



Flood Resilience – New Build

in association with Watertight International Limited

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Outline Specification

Flood Resilience – New Build

1. Introduction

The outline specification detailed below relates to measures required to improve the flood resilience of new build properties within areas at risk of flooding. The details and products detailed below are part of measures to be taken in conjunction with other measures provided by Watertight International Ltd, such as window and door panels and check valves on service pipe entries to the property.

The outline specification is for the minimum required where properties are built in areas at risk of flooding. Where the risk is higher or where there is ground seepage (water rising up through the ground in flood plain areas) additional steps may / will be required and these are highlighted in a separate document – Properties at High Risk.

It should be noted that each property or design of properties will vary according to the house builder or developer and it is advised that specific detailing may be required to each project based on the details enclosed within this outline specification.

A full assessment of the site and its risk of flooding should be taken prior to designing and building of new properties, along with further guidance from relevant agencies and documents such as *CIRIA C624 – Development and flood risk – Guidance for the construction industry*.

The details provided below are a summary of each area of application and product use, more detailed specifications and drawings will be provided in separate documents for each section, to comprise a fuller detailed specification package.

Areas covered within this document include:

- Floor construction
- Service entries through concrete floors
- Water resistance to masonry walls
- Service penetrations through masonry walls

For existing properties within flood risk areas please see separate document on flood remediation measures.

All product applications and installations to be carried out by suitably trained and or approved contractors and strictly in accordance with the manufacturer's installation and application guidelines which are attached to and form part of this document.

Detailed below are general guidance and details relating to applications for flood resilience. More detailed application details are provided within the separate information guidelines provided on each section, including typical drawings and methods.

2. Floors – General

These should in all cases be constructed from watertight / water resistant concrete rather than the traditional polythene damp proof membrane. This should also include any construction or day joint within the floor construction.

In high risk areas where water seepage / water rises up through the ground, it is advised that the ground floor slab be constructed and the brick / block walls be constructed off this, eliminating the vulnerable joint between the walls and floor slab. Where risk of flooding is from surface run off and service pipe entries, then more traditional methods can be used. Alternatively an internal waterproofing detail would need to be included within the design (detailed later in this document).

The concrete should be waterproofed using either of the following options:

- i) Concrete to incorporate Triton TT Super admix at rate of 1.2% by weight of OPC /SRC cement within the concrete. A minimum cement content of 275kg/m³ would be required to ensure optimum waterproofing to the concrete. All construction joints to be waterproofed using either Triton TT Waterstop or Triton TT Swellmastic as indicated in drawing no. TT005.1 attached. For full application details please refer to guidance sheet and manufacturer's data sheets.

- ii) Cast concrete and when suitable initial strength gained, generally next day, apply Triton TT Super by dry sprinkle application to the concrete and then either trowel or power float the TT Super into the concrete. The TT Super is an in-depth crystalline concrete waterproofer which will penetrate up to 150mm into the concrete slab. Construction joints and day joints would need to be chased out (minimum 25mm), a single application of TT Super as slurry to be applied and then joint re-profiled with Triton Fillet Seal.

In high risk areas where ground seepage / water rises through the ground where a traditional construction method is used, then the wall / floor junction and lower part of wall below the damp proof course would need to be waterproofed. (Please refer to guidance notes and drawing details for full details).

Form a bottle cove fillet along the entire wall / floor junction (approximately 25mm) using Triton Fillet Seal (see data sheet for mixing and installation guidelines), then apply two coats of Triton TT Vapour Membrane incorporating a reinforcing glass fibre mesh between coats. The TT Vapour Membrane to overlap the floor by minimum 150mm and link up to the damp proof course. (See separate detail sheet and drawing).

- iii) Service penetrations through the concrete floor should be waterproofed using either TT Waterstop or TT Swellmastic as shown in drawing no. TT007.1 attached. Application of TT Waterstop and Swellmastic to be in accordance with manufacturer's data sheets and service sealing detail sheet.

3. Water Resilience to Masonry Walls

To improve significantly the water resilience of masonry walls to properties constructed in flood risk areas, these should be constructed with suitable care and detail ensuring a good standard of construction.

Once constructed, apply two – three coats of Triton Triproof AQ to the walls at application rate of 0.5 - 2 litres per sq meter (subject to porosity of substrate). Application by way of coarse spray, applying coats wet on wet to maximise penetration to the substrate. Dilution of Triproof AQ should be 1:3 with water to maximise penetration and subsequent deposition of active water repellent.

Subject to porosity of substrate and other prevailing conditions it is recommended that the application of Triproof AQ be renewed every 5 years and or after each flooding event whichever is the shorter period.

The application of Triproof AQ to the external of the wall should be to a height beyond anticipated flood levels, or if this is unknown to first floor height of the property.

4. Service Penetrations to Walls

All service penetrations through the walls will require waterproofing using Triton Trifix epoxy. This should be applied to both the external penetration of the service pipe to the wall and the internal penetration.

It may be necessary to chase out around the service pipe penetration to approximately 15mm depth and 10mm greater circumference to ensure adequate application of the Triton Trifix epoxy. Application to be in accordance with manufacturer's data sheet and separate detail sheet on service penetrations.

5. Summary

The above outline details, along with the more comprehensive detail sheets for each application given above, are designed to significantly improve the flood resilience of new properties in areas at risk of flooding. These are only part of a complete package of measures which include barriers to window and doors, other openings to the property and suitable check valves to all service pipes and drainage to the property.

The above is an outline of these additional measures required and the appropriate detail sheets and manufacturer's data sheets and application guidelines should be adhered to, and form part of the overall specification.

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ALL INSTALLATION TO BE CARRIED OUT IN STRICT ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS. FOR FURTHER ASSISTANCE CONTACT **TRITON TECHNICAL** ON THE TELEPHONE NUMBER ABOVE.

REV.	MOD. BY	DATE	CHK. BY	APP. BY

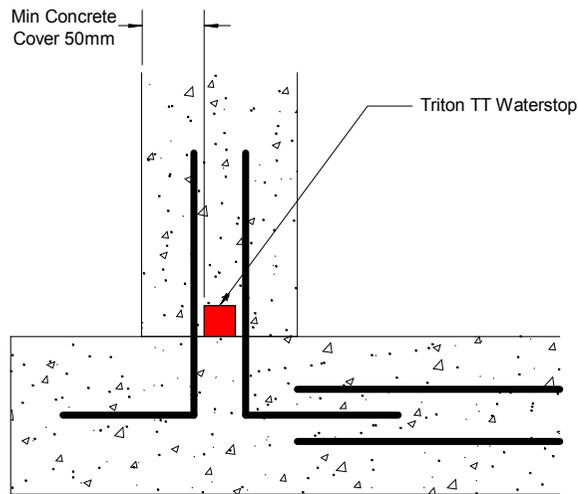
Alterations

TITLE:
Concrete Construction Joints
Using
Triton TT Waterstop

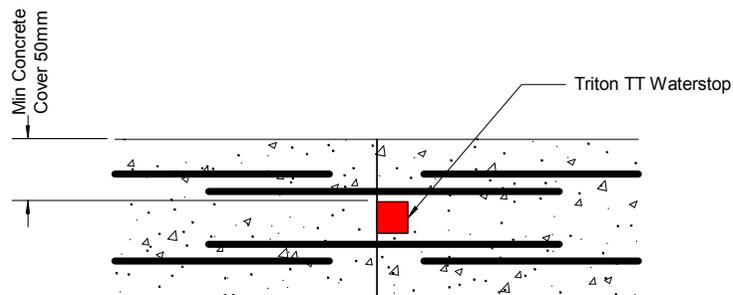
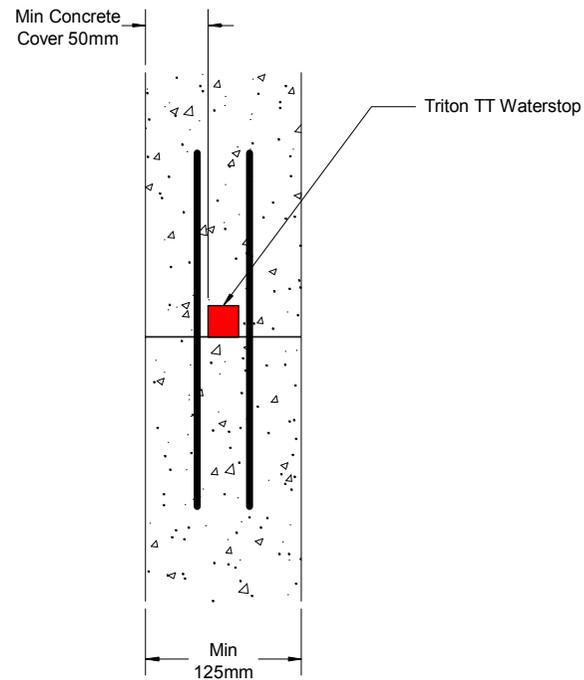
DRG. No. TT 005.1	REV 1
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DRAWN	JDF, CBS	System Files: TT 005-1(1).pdf
DATE	25-06-07	
SCALE (A3)	Not To Scale	
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APPROVED		

Wall To Floor



Walls



Floors
New & New To Old

Please Note:

On rough concrete surfaces
Triton TT Waterstop to be
adhered with Triton TT Swell Mastic



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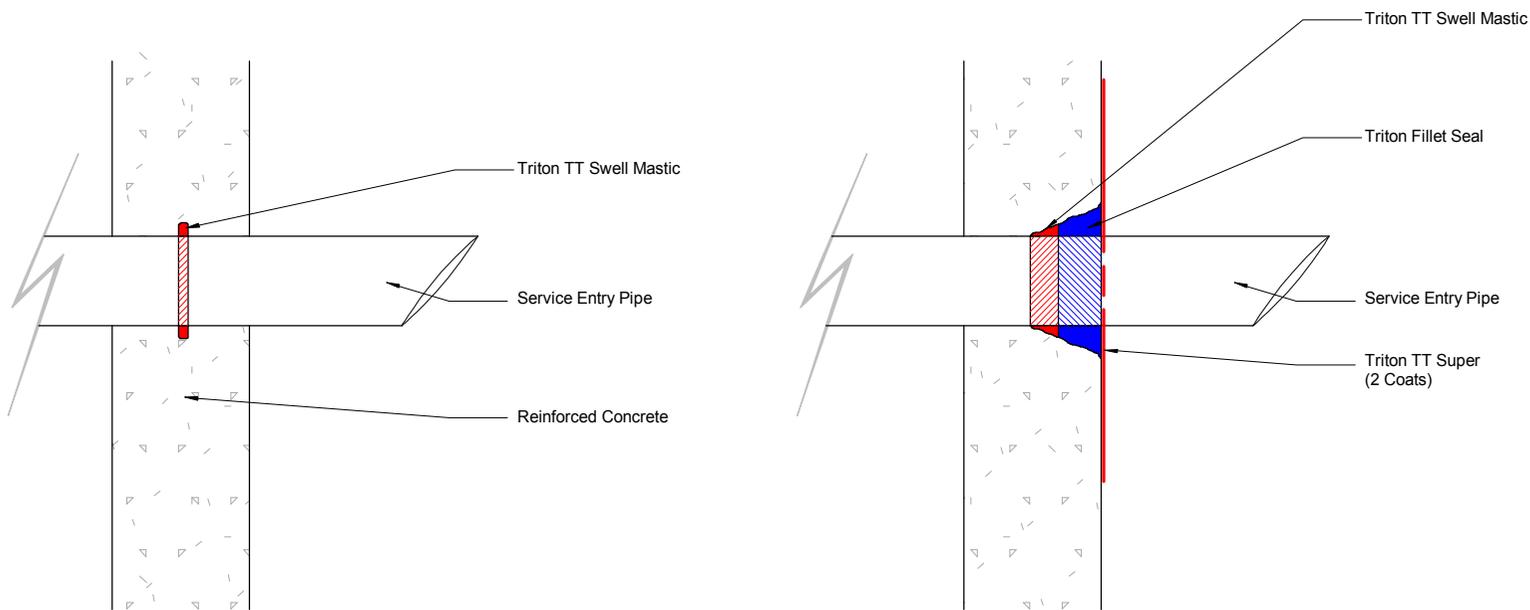
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New Construction

Existing Structure

REV.	MOD. BY	DATE	CHK. BY	APP. BY
Alterations				

TITLE:

Service Entry Sealing To
Concrete Structures

DRG. No.	TT 007.1	REV	1
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DRAWN	JDF, CBS	System Files: TT 007-1(1).pdf
DATE	25-06-07	
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TRITON TT WATERSTOP

(25mm x 20mm)



INTRODUCTION

Triton TT Waterstop is a preformed waterstop consisting of sodium bentonite and butyl rubber and it swells up to 700% when in contact with water. When fully encapsulated by poured concrete, the expansive forces form a seal against concrete surfaces. This seal resists hydrostatic pressure, stopping water from entering the sub-structures. Triton TT Waterstop is able to withstand a 40 metre head of pressure. As with any hydrophilic waterstop, Triton TT Waterstop will return to its original size if the concrete and substrate is completely dry and no more moisture is present. If water or moisture is introduced again to the joints, Triton TT Waterstop will re-expand to seal the potential leaking joints.

CHARACTERISTIC

1. Service life is indefinite with excellent resistance to acid & alkaline condition
2. Easy installation and extruded in rectangular shapes for optimal adhesion during application
3. Permanent water-tight function

Triton TT Waterstop has a built-in delay system thus the waterstop will activate approximately after 2 days of constant exposure to water.

LIMITATIONS

Triton TT Waterstop should not be used for expansion joints or subject to repetitive movements. Triton TT Waterstop should not be installed with less than 50mm of concrete cover to ensure that the pressure arising from the swelling action is accommodated.

SPECIFICATION

PHYSICAL PROPERTIES	
Specific Gravity	1.35
Colour	Black
Tensile Adhesion Strength	> 30 kgf/cm ²
Volumetric Expansion Rate	> 700%
Non-volatilization	99.7%

AREAS OF APPLICATION

1. Poured In-situ construction joints
2. Box culverts & Retaining walls
3. Cut and cover tunnel construction
4. Underground (Utility) Vault Seal
5. New to old concrete

VOLUMETRIC EXPANSION

	2 days	110 %
	3 days	250 %
	5 days	550 %
	7 days	700%
	2 days	105 %
	3 days	200 %
	5 days	400 %
	7 days	550%

PACKAGING

25m Roll (50 meter per box)

STORAGE

Triton TT Waterstop has a shelf life of 24 months; stored in original unopened cartons in cool, dry conditions, away from direct sunlight.

HEALTH AND SAFETY

Always read the Health and Safety Data Sheets before use.

Avoid skin and eye contact.

Avoid inhalation of vapours.

Wear safety glasses, gloves and overalls.

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Ref: TT Waterstop 06/07



TRITON TT VAPOUR MEMBRANE

DESCRIPTION

Triton TT Vapour Membrane is a single component acrylic modified coating that once cured, provides a liquid applied waterproof, methane and carbon dioxide barrier.

TYPICAL APPLICATIONS

1. As a retro applied waterproof and gas proof membrane to concrete, masonry and brick substrates.
2. Can be applied by airless spray, roller or brush to walls, floors or soffits.
3. As an alternative to sheet membranes in new construction.

CHARACTERISTICS

1. A 0.7mm thick (dry film) coating provides an effective methane barrier when applied to most clay or cementitious-based construction materials.
2. Also an effective waterproof membrane
3. Excellent adhesion, bonds to porous and non-porous substrates.
4. Flexible.
5. Non-toxic.
6. Will withstand temporary light trafficking.
7. Cannot be punctured as fully bonded.
8. Easily repaired by locally over-coating.
9. Can be painted, plastered or screeded over.
10. Rapid drying, in good conditions two coats can be applied in the same day.
11. Can be applied by brush, roller or airless spray.
12. Can be applied to damp and 'green' substrates.

TECHNICAL DATA

Components	1
Form	Thixotropic Liquid
Specific Gravity	1.40 (approx)
Application Temp	Plus 4 ⁰ C
Toxicity	Non-toxic
Cured Properties	
Adhesion to concrete	>1.1N/mm ²
Elongation ASTM D2370 %	>100%
Tensile Strength ASTM D2370	11 N/mm ²

CHEMICAL RESISTANCE

Triton TT Vapour Membrane has good chemical resistance to gasoline, sodium hydroxide, calcium chloride, de-icing salts and effluent.

