop, Triton TT Swell Mastic

#### **Relevant NBS Specification:**

E40 – Designed joints in in-situ concrete, 310 Flexible waterstops

#### **Product:**

Triton TT Super and Triton TT Super White

#### **Relevant NBS Specification:**

J10 – Cementitious mortar tanking/dampproofing, 130 Proprietary crystalline active mortar

#### **Product:**

Triton TT Vapour Membrane

#### **Relevant NBS Specification:**

J30 – Liquid applied tanking/dampproofing, 130 cold applied dampproofing

### **Health and Safety**

Please refer to [www.triton-chemicals.com](http://www.triton-chemicals.com) or contact our technical department on **020 8310 3929** for copies of Material Safety Data Sheets for all products in this brochure.

### **Disclaimer**

The information contained in this brochure is given in good faith and is based upon knowledge and experience of the materials used. However, since the application of the products is beyond the control of Triton Chemical Manufacturing Company, the Company cannot accept responsibility for any loss or damage resulting from the use of the products outside the scope of the intended use and precautions set out in this brochure and the accompanying Material Safety Data Sheets.

### **Also available from Triton**

Structural Waterproofing Systems  
Damp Proofing and Replastering Systems  
Protective Coatings, Structural Repair  
Timber Preservation and Repair  
Green Roof Systems  
Condensation Control



**Triton Chemical Manufacturing Co. Ltd.**

Unit 5, Lydean Industrial Estate, Abbeywood, London SE2 9SG

Tel: 020 8310 3929 Fax: 020 8312 0349

Email: [info@triton-chemicals.com](mailto:info@triton-chemicals.com)