PERFORMANCE CRITERIA

The performance of Triton TT Vapour Membrane is illustrated in the following table 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 1.40×10^{-10} kg/m²/s.

APPLICATION GUIDELINES

1. Surfaces must be clean, free from dust and loose material, oil, paint, fungal growth etc.
2. Non-structural cracks >0.5mm wide must be filled.
3. Structural cracks must first be repaired and filled.
4. The substrate must be sound and ideally present a smooth face.
5. Old repairs must be inspected and re-repaired if necessary.
6. Newly laid concrete should have a clean textured surface; Triton TT Vapour Membrane can be applied to concrete or mortar within 24 hours of laying.
7. Apply 45° fillets into angles formed of Triton Fillet Seal where practicable.

MIXING

Triton TT Vapour Membrane is supplied ready blended in a pail. The product requires agitation using a slow speed paddle mixer. Mix carefully for 5 minutes before use. If containers are stored for more than 2 hours after opening, re-agitate.

Do not add water.

SURFACE APPLICATION

1. Pre-dampen (not wet) the substrate before applying the first coat.

Interface with other media

1. For expansion joints ensure that Triton TT Vapour Membrane is applied well into the rebate before the expansion media is applied.
2. Other gas membranes must be exposed and lapped with Triton TT Vapour Membrane where present.

Dealing with cracks

1. Cracks must be stabilised and filled. Apply the first coat of Triton TT Vapour Membrane and apply plasterers polyurethane scrim along the line of the crack, apply a further coat of Triton TT Vapour Membrane to fully cover the scrim; apply the final coat as stated below.

Application of the main coating system

1. The product can be applied by stiff brush, roller or airless spray with a minimum 17 thousands of an inch nozzle. The spray method is especially suitable for less accessible locations and uneven substrates.
2. The first, primer, application is applied at the rate of >0.5lt/m² for waterproofing and >0.3lt/m² for an effective gas proof membrane. Ensure that the coating is even; use a circular action when spraying.
3. Allow the primer coat to dry before applying the second coat.
4. Apply the second coat at the rate of >0.7lt/m² for waterproofing and >0.5lt/m² for gas proof applications; for brush application, apply at right angles to the first coat. Again use a circular action when spraying. Application rate will depend on substrate surface.
5. Do not apply over bitumen.
6. The total application thickness must not exceed 4mm if splitting or cracking is to be avoided.

PACKAGING

Triton TT Vapour Membrane is supplied in a 20lt pail.

COLOUR

Mid grey

STORAGE

Triton TT Vapour Membrane must be stored at temperatures above 5°C and below 35°C in dry conditions, off the ground and away from direct sunlight.

The shelf life is 12 months in original unopened packaging when stored correctly.

HEALTH & SAFETY

Protect hands with rubber gloves. Avoid contact with skin and eyes. Should this occur flush with plenty of clean water. If irritation persists, seek professional medical advice.

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Ref: TT Vapour Membrane 06/07



TRITON TT SWELL MASTIC

DESCRIPTION

Triton TT Swell Mastic is grey colour, gun applied one component hydro reactive expansion sealant for waterproofing joints in concrete.

Triton TT Swell Mastic expands up to 100% when in contact with water to create a durable waterstop with long-lasting adhesive and hydro-swelling properties. When in contact with sea water, Triton TT Swell Mastic expands between 50 – 70%.

Triton TT Swell Mastic has excellent adhesive properties on different surfaces such as concrete, steel, glass, PVC, HDPE etc. The surface can be rough, smooth, damp or dry.

ADVANTAGES

1. Single component, application directly.
2. As a problem solving hydrophilic in difficult access areas.
3. Fast curing, enable early concrete pour and rapid return to service.
4. Excellent seal on rough concrete and plug up irregular surfaces.
5. Durable – excellent wet/dry cycle, retaining elastic character and swelling performance

AREAS OF APPLICATION

1. Pipe penetrations (concrete, PVC etc).
2. Waterproofing of joints between pre-cast concrete elements (e.g. inspection manholes, box culverts, sewer systems etc).
3. Waterproofing of H-beam penetration through floor slabs.
4. Adhesion of waterstops on an irregular surface.
5. Sealing around conventional PVC waterstop providing a belt seal prior to concrete pour.

TECHNICAL DATA

Appearance	Grey
Form	Elastic paste
Specific gravity	1.2
Solids (min.)	98%
Application limits (°C)	20 – 70
Tack-free time	1 hour
Approx. dry time (25°C, 65 RH)	10 hours
Shore A Hardness	25
Tear resistance (N/mm ²)	20 kg/cm²
Set time (3 mm thickness)	24 hours
Expansion volume (%)	
Water	100
Sea water	50 – 70
Concrete pour	Allow 4 to 8 hours

LIMITATIONS

Triton TT Swell Mastic should not be used for expansion joint or for joints subjected to significant repetitive movement

Triton TT Swell Mastic should be positioned to ensure that there is a minimum of 70mm concrete cover to accommodate pressure developed during the swelling process.

Triton TT Swell Mastic will establish a firm bond to concrete, however, as with any hydrophilic waterstop, care should be taken during concreting directly onto the seal.

PACKAGING

300ml per cartridge.

COVERAGE

Each 320ml gun cartridge will provide enough material for approximately 1.5 metres when gunned to form a constant 10mm diameter bead.

SHELF LIFE

Shelf life is 6 months in the original unopened packaging. To be stored at room temperature. Do not store in direct sunlight.

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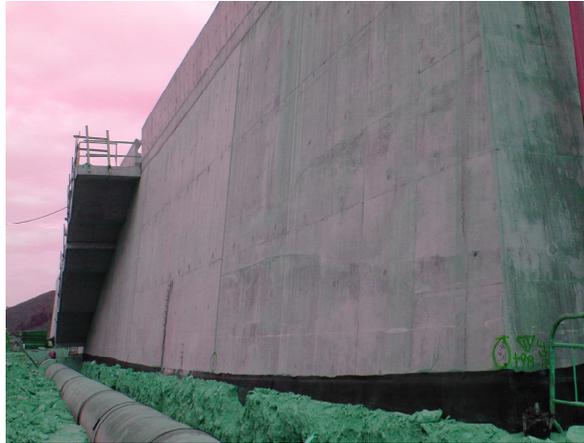
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Ref: TT Swell Mastic 06/07



TRITON TT SUPER ADMIX



DESCRIPTION

Triton TT Super Admix is a unique chemical treatment for the waterproofing and protection of concrete. This admix is specially designed as a concrete additive at the time of batching.

INTRODUCTION

Packed as a dry powder compound, Triton TT Super Admix consists of Portland cement, very fine treated silica sand and various active proprietary chemicals. The active chemicals react with the moisture in the fresh concrete and the by-products of cement hydration causing a catalytic reaction that generates a non-soluble crystalline formation of dendritic fibres throughout the pores and capillary tracts of the concrete. Thus the concrete itself becomes sealed against the penetration of water or liquid, protecting the concrete from the deterioration effect of harsh environmental conditions.

CHARACTERISTICS

1. Maximizes waterproofness of concrete
2. Will withstand extreme hydrostatic pressure.
3. Exceptional durability.
4. Reduces shrinkage and cracking
5. Protection of concrete against certain aggressive chemicals including chloride attack to steel reinforcing
6. Improves workability of concrete
7. Allows passage of air and water vapour
8. Cost effective.

DIRECTIONS FOR USE

For waterproofing concrete the recommended addition rate for Triton TT Super Admix is 0.8%- 1.2% by weight of cement. For enhanced chemical resistance please consult with Triton's Technical Services to determine the approximate addition rate. Triton TT Super Admix is added to the concrete at the time of batching. The sequence of procedures for addition will vary according to the type of batch plant operation and equipment.

1. READY MIX PLANT - DRY BATCH OPERATION

Add Triton TT Super Admix in powder form to the drum of the ready-mix truck. Drive the truck under the batch plant and add 60% - 70% of the required water along with 140 kg - 230 kg of aggregate. Mix the materials for 2 - 3 minutes to ensure the Admix is distributed evenly throughout the mix water. Add the balance of materials to the ready-mix truck in accordance with standard batch practices.

2. READY MIX PLANT - CENTRAL MIX OPERATION

Mix Triton TT Super with water to form a very thin slurry (e.g. 6kg. – 8kg lb. of powder mixed with 10 Litres of water). Pour the required amount of material into the drum of the ready-mix truck. The aggregate, cement and water should be batched and mixed in the plant in accordance with standard practices (taking into account the quantity of water that has already been placed in the ready-mix truck). Pour the concrete into the truck and mix for at least 5 minutes to ensure even distribution of the Triton TT Super Admix throughout the concrete.

3. PRECAST BATCH PLANT - PAN MIXER

Add Triton TT Super Admix to the rock and sand, then mix thoroughly for 2 - 3 minutes before adding the cement and water. The total concrete mass should be blended using standard practices.

Note: It is important to obtain a homogeneous mixture of Triton TT Super Admix with the concrete.

Therefore, do not add dry Triton TT Super Admix powder directly to wet concrete as this may cause clumping and thorough dispersion will not occur.

For further information regarding the proper use of Triton TT Super Admix for a specific project, consult with a Triton technical representative.

CURING

Normal practices for placing and curing concrete should be followed as laid out in your local standards.

TECHNICAL SERVICES

Technical assistance is available through Triton's Technical department or its field based technical representatives.

PACKAGING

Triton TT Super Admix is available in 20kg Drums or 3kg water-soluble bags. Product must be stored dry at a minimum temperature of 7°C. Shelf life is one year when stored under proper conditions.

HEALTH & SAFETY

Triton TT Super is alkaline. Protect hands with rubber gloves. Avoid contact with skin and eyes. Should this occur, flush with water. If irritation persists, contact physician.

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Ref: TT Super Admix 06/07



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 (T.T.55) and renders. In most circumstances FILLET SEAL need only be mixed with water for use. Where extra adhesion or flexibility are required, TRITON SBR latex and TRITON TANKING MIX ELASTIFIER (T.T.M.E) may be used respectively.

NOTE: Where water is leaking or seeping the use of TRITON QUICK SET is advised.

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 water proofing works.

PREPARATION

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 onto the slurry coated surface as illustrated in FIG. 1 below.

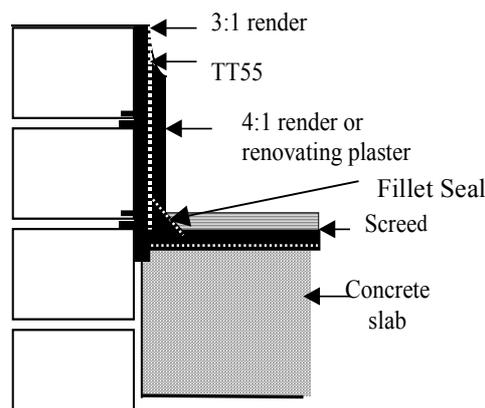


Fig. 1

The FILLET SEAL becomes fully encapsulated within the layers of slurry coating.

USAGE

FILLET SEAL normally needs only mixing with clean water before use. Add sufficient water to make a cohesive, stiff mortar. Ideally the FILLET SEAL should be applied to partly cured (green) slurry coating (T.T.55) surfaces to maximise adhesion. If this is not possible make up the FILLET SEAL using a gauging solution composed of 1 part TRITON SBR to 4 parts water (by volume). Pre-wet the surface with the same solution just before applying the FILLET SEAL. When excessive stress concentrations are expected at floor/wall joints the use of T.T.M.E added to the mix is advised. T.T.M.E increases flexibility and should be added neat to FILLET SEAL until the required consistency is achieved. The slurry coating (T.T.55) under and overcoats should also contain T.T.M.E.

NOTE: Only sound substrates suitable to be permanently sealed under a waterproofing system should be treated. Concrete, Brick, Stone, Render and Mortar in poor condition could deteriorate further when sealed inappropriately.

CURING

Avoid rapid drying out, overcoat as soon as set (5-6 hours dependent on conditions) whenever possible. Do not subject to running water until fully hardened (and overcoated).

STORAGE AND HANDLING

Avoid breathing dust.

Wear gloves and eye protection.

Wash hands and exposed skin after use.

Must be stored in dry frost-free conditions.

If bags are stored correctly and unopened they will have shelf life of 12 months.

Packed in 25kg bags.

Minimum application temperature: 5°C

Maximum application temperature: 30°C

COVERAGE

15 – 20Lm (25mm x 25mm triangular fillet) per 25kg approximately.

The information given in this data sheet is given in good faith and is based upon knowledge and experience of the materials used. However, since the application of the product 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 product outside the scope of the intended use and precautions set out in the data sheet.

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Ref: 09/02 DATA TRITON FILLET SEAL



TRIPROOF AQ

MASONRY WATER REPELLENT CONCENTRATE.

DILUTES WITH WATER TO FORM STABLE SOLUTIONS FOR USE ON MINERAL SUBSTRATES

TRIPROOF AQ is a highly effective water repellent based on a blend of Silane and polysiloxane resins. **TRIPROOF AQ** is suitable for use over masonry, brickwork, concrete and renders. Superior performance is obtained on alkaline surfaces such as new renders and concrete.

FEATURES

- High alkaline resistance
- Excellent penetrating power
- Vapour permeable
- Colourless
- Dries to a tack-free finish
- UV resistant
- Water thinnable
- Easy removal of overspray

DESCRIPTION

TRIPROOF AQ is supplied as a concentrate for dilution with water before use. For most mineral substrates a dilution ratio of 1: 9 is recommended. When treating dense concrete surfaces dilution ratios of 1: 2 or 1 : 3 can be employed to maximise penetration and subsequent deposition of active water repellent. Treatment of surfaces with **TRIPROOF AQ** reduces water absorption whilst maintaining the appearance of the area treated, also since the product does not block or clog pores and capillaries the vapour permeability of the substrate is maintained. Reducing water absorption prolongs the life of the substrate by reducing the damage caused by water:

FROST DAMAGE AND SPALLING

Frost damage occurs when pores and capillaries are more than 90% full of water. The expansion of frozen water exerts pressure into the substrate causing splitting, spalling and general disintegration.

SALT EFFLORESCENCE

Constant evaporation and wetting with water causes salts to move nearer to the surface causing a white bloom or crystal growth at best or splitting and spalling at worst.

BIOLOGICAL GROWTH

Damp surfaces will support the growth of algae, moss, lichen and moulds. These organisms use acids to digest their food which damages the underlying masonry with time.

CHEMICAL CORROSION

Water encourages the corrosion of metal fittings and fixtures, and of particular importance, cavity wall ties.

ATMOSPHERIC POLLUTION

Acid rain accelerates the weathering process by dissolving the binding matrix of the substrate.

APPLICATION

TRIPROOF AQ should be applied by a coarse low pressure spray or by flooding after dilution with water. Apply at least two coats, wet on wet, to maximise penetration into the substrate. Apply each subsequent coat when the substrate has absorbed the previous one and is no longer shiny wet. Surfaces to be treated should be dry. The ideal temperature for application are between +10°C and +25°C. Application and dilution rates vary according to the porosity of the substrate to be treated:

TRIPROOF AQ

	Application rate	Dilution ratio
Concrete	0.25 L/m ²	1:2 or 1:3
Render	0.5-1 L/m ²	1:9
Brickwork	0.5-2 L/m ²	1:9

In all cases it is advisable to conduct a small site trial to determine the most appropriate application rate and dilution ratio.

DILUTION:

Half fill mixing container with water, add **TRIPROOF AQ** and stir. Add remaining water and stir thoroughly. Use within a week of mixing.

GENERAL INFORMATION

Concentrate

Density	1.0 g/cm ³
Shelf life	At least 6 months
Pack size	2.5 Litre (makes 25 Litres)

RELATED PRODUCTS

Triton OH 100 - stone strengthener
Triproof 290 - solvent borne water repellent solution.

For further information contact:

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Ref: 05/04 DATA.TRIPROOF AQ



TRIFIX ADHESIVE

DESCRIPTION TRIFIX is a two component epoxy resin system formulated for use with twin component side by side cartridges using either hand operated or, more normally, air operated guns, using “at the nozzle” static spiral mixer or pot mix for larger applications.

CHARACTERISTICS TRIFIX is colour coded for visual assurance that the two components are fully mixed. The product is solvent free, thixotropic i.e., will not readily slump, and cures in cold, damp conditions.

USES TRIFIX is formulated as an adhesive for bonding and anchoring most building materials e.g. brick, stone, steel, mortar and timber. Once cured TRIFIX creates a strong stress free joint regardless of the surrounding environment.

*The colour, but no other ingredient, may be changed at the manufacturers discretion. The change will not affect the cured product in any way.

TRIMOL SYSTEM

PRODUCT	APPEARANCE	DENSITY AT 25°C
TRIFIX RESIN	*Orange	1.7
TRIFIX HARDENER	*Red	1.2

INSTRUCTIONS FOR USE

PREPARATION Prior to the application of TRIFIX all surfaces must be free from dust, oil, rust and grease. Any loose materials must be removed back to a sound surface.

MIXING When supplied in cartridge form the mixing takes place in a static spiral mixer, which delivers the mixed product to the required surface. When supplied in pots, all of the resin must be mixed with all of the hardener. Under no circumstances should part mixes be used. Mix the two components thoroughly until a consistent, no streaky colour is achieved. When using cartridges, extrude TRIFIX onto a surface until a consistent non-streaky colour is achieved.

USABLE LIFE In cartridges TRIFIX has no waste apart from the mixed product in the nozzle, which will stay workable for a minimum of 15 mins. In pot form the mixed product will remain workable for approximately 15 mins. This time can vary depending upon the working temperature.

CURING Complete cure: 7 days

TESTING Not less than 24 hours after application, the temperature to be 12°C or above.

WORKING TEMPERATURE The material is formulated for use at 5°C. to 25°C.: it is seasonably adjusted during manufacture to ensure the flow characteristics of the mixed product are constant.

TRIFIX ADHESIVE

Mechanical properties after curing 21 days at 20°C.

Test temperature: 20°C.

Tensile strength 35 Mpa

ISO/R 527

Flexural strength 30 Mpa

ISO 178

Compressive strength 60 Mpa

STORAGE The separate components, stored at 5°C. to 20°C. in dry conditions, have a shelf life of at least 9 months.

PACKAGING 400ml side by side cartridge

CLEANING The method of application cuts cleaning to a minimum but should it be necessary to clean then TRITON RESIN CLEANER should be employed: cured TRIFIX ADHESIVE will require removal by chipping or other mechanical means.

CAUTION TRIFIX ADHESIVE is generally harmless providing that the normal common-sense precautions are taken when handling chemicals are observed. For instance neither the separate components nor the uncured mixture should be allowed to come into contact with foodstuffs or utensils. Measures should also be taken to prevent contact with the skin: wearing rubber or plastic gloves will normally suffice along with eye protection. Thoroughly cleanse the skin at the end of each working period by washing with soap and water. Disposable paper towels are recommended to dry the skin. Precautions are fully discussed in Product Safety Information sheet for TRIFIX ADHESIVE, which is available on request.

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

For further information contact:

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Ref:09/97DATA.TRIFIX ADHESIVE



Outline Specification

Flood Resilience – New Build Details: Floors

1. Introduction

Before constructing floors, the details below, along with all relevant data sheets and guidance notes should be carefully read and understood. Wherever possible or practical the installation should be carried out by suitably trained site technicians.

Typical section details are shown in the drawings below giving a number of options, dependant on the form of construction and the flood risk level and type of flooding (eg surface water or ground seepage). Please refer to drawing nos. FRO01.1 A, B and C.

2. Concrete to Floors

The concrete should be waterproofed using Triton TT Super admix and incorporating Triton TT Waterstop to any construction/day joints within the concrete floor slab.

TT Super admix to be added to concrete at rate of 1.2% by weight of OPC / SRC cement within the concrete mix design (1.2kg TT super admix : 100kg OPC / SRC).

Example: C30 Concrete with cement content 300kg/m³
= (1.2 x 3) = 3.6kg TT Super admix/m³

Triton TT Super admix is added at the calculated rate to the concrete at batching, either on site or ready mix plant. The TT Super admix is added to the initial gauging water to the mix, followed by the cement and aggregate and the final gauging water. When added the concrete should be mixed for a minimum of 15 minutes prior to placement on site.

The TT Super admix will improve the workability of the mix, improve the strength and durability of the concrete, improve its resistance to chemicals in the ground as well as waterproof the concrete.

Placement, compaction and curing of the concrete incorporating the TT Super admix should be in accordance with good concreting guidelines and practice.

3. Construction/Day Joints to Floor Slab

If it is designed, or if the need arises for a construction/day joint within the concrete incorporating the TT Super admix, then this joint detail needs to be waterproofed. Refer to drawing no. TT005.1 attached for details.

Where it is a designed construction joint then the installation of Triton TT Waterstop to the joint is required. This should be fixed to the even surface of the concrete either by nailing or by way of Triton TT Swellmastic as detailed in the attached data sheet, to the middle of the concrete surface.

A minimum of 50mm concrete cover is required to the TT Waterstop to ensure that as it swells in contact with water the expansive forces do not blow the concrete surface.

If there is an interruption to the concrete pour or where an unplanned break is needed then if the surface of the concrete is reasonably even then TT Waterstop to be installed as detailed above and as indicated in drawing no. TT005.1 attached.

If the surface is uneven then two 10mm beads of Triton TT Swellmastic should be applied along the day joint, again ensuring a minimum of 50mm concrete cover to the upper surface of the concrete slab. See data sheet for full installation details.

4. Wall/Floor Detail – Low Risk Areas

Where construction of the masonry walls is constructed of concrete foundations and the floor slab incorporating the TT Super admix in fills between, as indicated in drawing no. FRO01.1 (B) attached.

From the damp proof course level to the below ground element of the wall externally, two coats of Triton TT Vapour Membrane should be applied to the brick walls, this should link up to the concrete foundations wherever possible.

Triton TT Vapour Membrane is a one part acrylic polymer blend applied in two coats to waterproof the lower element of the wall externally below the installed damp proof course. For mixing, application and curing refer to data sheet attached.

5. Wall/Floor Detail – High Risk Areas

Where it is anticipated that the area is at high risk of flooding from ground seepage as well as surface run off, then the masonry walls should be built directly off the waterproof concrete slab as indicated in drawing no. FRO01.1 (A) attached.

This would eliminate the vulnerable wall / floor junction detail from the internal aspect of the build. Again the wall below the damp proof course externally to be waterproofed using two coats of Triton TT Vapour Membrane as indicated. This should overlap with the edge of the waterproof concrete slab.

Where the method of construction is as point 4 above, then the internal wall / floor detail needs to be addressed as indicated in drawing no. FRO01.1 (B) attached.

To the joint between the waterproof concrete and masonry wall, a minimum 25mm bottle cove fillet to be installed around the entire wall / floor junction, using Triton Fillet Seal, a purpose designed non shrink fillet seal. For a 25mm fillet, application would be approximately 1.6kg / linear meter. The fillet seal should be mixed to a 'putty' consistency with water and then applied to the joint with suitable amount of pressure to pack tightly into the angle. Full mixing, application and curing details as per attached data sheet.

Once the fillet seal has cured, apply two coats Triton TT Vapour Membrane from the damp proof course level down the wall, across the fillet seal and return across the waterproof concrete by minimum of 150mm. See drawing no. FRO01.1(B) attached.

6. Wall/Floor Detail – Unknown Risk/Ground Contaminants

Where the flood risk type is unknown, or where an alternate to the TT Super admix is preferred, and particularly in areas where there is a requirement for ground gas measures such as Radon, Methane or Carbon Dioxide, then an alternate detail would be as shown in drawing no. FRO01.1(C) attached.

Here the slab should be cast in the normal way, along with a suitable damp proof course to the masonry wall.

Triton Fillet Seal to be installed to the perimeter wall / floor junction as indicated in point 5 above and as per Triton Fillet Seal data sheet attached. Then apply minimum of two coats of Triton TT Vapour Membrane to the entire floor area and return up to and overlapping the damp proof course to the walls, as per drawing no. FRO01.1(C) attached.

7. Summary

All product applications are to be strictly in accordance with manufacturer's installation and application guidelines and as per drawings referred to and attached to this document.

Where construction methods vary or where risk element is different, please consult with Triton's technical department prior to carrying out the works.

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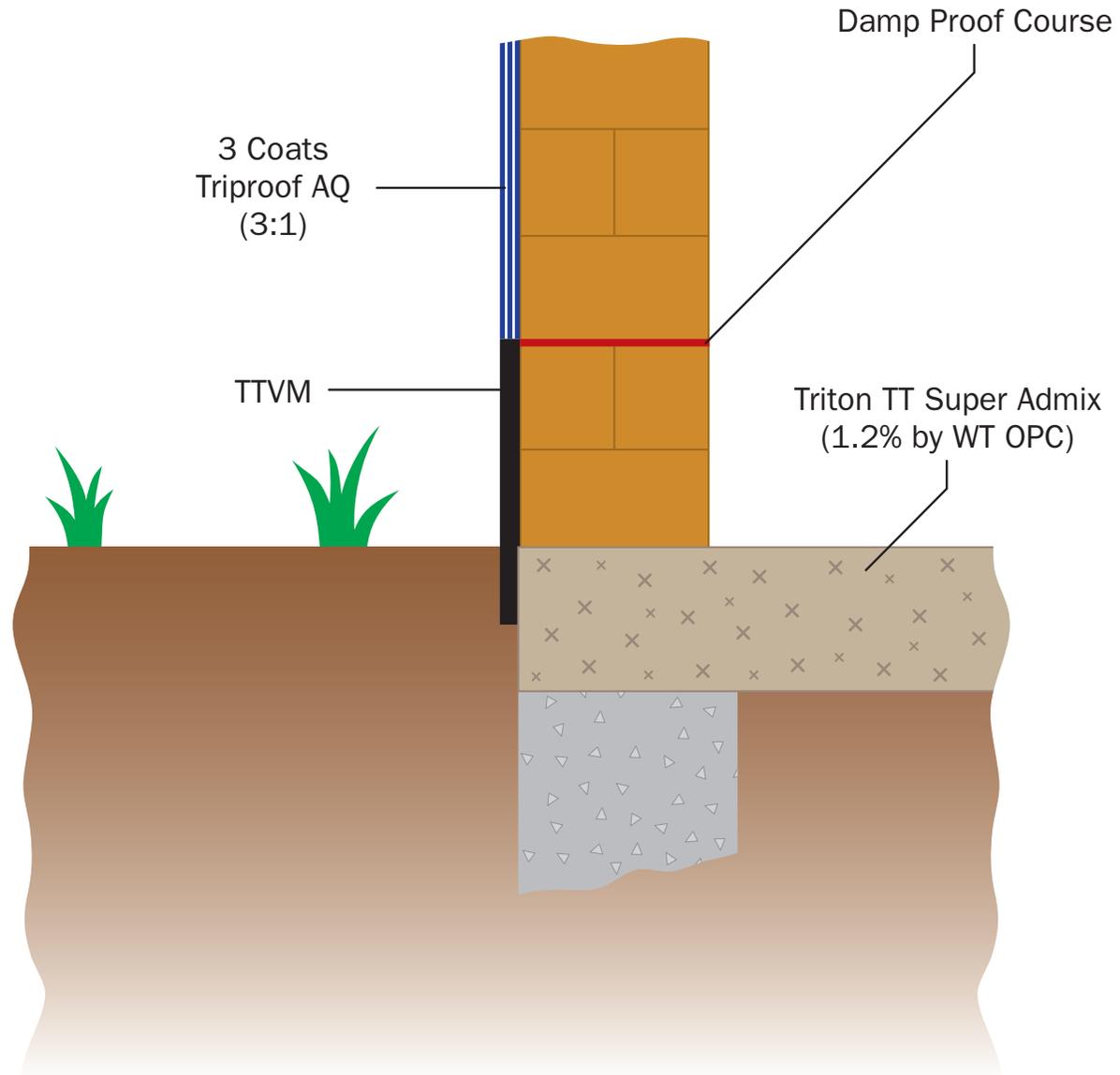
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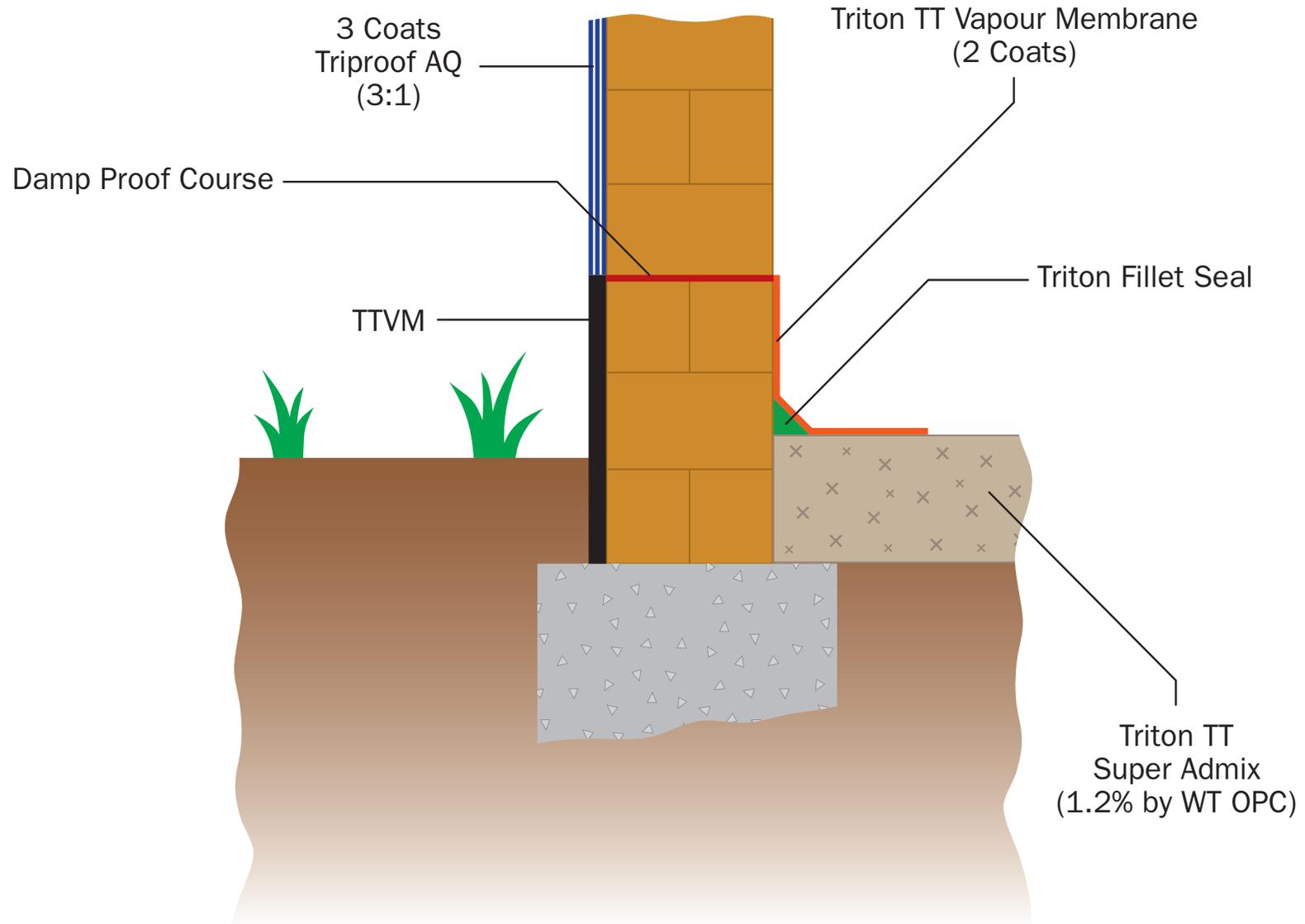
FR001.1 (A)

TYPICAL DETAILS – WALL/FLOOR CONSTRUCTION (SOLID & CAVITY WALLS)



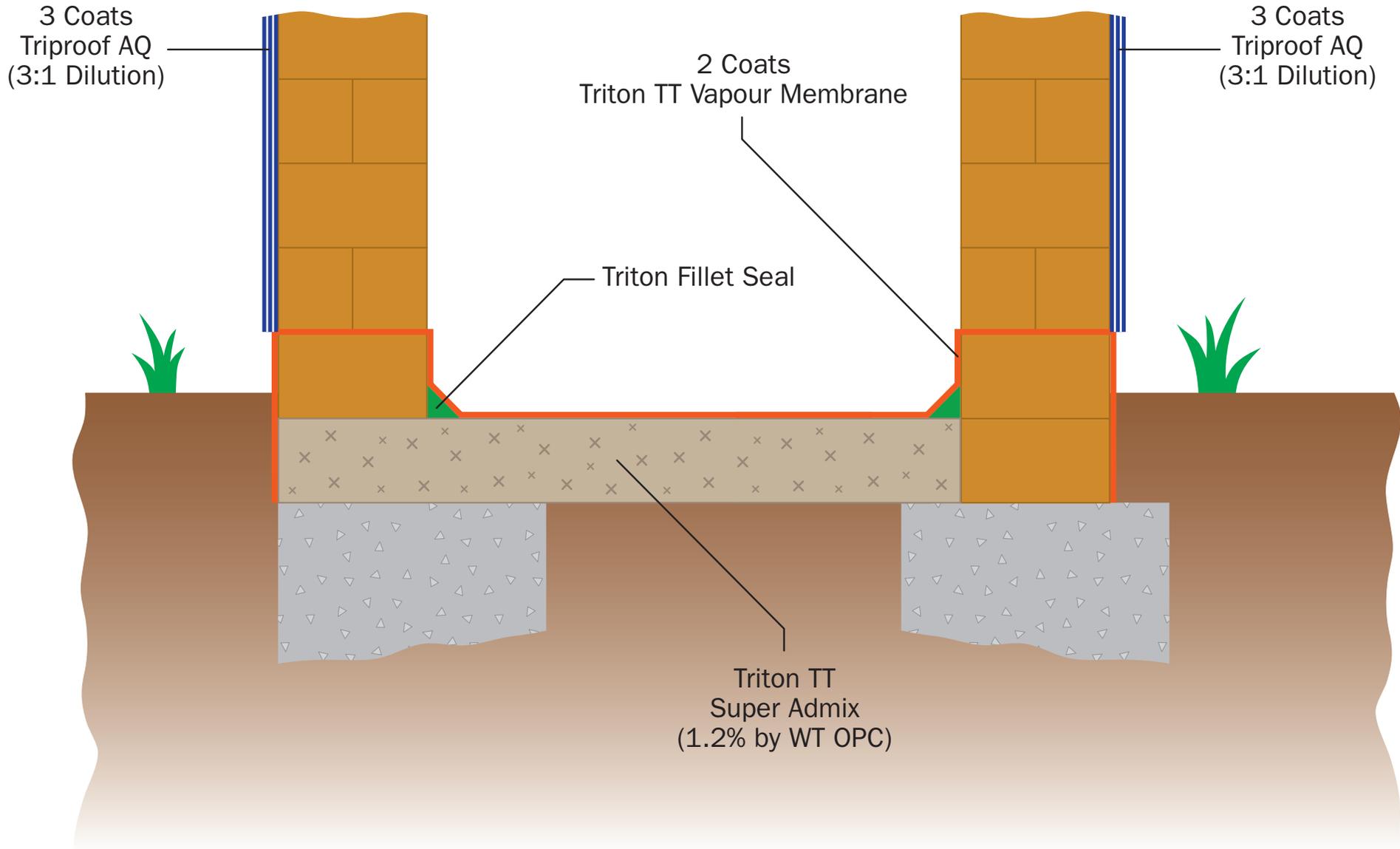
FR001.1 (B)

TYPICAL DETAILS – WALL/FLOOR CONSTRUCTION (SOLID & CAVITY WALLS)



FR001.1 (C)

TYPICAL SECTION – HIGH RISK/CONTAMINATED/GROUND SLAB





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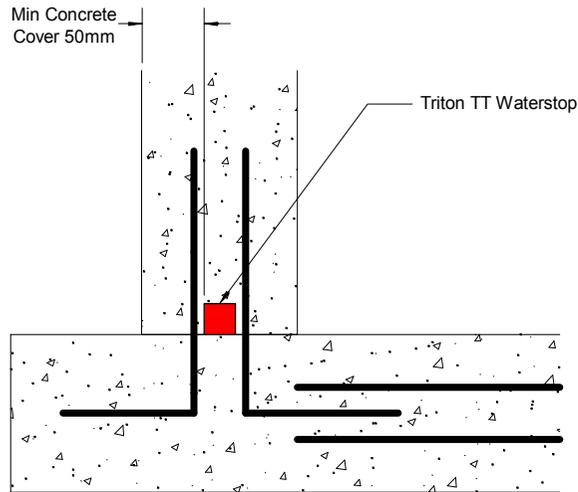
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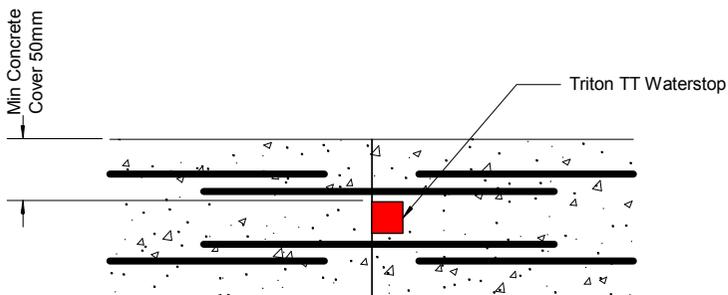
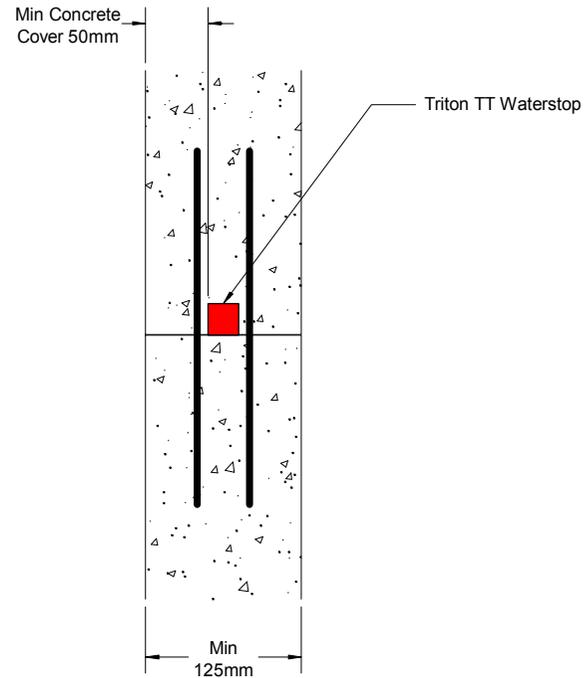
NOTE

ALL INSTALLATION TO BE CARRIED OUT IN STRICT ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS. FOR FURTHER ASSISTANCE CONTACT **TRITON TECHNICAL** ON THE TELEPHONE NUMBER ABOVE.

Wall To Floor



Walls



Floors
New & New To Old

Please Note:

On rough concrete surfaces
Triton TT Waterstop to be
adhered with Triton TT Swell Mastic

REV.	MOD. BY	DATE	CHK. BY	APP. BY

Alterations

TITLE:

Concrete Construction Joints
Using
Triton TT Waterstop

DRG. No.	TT 005.1	REV	1
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DRAWN	JDF, CBS	System Files: TT 005-1(1).pdf
DATE	25-06-07	
SCALE (A3)	Not To Scale	
CHECKED		
APPROVED		



TRITON TT SWELL MASTIC

DESCRIPTION

Triton TT Swell Mastic is grey colour, gun applied one component hydro reactive expansion sealant for waterproofing joints in concrete.

Triton TT Swell Mastic expands up to 100% when in contact with water to create a durable waterstop with long-lasting adhesive and hydro-swelling properties. When in contact with sea water, Triton TT Swell Mastic expands between 50 – 70%.

Triton TT Swell Mastic has excellent adhesive properties on different surfaces such as concrete, steel, glass, PVC, HDPE etc. The surface can be rough, smooth, damp or dry.

ADVANTAGES

1. Single component, application directly.
2. As a problem solving hydrophilic in difficult access areas.
3. Fast curing, enable early concrete pour and rapid return to service.
4. Excellent seal on rough concrete and plug up irregular surfaces.
5. Durable – excellent wet/dry cycle, retaining elastic character and swelling performance

AREAS OF APPLICATION

1. Pipe penetrations (concrete, PVC etc).
2. Waterproofing of joints between pre-cast concrete elements (e.g. inspection manholes, box culverts, sewer systems etc).
3. Waterproofing of H-beam penetration through floor slabs.
4. Adhesion of waterstops on an irregular surface.
5. Sealing around conventional PVC waterstop providing a belt seal prior to concrete pour.

TECHNICAL DATA

Appearance	Grey
Form	Elastic paste
Specific gravity	1.2
Solids (min.)	98%
Application limits (°C)	20 – 70
Tack-free time	1 hour
Approx. dry time (25°C, 65 RH)	10 hours
Shore A Hardness	25
Tear resistance (N/mm ²)	20 kg/cm²
Set time (3 mm thickness)	24 hours
Expansion volume (%)	
Water	100
Sea water	50 – 70
Concrete pour	Allow 4 to 8 hours

LIMITATIONS

Triton TT Swell Mastic should not be used for expansion joint or for joints subjected to significant repetitive movement

Triton TT Swell Mastic should be positioned to ensure that there is a minimum of 70mm concrete cover to accommodate pressure developed during the swelling process.

Triton TT Swell Mastic will establish a firm bond to concrete, however, as with any hydrophilic waterstop, care should be taken during concreting directly onto the seal.

PACKAGING

300ml per cartridge.

COVERAGE

Each 320ml gun cartridge will provide enough material for approximately 1.5 metres when gunned to form a constant 10mm diameter bead.

SHELF LIFE

Shelf life is 6 months in the original unopened packaging. To be stored at room temperature. Do not store in direct sunlight.

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Ref: TT Swell Mastic 06/07



TRITON TT VAPOUR MEMBRANE

DESCRIPTION

Triton TT Vapour Membrane is a single component acrylic modified coating that once cured, provides a liquid applied waterproof, methane and carbon dioxide barrier.

TYPICAL APPLICATIONS

1. As a retro applied waterproof and gas proof membrane to concrete, masonry and brick substrates.
2. Can be applied by airless spray, roller or brush to walls, floors or soffits.
3. As an alternative to sheet membranes in new construction.

CHARACTERISTICS

1. A 0.7mm thick (dry film) coating provides an effective methane barrier when applied to most clay or cementitious-based construction materials.
2. Also an effective waterproof membrane
3. Excellent adhesion, bonds to porous and non-porous substrates.
4. Flexible.
5. Non-toxic.
6. Will withstand temporary light trafficking.
7. Cannot be punctured as fully bonded.
8. Easily repaired by locally over-coating.
9. Can be painted, plastered or screeded over.
10. Rapid drying, in good conditions two coats can be applied in the same day.
11. Can be applied by brush, roller or airless spray.
12. Can be applied to damp and 'green' substrates.

TECHNICAL DATA

Components	1
Form	Thixotropic Liquid
Specific Gravity	1.40 (approx)
Application Temp	Plus 4 ⁰ C
Toxicity	Non-toxic
Cured Properties	
Adhesion to concrete	>1.1N/mm ²
Elongation ASTM D2370 %	>100%
Tensile Strength ASTM D2370	11 N/mm ²

CHEMICAL RESISTANCE

Triton TT Vapour Membrane has good chemical resistance to gasoline, sodium hydroxide, calcium chloride, de-icing salts and effluent.

PERFORMANCE CRITERIA

The performance of Triton TT Vapour Membrane is illustrated in the following table 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 1.40×10^{-10} kg/m²/s.

APPLICATION GUIDELINES

1. Surfaces must be clean, free from dust and loose material, oil, paint, fungal growth etc.
2. Non-structural cracks >0.5mm wide must be filled.
3. Structural cracks must first be repaired and filled.
4. The substrate must be sound and ideally present a smooth face.
5. Old repairs must be inspected and re-repaired if necessary.
6. Newly laid concrete should have a clean textured surface; Triton TT Vapour Membrane can be applied to concrete or mortar within 24 hours of laying.
7. Apply 45° fillets into angles formed of Triton Fillet Seal where practicable.

MIXING

Triton TT Vapour Membrane is supplied ready blended in a pail. The product requires agitation using a slow speed paddle mixer. Mix carefully for 5 minutes before use. If containers are stored for more than 2 hours after opening, re-agitate.

Do not add water.

SURFACE APPLICATION

1. Pre-dampen (not wet) the substrate before applying the first coat.

Interface with other media

1. For expansion joints ensure that Triton TT Vapour Membrane is applied well into the rebate before the expansion media is applied.
2. Other gas membranes must be exposed and lapped with Triton TT Vapour Membrane where present.

Dealing with cracks

1. Cracks must be stabilised and filled. Apply the first coat of Triton TT Vapour Membrane and apply plasterers polyurethane scrim along the line of the crack, apply a further coat of Triton TT Vapour Membrane to fully cover the scrim; apply the final coat as stated below.

Application of the main coating system

1. The product can be applied by stiff brush, roller or airless spray with a minimum 17 thousands of an inch nozzle. The spray method is especially suitable for less accessible locations and uneven substrates.
2. The first, primer, application is applied at the rate of >0.5lt/m² for waterproofing and >0.3lt/m² for an effective gas proof membrane. Ensure that the coating is even; use a circular action when spraying.
3. Allow the primer coat to dry before applying the second coat.
4. Apply the second coat at the rate of >0.7lt/m² for waterproofing and >0.5lt/m² for gas proof applications; for brush application, apply at right angles to the first coat. Again use a circular action when spraying. Application rate will depend on substrate surface.
5. Do not apply over bitumen.
6. The total application thickness must not exceed 4mm if splitting or cracking is to be avoided.

PACKAGING

Triton TT Vapour Membrane is supplied in a 20lt pail.

COLOUR

Mid grey

STORAGE

Triton TT Vapour Membrane must be stored at temperatures above 5°C and below 35°C in dry conditions, off the ground and away from direct sunlight.

The shelf life is 12 months in original unopened packaging when stored correctly.

HEALTH & SAFETY

Protect hands with rubber gloves. Avoid contact with skin and eyes. Should this occur flush with plenty of clean water. If irritation persists, seek professional medical advice.

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Ref: TT Vapour Membrane 06/07



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 (T.T.55) and renders. In most circumstances FILLET SEAL need only be mixed with water for use. Where extra adhesion or flexibility are required, TRITON SBR latex and TRITON TANKING MIX ELASTIFIER (T.T.M.E) may be used respectively.

NOTE: Where water is leaking or seeping the use of TRITON QUICK SET is advised.

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 water proofing works.

PREPARATION

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 onto the slurry coated surface as illustrated in FIG. 1 below.

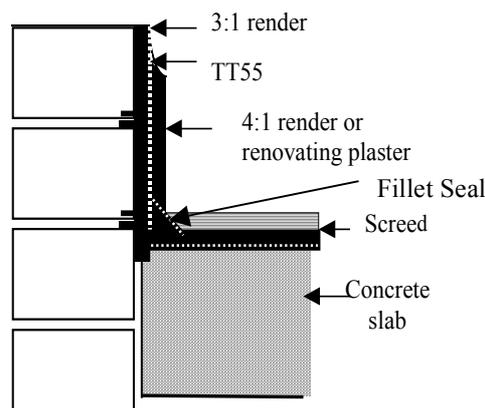


Fig. 1

The FILLET SEAL becomes fully encapsulated within the layers of slurry coating.

USAGE

FILLET SEAL normally needs only mixing with clean water before use. Add sufficient water to make a cohesive, stiff mortar. Ideally the FILLET SEAL should be applied to partly cured (green) slurry coating (T.T.55) surfaces to maximise adhesion. If this is not possible make up the FILLET SEAL using a gauging solution composed of 1 part TRITON SBR to 4 parts water (by volume). Pre-wet the surface with the same solution just before applying the FILLET SEAL. When excessive stress concentrations are expected at floor/wall joints the use of T.T.M.E added to the mix is advised. T.T.M.E increases flexibility and should be added neat to FILLET SEAL until the required consistency is achieved. The slurry coating (T.T.55) under and overcoats should also contain T.T.M.E.

NOTE: Only sound substrates suitable to be permanently sealed under a waterproofing system should be treated. Concrete, Brick, Stone, Render and Mortar in poor condition could deteriorate further when sealed inappropriately.

CURING

Avoid rapid drying out, overcoat as soon as set (5-6 hours dependent on conditions) whenever possible. Do not subject to running water until fully hardened (and overcoated).

STORAGE AND HANDLING

Avoid breathing dust.

Wear gloves and eye protection.

Wash hands and exposed skin after use.

Must be stored in dry frost-free conditions.

If bags are stored correctly and unopened they will have shelf life of 12 months.

Packed in 25kg bags.

Minimum application temperature: 5°C

Maximum application temperature: 30°C

COVERAGE

15 – 20Lm (25mm x 25mm triangular fillet) per 25kg approximately.

The information given in this data sheet is given in good faith and is based upon knowledge and experience of the materials used. However, since the application of the product 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 product outside the scope of the intended use and precautions set out in the data sheet.

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Ref: 09/02 DATA TRITON FILLET SEAL



TRITON TT SUPER ADMIX



DESCRIPTION

Triton TT Super Admix is a unique chemical treatment for the waterproofing and protection of concrete. This admix is specially designed as a concrete additive at the time of batching.

INTRODUCTION

Packed as a dry powder compound, Triton TT Super Admix consists of Portland cement, very fine treated silica sand and various active proprietary chemicals. The active chemicals react with the moisture in the fresh concrete and the by-products of cement hydration causing a catalytic reaction that generates a non-soluble crystalline formation of dendritic fibres throughout the pores and capillary tracts of the concrete. Thus the concrete itself becomes sealed against the penetration of water or liquid, protecting the concrete from the deterioration effect of harsh environmental conditions.

CHARACTERISTICS

1. Maximizes waterproofness of concrete
2. Will withstand extreme hydrostatic pressure.
3. Exceptional durability.
4. Reduces shrinkage and cracking
5. Protection of concrete against certain aggressive chemicals including chloride attack to steel reinforcing
6. Improves workability of concrete
7. Allows passage of air and water vapour
8. Cost effective.

DIRECTIONS FOR USE

For waterproofing concrete the recommended addition rate for Triton TT Super Admix is 0.8%- 1.2% by weight of cement. For enhanced chemical resistance please consult with Triton's Technical Services to determine the approximate addition rate. Triton TT Super Admix is added to the concrete at the time of batching. The sequence of procedures for addition will vary according to the type of batch plant operation and equipment.

1. READY MIX PLANT - DRY BATCH OPERATION

Add Triton TT Super Admix in powder form to the drum of the ready-mix truck. Drive the truck under the batch plant and add 60% - 70% of the required water along with 140 kg - 230 kg of aggregate. Mix the materials for 2 - 3 minutes to ensure the Admix is distributed evenly throughout the mix water. Add the balance of materials to the ready-mix truck in accordance with standard batch practices.

2. READY MIX PLANT - CENTRAL MIX OPERATION

Mix Triton TT Super with water to form a very thin slurry (e.g. 6kg. – 8kg lb. of powder mixed with 10 Litres of water). Pour the required amount of material into the drum of the ready-mix truck. The aggregate, cement and water should be batched and mixed in the plant in accordance with standard practices (taking into account the quantity of water that has already been placed in the ready-mix truck). Pour the concrete into the truck and mix for at least 5 minutes to ensure even distribution of the Triton TT Super Admix throughout the concrete.

3. PRECAST BATCH PLANT - PAN MIXER

Add Triton TT Super Admix to the rock and sand, then mix thoroughly for 2 - 3 minutes before adding the cement and water. The total concrete mass should be blended using standard practices.

Note: It is important to obtain a homogeneous mixture of Triton TT Super Admix with the concrete.

Therefore, do not add dry Triton TT Super Admix powder directly to wet concrete as this may cause clumping and thorough dispersion will not occur.

For further information regarding the proper use of Triton TT Super Admix for a specific project, consult with a Triton technical representative.

CURING

Normal practices for placing and curing concrete should be followed as laid out in your local standards.

TECHNICAL SERVICES

Technical assistance is available through Triton's Technical department or its field based technical representatives.

PACKAGING

Triton TT Super Admix is available in 20kg Drums or 3kg water-soluble bags. Product must be stored dry at a minimum temperature of 7°C. Shelf life is one year when stored under proper conditions.

HEALTH & SAFETY

Triton TT Super is alkaline. Protect hands with rubber gloves. Avoid contact with skin and eyes. Should this occur, flush with water. If irritation persists, contact physician.

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Ref: TT Super Admix 06/07



TRITON TT WATERSTOP

(25mm x 20mm)



INTRODUCTION

Triton TT Waterstop is a preformed waterstop consisting of sodium bentonite and butyl rubber and it swells up to 700% when in contact with water. When fully encapsulated by poured concrete, the expansive forces form a seal against concrete surfaces. This seal resists hydrostatic pressure, stopping water from entering the sub-structures. Triton TT Waterstop is able to withstand a 40 metre head of pressure. As with any hydrophilic waterstop, Triton TT Waterstop will return to its original size if the concrete and substrate is completely dry and no more moisture is present. If water or moisture is introduced again to the joints, Triton TT Waterstop will re-expand to seal the potential leaking joints.

CHARACTERISTIC

1. Service life is indefinite with excellent resistance to acid & alkaline condition
2. Easy installation and extruded in rectangular shapes for optimal adhesion during application
3. Permanent water-tight function

Triton TT Waterstop has a built-in delay system thus the waterstop will activate approximately after 2 days of constant exposure to water.

LIMITATIONS

Triton TT Waterstop should not be used for expansion joints or subject to repetitive movements. Triton TT Waterstop should not be installed with less than 50mm of concrete cover to ensure that the pressure arising from the swelling action is accommodated.

SPECIFICATION

PHYSICAL PROPERTIES	
Specific Gravity	1.35
Colour	Black
Tensile Adhesion Strength	> 30 kgf/cm ²
Volumetric Expansion Rate	> 700%
Non-volatilization	99.7%

AREAS OF APPLICATION

1. Poured In-situ construction joints
2. Box culverts & Retaining walls
3. Cut and cover tunnel construction
4. Underground (Utility) Vault Seal
5. New to old concrete

VOLUMETRIC EXPANSION

	2 days	110 %
	3 days	250 %
	5 days	550 %
	7 days	700%
	2 days	105 %
	3 days	200 %
	5 days	400 %
	7 days	550%

PACKAGING

25m Roll (50 meter per box)

STORAGE

Triton TT Waterstop has a shelf life of 24 months; stored in original unopened cartons in cool, dry conditions, away from direct sunlight.

HEALTH AND SAFETY

Always read the Health and Safety Data Sheets before use.

Avoid skin and eye contact.

Avoid inhalation of vapours.

Wear safety glasses, gloves and overalls.

For further information please contact:

Triton Chemical Manufacturing Co Ltd

Triton House, Lyndean Industrial Estate

129 Felixstowe Rd, Abbey Wood, London SE2 9SG

Tel: 0208 310 3929 Fax: 020 8312 0349

www.triton-chemicals.com

info@triton-chemicals.com

Ref: TT Waterstop 06/07



Outline Specification

Flood Resilience – New Build Details: Masonry and Rendered Walls

1. Introduction

All masonry walls to be constructed with suitable care and attention to the mortar beds and quality of build. The mortar should be well pointed.

The applications as detailed below should be to a height beyond the height of anticipated flood levels or, where these are unknown, to at least first floor level.

2. Masonry Walls

Once walls have been constructed and mortar has had suitable time to cure, a three coat application of Triton Triproof AQ is recommended. The Triproof AQ should be diluted with water at a ratio of 3 parts water : one part Triproof AQ.

Application rate / consumption rate of the Triproof AQ will vary depending on the porosity of the masonry to which it is being applied. Consumption rates will be in the order of 0.5 – 2 litres per square meter.

The Triproof should be applied in three coats by way of coarse spray, and is applied wet on wet. Each coat to be applied liberally to the wall surface, and once excess has run off and/or penetrated into the surface, the subsequent coats should be applied.

Full details on mixing and application are on the attached data sheet which should be read and understood prior to application of the product. Please also refer to drawing nos. FR001.1 A, B and C attached.

NOTE:

Over time and subject to the exposure of the treated surface to prevailing weather conditions, the Triproof AQ would need to be re-applied periodically. Also after each flooding episode the Triproof AQ would also require re-application. We would recommend a minimum period of 5 years between applications or after each flooding episode whichever is the shorter time.

3. Externally Rendered Walls

Where walls are constructed of masonry and then are to be finished with a render, details should be as shown in drawings nos. FR003.1 (A) and (B) attached.

Once walls have been built and prior to the application of the render, apply two coats of Triton TT Vapour Membrane to the walls from either the foundation level up to first floor level as indicated in drawing no. FR003.1 (B) or from edge of waterproof concrete slab to first floor level as indicated in drawing no. FR003.1(A).

Prior to the application of the TT Vapour Membrane, walls must be clean and dust free, two coats are to be applied at the rate of 0.7 litres per square meter for each coat.

To provide a suitable mechanical key for the render, apply dry sand to the second coat of TT Vapour Membrane whilst still tacky.

To first render coat use a gauging solution of 4 parts water and 1 part Triton SBR, to ensure a good chemical as well as physical bond between the render and TT Vapour Membrane.

4. Summary

All product mixing, application, curing and preparation of the wall surfaces to be in accordance with the product data sheets and manufacturer's recommendations. If in doubt, please contact Triton's technical department.

Triton Contact Details:

Triton Chemical Manufacturing Co. Ltd.
Unit 5, Lyndean Industrial Estate, Abbey Wood, London SE2 9SG

Tel: 020 8310 3929

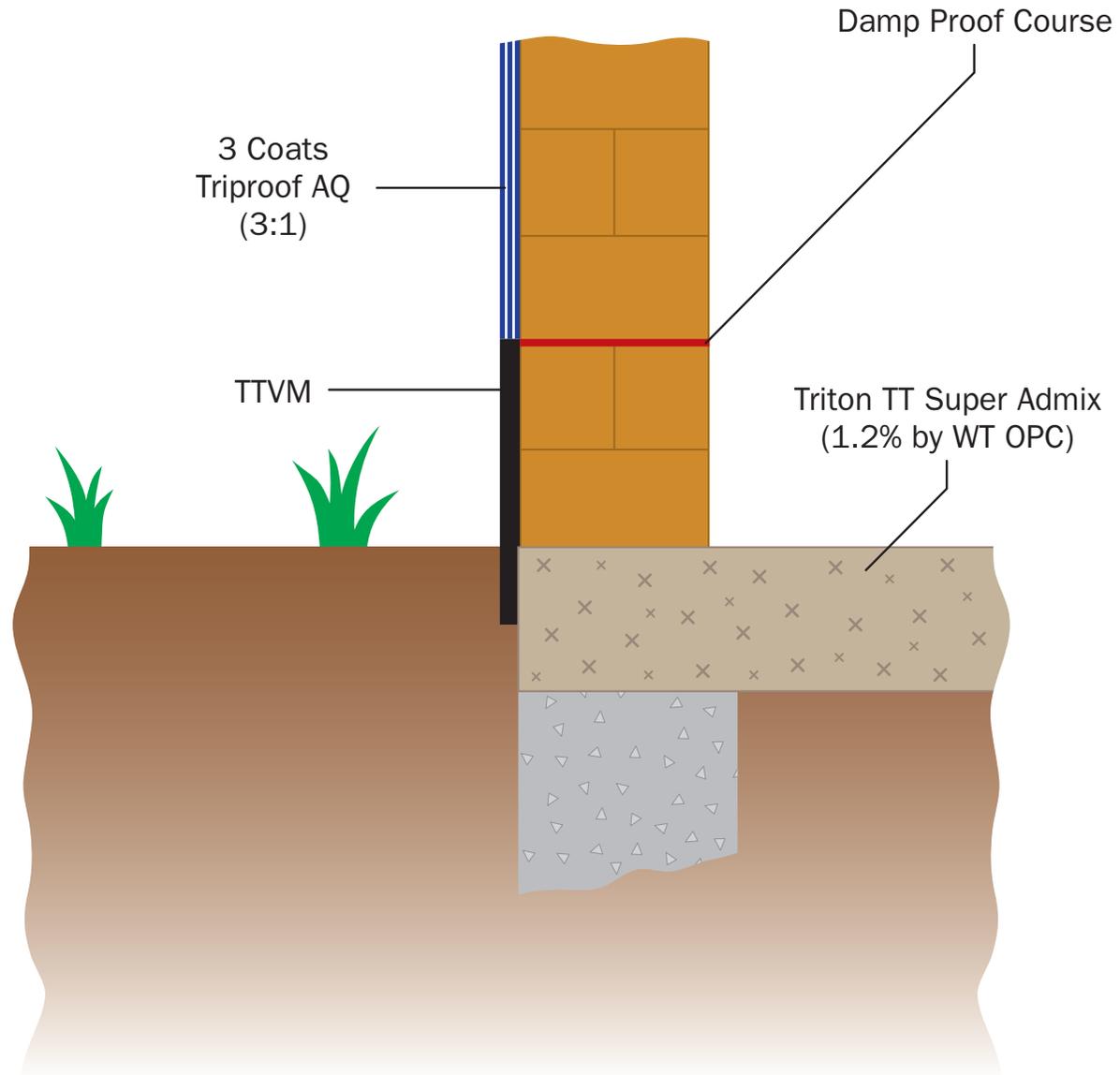
Fax: 020 8312 0349

Email: info@triton-chemicals.com

www.triton-chemicals.com

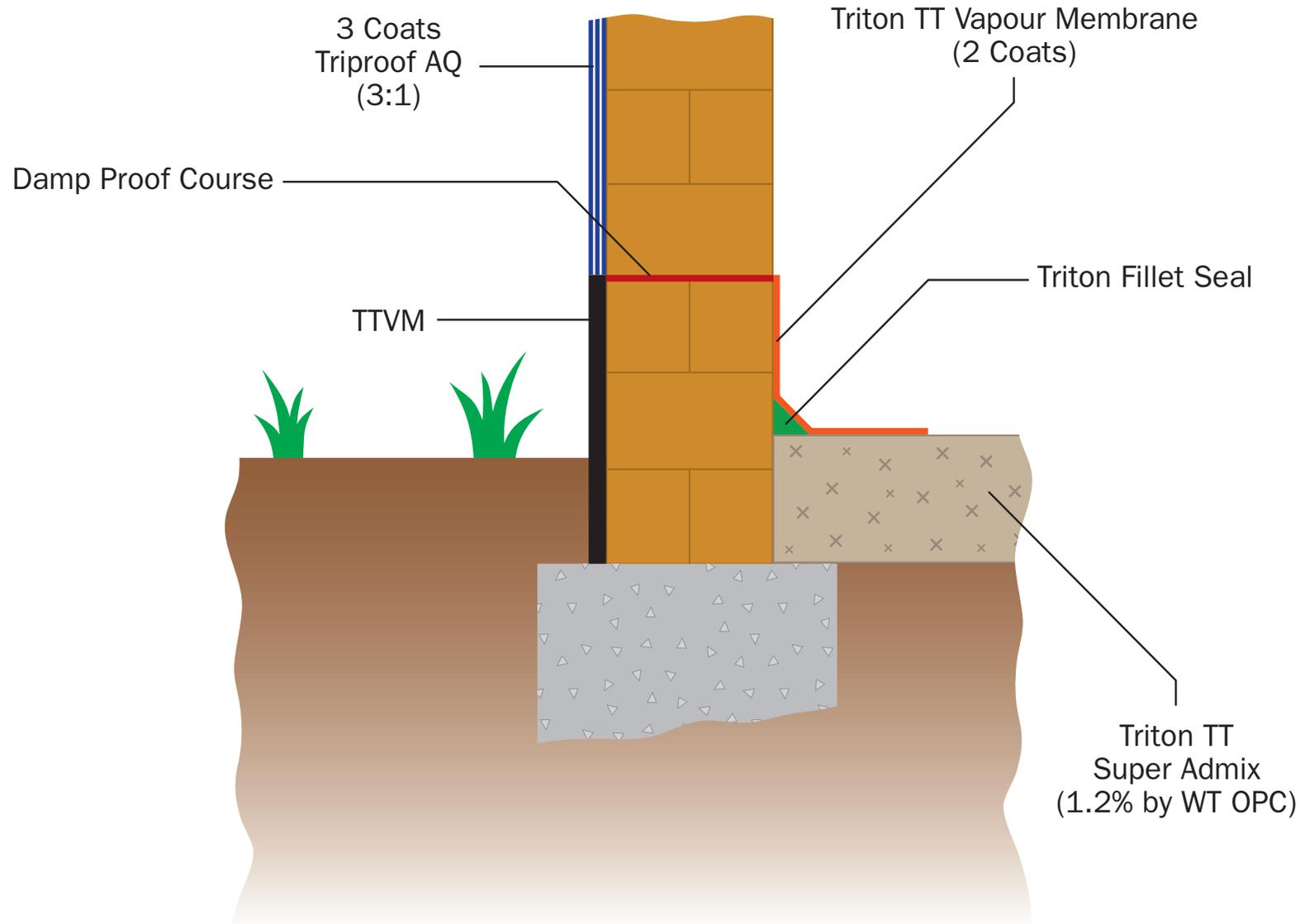
FR001.1 (A)

TYPICAL DETAILS – WALL/FLOOR CONSTRUCTION (SOLID & CAVITY WALLS)



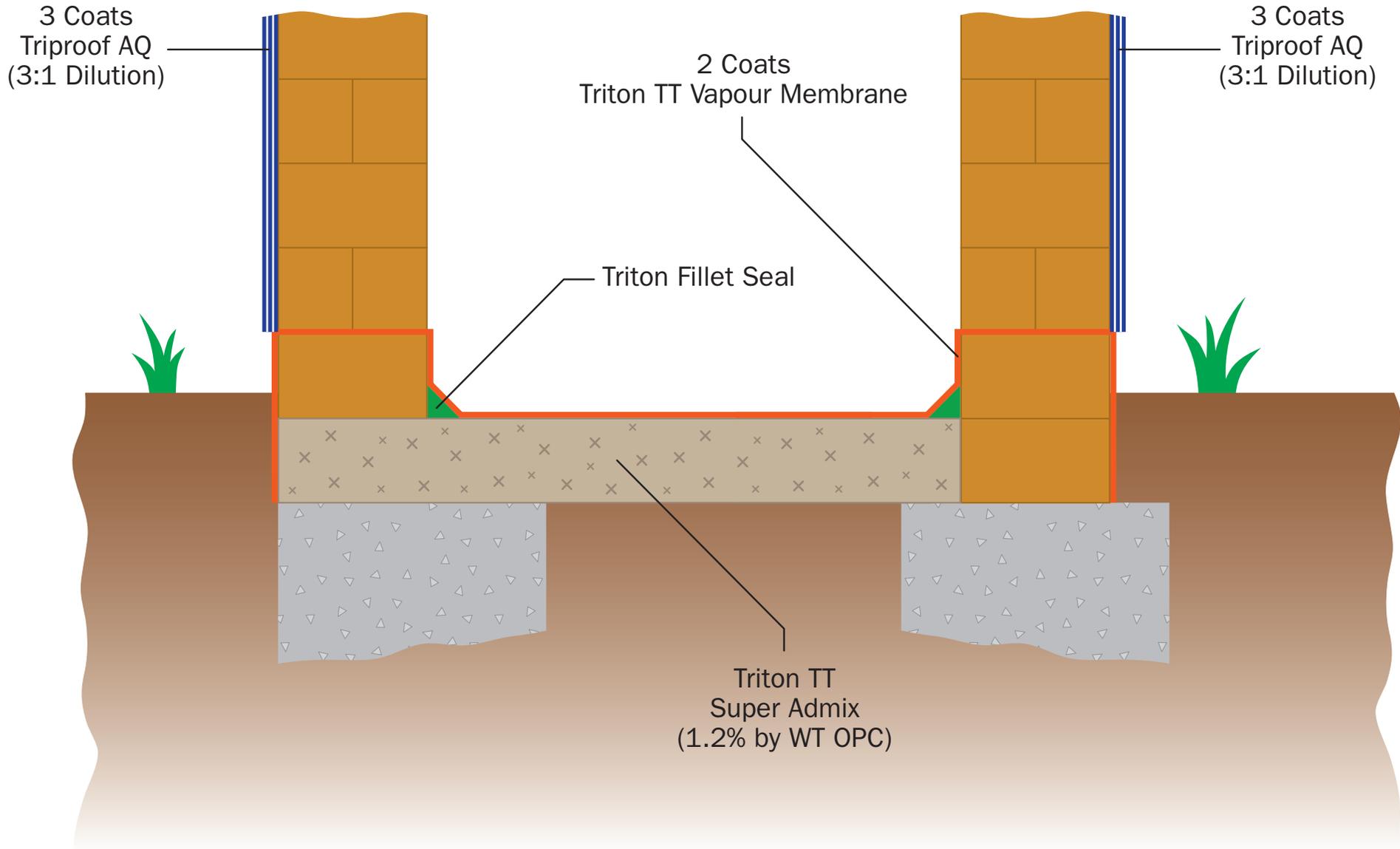
FR001.1 (B)

TYPICAL DETAILS – WALL/FLOOR CONSTRUCTION (SOLID & CAVITY WALLS)



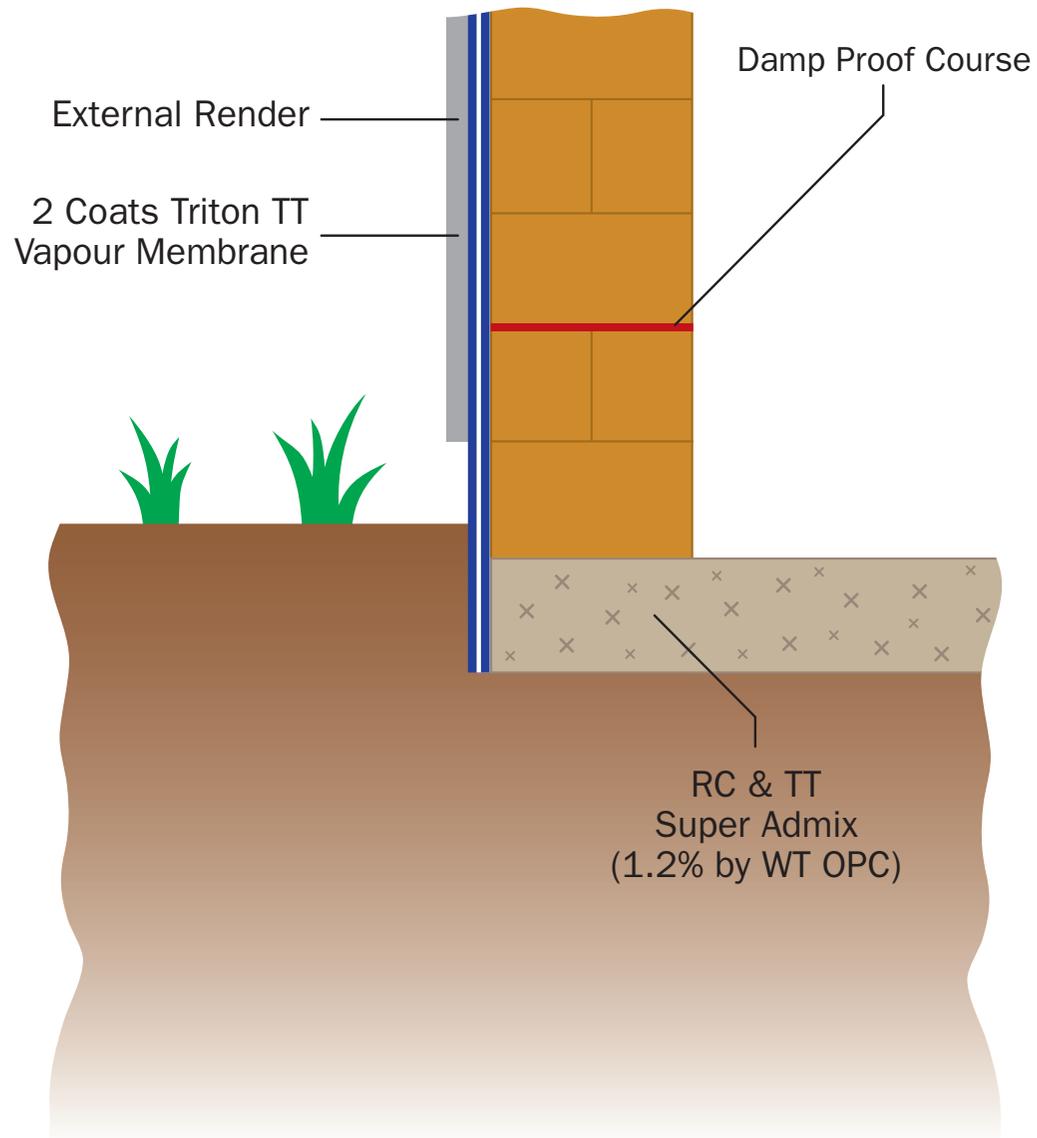
FR001.1 (C)

TYPICAL SECTION – HIGH RISK/CONTAMINATED/GROUND SLAB



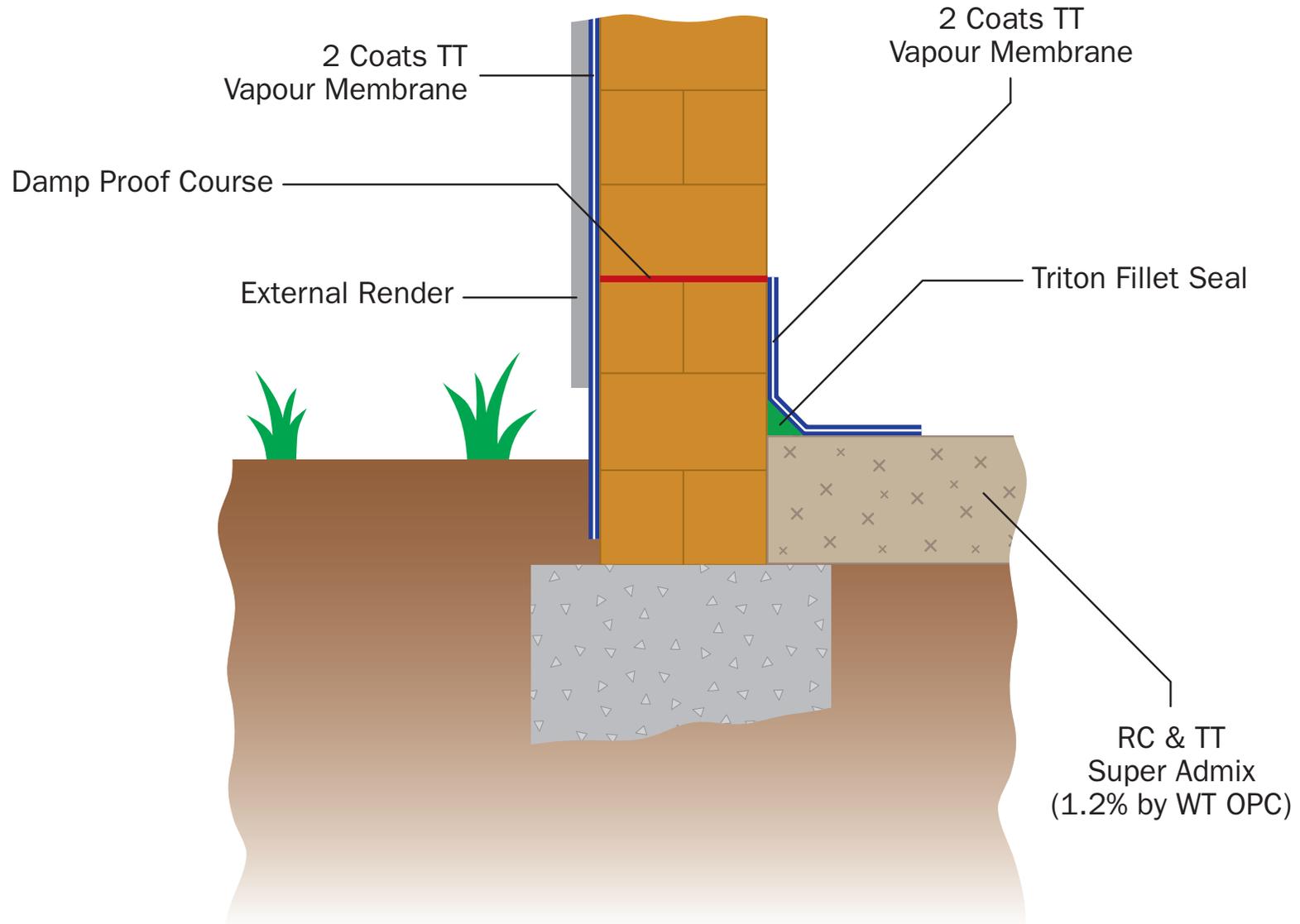
FR003.1 (A)

TYPICAL SECTIONS – RENDER EXTERNAL WALLS (SOLID & CAVITY WALLS)



FR003.1 (B)

TYPICAL SECTIONS – RENDER EXTERNAL WALLS (SOLID & CAVITY WALLS)





TRIPROOF AQ

MASONRY WATER REPELLENT CONCENTRATE.

DILUTES WITH WATER TO FORM STABLE SOLUTIONS FOR USE ON MINERAL SUBSTRATES

TRIPROOF AQ is a highly effective water repellent based on a blend of Silane and polysiloxane resins. **TRIPROOF AQ** is suitable for use over masonry, brickwork, concrete and renders. Superior performance is obtained on alkaline surfaces such as new renders and concrete.

FEATURES

- High alkaline resistance
- Excellent penetrating power
- Vapour permeable
- Colourless
- Dries to a tack-free finish
- UV resistant
- Water thinnable
- Easy removal of overspray

DESCRIPTION

TRIPROOF AQ is supplied as a concentrate for dilution with water before use. For most mineral substrates a dilution ratio of 1: 9 is recommended. When treating dense concrete surfaces dilution ratios of 1: 2 or 1 : 3 can be employed to maximise penetration and subsequent deposition of active water repellent. Treatment of surfaces with **TRIPROOF AQ** reduces water absorption whilst maintaining the appearance of the area treated, also since the product does not block or clog pores and capillaries the vapour permeability of the substrate is maintained. Reducing water absorption prolongs the life of the substrate by reducing the damage caused by water:

FROST DAMAGE AND SPALLING

Frost damage occurs when pores and capillaries are more than 90% full of water. The expansion of frozen water exerts pressure into the substrate causing splitting, spalling and general disintegration.

SALT EFFLORESCENCE

Constant evaporation and wetting with water causes salts to move nearer to the surface causing a white bloom or crystal growth at best or splitting and spalling at worst.

BIOLOGICAL GROWTH

Damp surfaces will support the growth of algae, moss, lichen and moulds. These organisms use acids to digest their food which damages the underlying masonry with time.

CHEMICAL CORROSION

Water encourages the corrosion of metal fittings and fixtures, and of particular importance, cavity wall ties.

ATMOSPHERIC POLLUTION

Acid rain accelerates the weathering process by dissolving the binding matrix of the substrate.

APPLICATION

TRIPROOF AQ should be applied by a coarse low pressure spray or by flooding after dilution with water. Apply at least two coats, wet on wet, to maximise penetration into the substrate. Apply each subsequent coat when the substrate has absorbed the previous one and is no longer shiny wet. Surfaces to be treated should be dry. The ideal temperature for application are between +10°C and +25°C. Application and dilution rates vary according to the porosity of the substrate to be treated:

TRIPROOF AQ

	Application rate	Dilution ratio
Concrete	0.25 L/m ²	1:2 or 1:3
Render	0.5-1 L/m ²	1:9
Brickwork	0.5-2 L/m ²	1:9

In all cases it is advisable to conduct a small site trial to determine the most appropriate application rate and dilution ratio.

DILUTION:

Half fill mixing container with water, add **TRIPROOF AQ** and stir. Add remaining water and stir thoroughly. Use within a week of mixing.

GENERAL INFORMATION

Concentrate

Density	1.0 g/cm ³
Shelf life	At least 6 months
Pack size	2.5 Litre (makes 25 Litres)

RELATED PRODUCTS

Triton OH 100 - stone strengthener
Triproof 290 - solvent borne water repellent solution.

For further information contact:

Triton Chemical Manufacturing Co Ltd

Unit 5, Lyndean Industrial Estate
129 Felixstowe Rd, Abbey Wood, London, SE2 9SG
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www.triton-chemicals.com
info@triton-chemicals.com

Ref: 05/04 DATA.TRIPROOF AQ



TRITON TT VAPOUR MEMBRANE

DESCRIPTION

Triton TT Vapour Membrane is a single component acrylic modified coating that once cured, provides a liquid applied waterproof, methane and carbon dioxide barrier.

TYPICAL APPLICATIONS

1. As a retro applied waterproof and gas proof membrane to concrete, masonry and brick substrates.
2. Can be applied by airless spray, roller or brush to walls, floors or soffits.
3. As an alternative to sheet membranes in new construction.

CHARACTERISTICS

1. A 0.7mm thick (dry film) coating provides an effective methane barrier when applied to most clay or cementitious-based construction materials.
2. Also an effective waterproof membrane
3. Excellent adhesion, bonds to porous and non-porous substrates.
4. Flexible.
5. Non-toxic.
6. Will withstand temporary light trafficking.
7. Cannot be punctured as fully bonded.
8. Easily repaired by locally over-coating.
9. Can be painted, plastered or screeded over.
10. Rapid drying, in good conditions two coats can be applied in the same day.
11. Can be applied by brush, roller or airless spray.
12. Can be applied to damp and 'green' substrates.

TECHNICAL DATA

Components	1
Form	Thixotropic Liquid
Specific Gravity	1.40 (approx)
Application Temp	Plus 4 ⁰ C
Toxicity	Non-toxic
Cured Properties	
Adhesion to concrete	>1.1N/mm ²
Elongation ASTM D2370 %	>100%
Tensile Strength ASTM D2370	11 N/mm ²

CHEMICAL RESISTANCE

Triton TT Vapour Membrane has good chemical resistance to gasoline, sodium hydroxide, calcium chloride, de-icing salts and effluent.

PERFORMANCE CRITERIA

The performance of Triton TT Vapour Membrane is illustrated in the following table 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 1.40×10^{-10} kg/m²/s.

APPLICATION GUIDELINES

1. Surfaces must be clean, free from dust and loose material, oil, paint, fungal growth etc.
2. Non-structural cracks >0.5mm wide must be filled.
3. Structural cracks must first be repaired and filled.
4. The substrate must be sound and ideally present a smooth face.
5. Old repairs must be inspected and re-repaired if necessary.
6. Newly laid concrete should have a clean textured surface; Triton TT Vapour Membrane can be applied to concrete or mortar within 24 hours of laying.
7. Apply 45° fillets into angles formed of Triton Fillet Seal where practicable.

MIXING

Triton TT Vapour Membrane is supplied ready blended in a pail. The product requires agitation using a slow speed paddle mixer. Mix carefully for 5 minutes before use. If containers are stored for more than 2 hours after opening, re-agitate.

Do not add water.

SURFACE APPLICATION

1. Pre-dampen (not wet) the substrate before applying the first coat.

Interface with other media

1. For expansion joints ensure that Triton TT Vapour Membrane is applied well into the rebate before the expansion media is applied.
2. Other gas membranes must be exposed and lapped with Triton TT Vapour Membrane where present.

Dealing with cracks

1. Cracks must be stabilised and filled. Apply the first coat of Triton TT Vapour Membrane and apply plasterers polyurethane scrim along the line of the crack, apply a further coat of Triton TT Vapour Membrane to fully cover the scrim; apply the final coat as stated below.

Application of the main coating system

1. The product can be applied by stiff brush, roller or airless spray with a minimum 17 thousands of an inch nozzle. The spray method is especially suitable for less accessible locations and uneven substrates.
2. The first, primer, application is applied at the rate of >0.5lt/m² for waterproofing and >0.3lt/m² for an effective gas proof membrane. Ensure that the coating is even; use a circular action when spraying.
3. Allow the primer coat to dry before applying the second coat.
4. Apply the second coat at the rate of >0.7lt/m² for waterproofing and >0.5lt/m² for gas proof applications; for brush application, apply at right angles to the first coat. Again use a circular action when spraying. Application rate will depend on substrate surface.
5. Do not apply over bitumen.
6. The total application thickness must not exceed 4mm if splitting or cracking is to be avoided.

PACKAGING

Triton TT Vapour Membrane is supplied in a 20lt pail.

COLOUR

Mid grey

STORAGE

Triton TT Vapour Membrane must be stored at temperatures above 5°C and below 35°C in dry conditions, off the ground and away from direct sunlight.

The shelf life is 12 months in original unopened packaging when stored correctly.

HEALTH & SAFETY

Protect hands with rubber gloves. Avoid contact with skin and eyes. Should this occur flush with plenty of clean water. If irritation persists, seek professional medical advice.

For further information please contact:

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Triton House, Lyndean Industrial Estate

129 Felixstowe Rd, Abbey Wood, London SE2 9SG

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info@triton-chemicals.com

Ref: TT Vapour Membrane 06/07



TRITON SBR

SBR Latex admixture for cementitious mixes e.g.; Renders, Screeds, Tile adhesives, Patch repairs and waterproof slurry coatings.

TRITON SBR improves the workability and durability of cement mixes. The resultant cured material has the following improved properties over a non latex mix:

- Higher strength, density and water impermeability.
- Increased flexibility and crack resistance.
- Improved adhesive bond allowing thinner layers to be laid.
- Increased chemical resistance.

DIRECTIONS FOR USE

PREPARATION: Surfaces to be rendered, screeded etc. must be free from all loose and friable material, dust, dirt, plaster, bitumen, grease etc.

PRIMING COAT: The application of a priming coat is normally recommended to obtain maximum adhesion to the substrate. The prepared surface should be thoroughly dampened with water (but with no free standing water). A primer coat consisting of two parts Portland cement mixed with one part of TRITON SBR by volume should be thoroughly worked into the surface by brush or broom. The topping (screed, render etc.) should be applied whilst the primer is still wet.

MIXING: Premix the sand and cement. Add 9 - 10litres TRITON SBR for every 50kg of cement used. Add small amounts of water until the desired consistency is achieved. TRITON SBR has a plasticizing/water reducing effect and less water than normal will be required. Do not over-mix.

APPLICATION: The thickness of Renders should be restricted to about 7mm per coat to avoid sagging. Multi coats can be applied in relatively quick succession:- 30-60 minutes. Screeds can be placed as normal (priming coat recommended). Avoid over-finishing or rapid drying, if necessary cover with polythene for 24-48 hours after placing.

TECHNICAL DATA

TOTAL SOLIDS	%	44.5
SPECIFIC GRAVITY	g/l	1.01
PH		10.5

SAFETY PRECAUTIONS

- Wear gloves and eye protection.
- Wash hands and exposed skin after use.
- Store in original container in a safe place.

PACKAGING

Available in 5 litre and 25 litre containers

PROTECT FROM FROST

For further information contact:

Triton Chemical Manufacturing Co. Ltd.

Unit 5, Lyndean Industrial Estate,
129 Felixstowe Rd, Abbey Wood, London, SE2 9SG
Telephone: 020 8310-3929 Fax: 020 8312-0349

www.triton-chemicals.com
info@triton-chemicals.com

Ref: 04/97 DATA.TRITON.SBR



Outline Specification

Flood Resilience – New Build Details: Masonry and Rendered Walls

1. Introduction

All masonry walls to be constructed with suitable care and attention to the mortar beds and quality of build. The mortar should be well pointed.

The applications as detailed below should be to a height beyond the height of anticipated flood levels or, where these are unknown, to at least first floor level.

2. Masonry Walls

Once walls have been constructed and mortar has had suitable time to cure, a three coat application of Triton Triproof AQ is recommended. The Triproof AQ should be diluted with water at a ratio of 3 parts water : one part Triproof AQ.

Application rate / consumption rate of the Triproof AQ will vary depending on the porosity of the masonry to which it is being applied. Consumption rates will be in the order of 0.5 – 2 litres per square meter.

The Triproof should be applied in three coats by way of coarse spray, and is applied wet on wet. Each coat to be applied liberally to the wall surface, and once excess has run off and/or penetrated into the surface, the subsequent coats should be applied.

Full details on mixing and application are on the attached data sheet which should be read and understood prior to application of the product. Please also refer to drawing nos. FR001.1 A, B and C attached.

NOTE:

Over time and subject to the exposure of the treated surface to prevailing weather conditions, the Triproof AQ would need to be re-applied periodically. Also after each flooding episode the Triproof AQ would also require re-application. We would recommend a minimum period of 5 years between applications or after each flooding episode whichever is the shorter time.

3. Externally Rendered Walls

Where walls are constructed of masonry and then are to be finished with a render, details should be as shown in drawings nos. FR003.1 (A) and (B) attached.

Once walls have been built and prior to the application of the render, apply two coats of Triton TT Vapour Membrane to the walls from either the foundation level up to first floor level as indicated in drawing no. FR003.1 (B) or from edge of waterproof concrete slab to first floor level as indicated in drawing no. FR003.1(A).

Prior to the application of the TT Vapour Membrane, walls must be clean and dust free, two coats are to be applied at the rate of 0.7 litres per square meter for each coat.

To provide a suitable mechanical key for the render, apply dry sand to the second coat of TT Vapour Membrane whilst still tacky.

To first render coat use a gauging solution of 4 parts water and 1 part Triton SBR, to ensure a good chemical as well as physical bond between the render and TT Vapour Membrane.

4. Summary

All product mixing, application, curing and preparation of the wall surfaces to be in accordance with the product data sheets and manufacturer's recommendations. If in doubt, please contact Triton's technical department.

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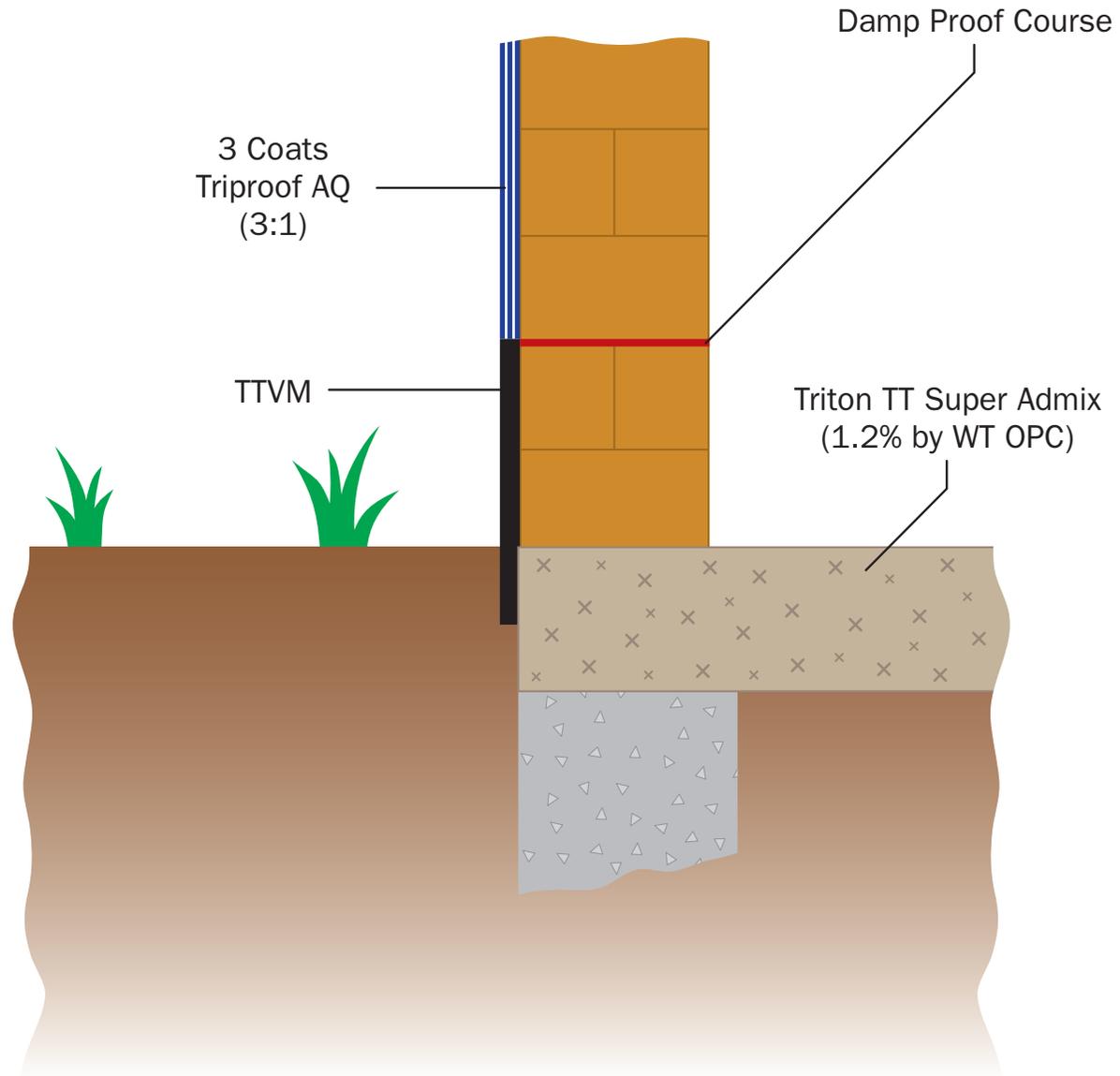
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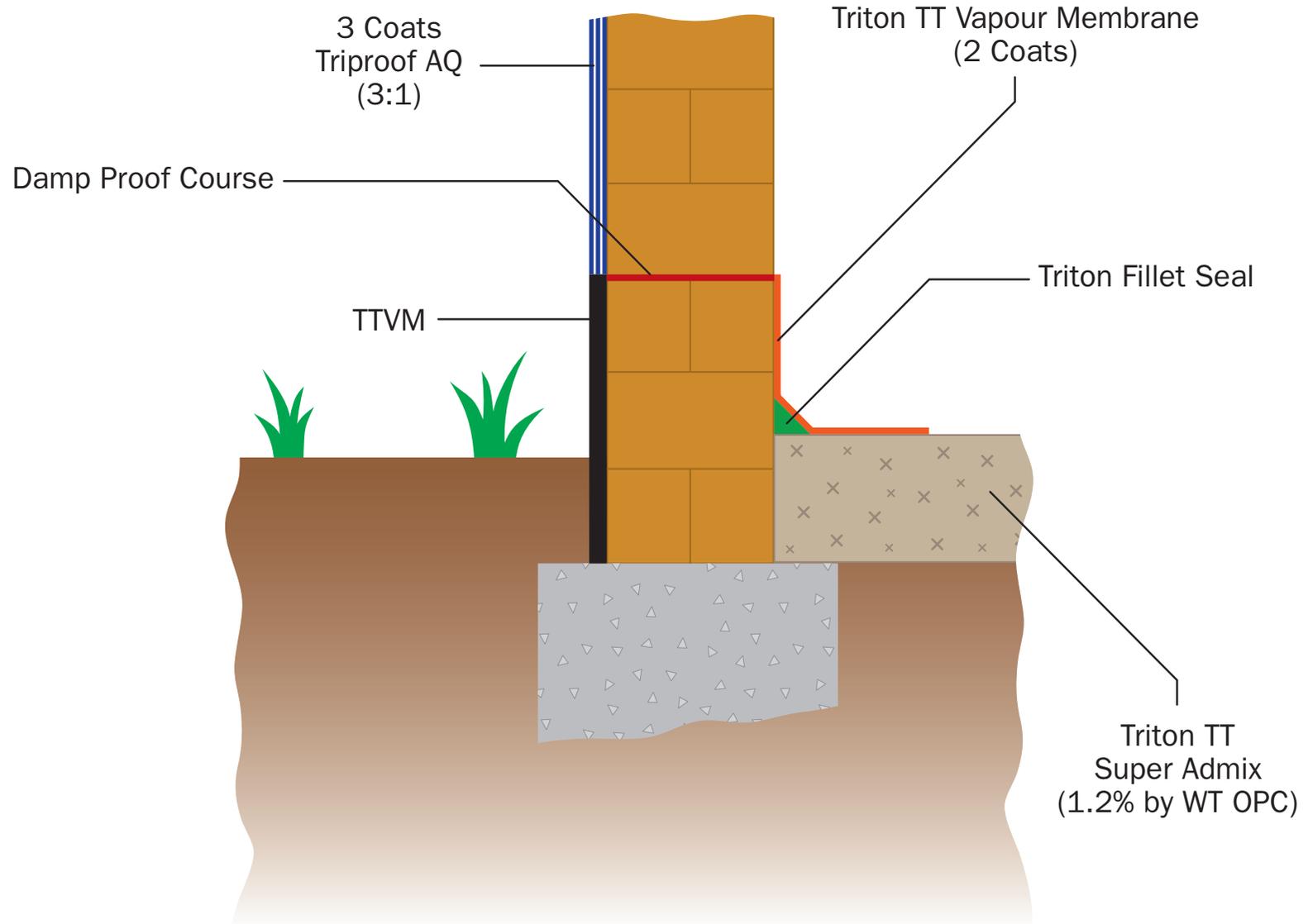
FR001.1 (A)

TYPICAL DETAILS – WALL/FLOOR CONSTRUCTION (SOLID & CAVITY WALLS)



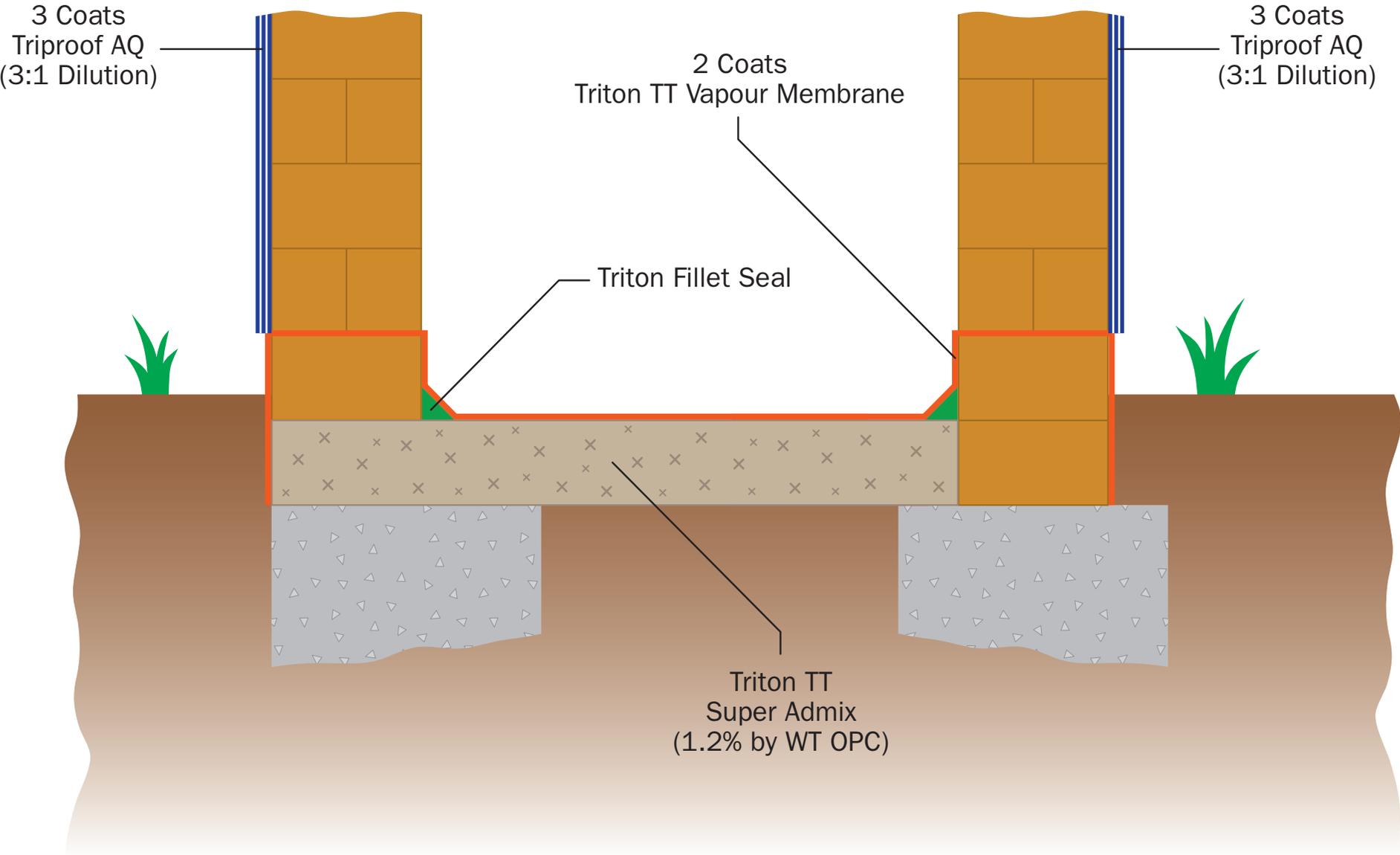
FR001.1 (B)

TYPICAL DETAILS – WALL/FLOOR CONSTRUCTION (SOLID & CAVITY WALLS)



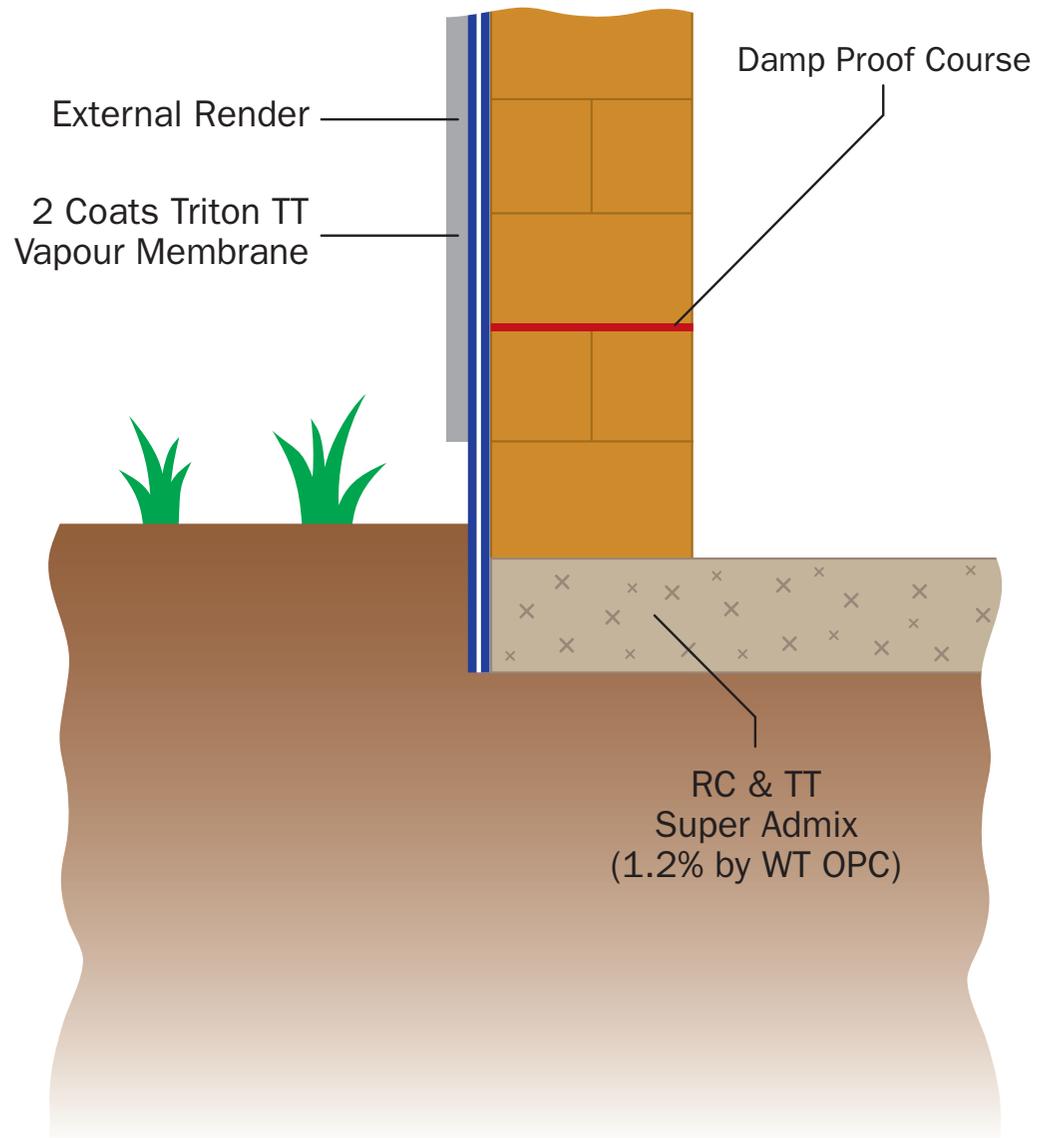
FR001.1 (C)

TYPICAL SECTION – HIGH RISK/CONTAMINATED/GROUND SLAB



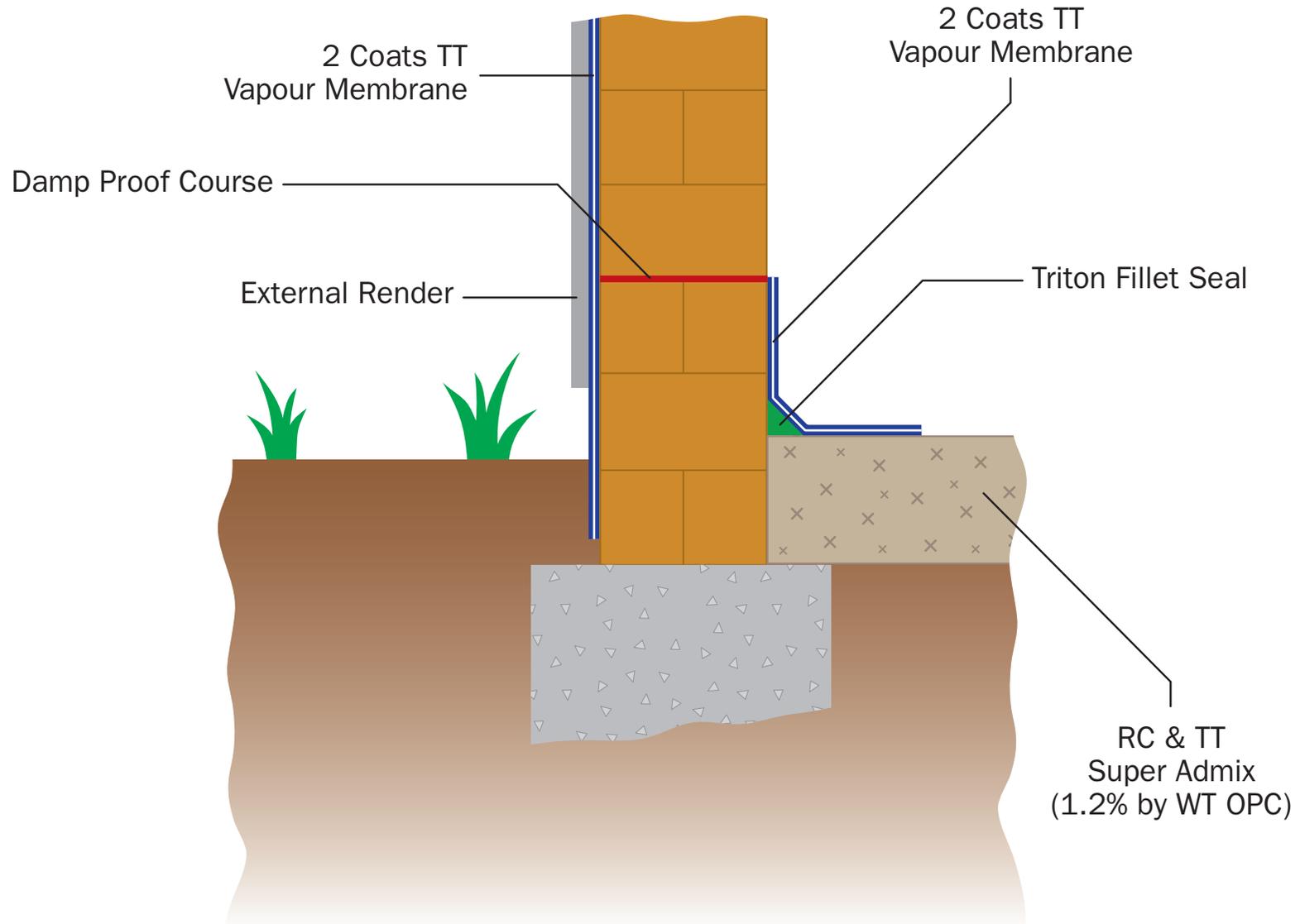
FR003.1 (A)

TYPICAL SECTIONS – RENDER EXTERNAL WALLS (SOLID & CAVITY WALLS)



FR003.1 (B)

TYPICAL SECTIONS – RENDER EXTERNAL WALLS (SOLID & CAVITY WALLS)





TRIPROOF AQ

MASONRY WATER REPELLENT CONCENTRATE.

DILUTES WITH WATER TO FORM STABLE SOLUTIONS FOR USE ON MINERAL SUBSTRATES

TRIPROOF AQ is a highly effective water repellent based on a blend of Silane and polysiloxane resins. **TRIPROOF AQ** is suitable for use over masonry, brickwork, concrete and renders. Superior performance is obtained on alkaline surfaces such as new renders and concrete.

FEATURES

- High alkaline resistance
- Excellent penetrating power
- Vapour permeable
- Colourless
- Dries to a tack-free finish
- UV resistant
- Water thinnable
- Easy removal of overspray

DESCRIPTION

TRIPROOF AQ is supplied as a concentrate for dilution with water before use. For most mineral substrates a dilution ratio of 1: 9 is recommended. When treating dense concrete surfaces dilution ratios of 1: 2 or 1 : 3 can be employed to maximise penetration and subsequent deposition of active water repellent. Treatment of surfaces with **TRIPROOF AQ** reduces water absorption whilst maintaining the appearance of the area treated, also since the product does not block or clog pores and capillaries the vapour permeability of the substrate is maintained. Reducing water absorption prolongs the life of the substrate by reducing the damage caused by water:

FROST DAMAGE AND SPALLING

Frost damage occurs when pores and capillaries are more than 90% full of water. The expansion of frozen water exerts pressure into the substrate causing splitting, spalling and general disintegration.

SALT EFFLORESCENCE

Constant evaporation and wetting with water causes salts to move nearer to the surface causing a white bloom or crystal growth at best or splitting and spalling at worst.

BIOLOGICAL GROWTH

Damp surfaces will support the growth of algae, moss, lichen and moulds. These organisms use acids to digest their food which damages the underlying masonry with time.

CHEMICAL CORROSION

Water encourages the corrosion of metal fittings and fixtures, and of particular importance, cavity wall ties.

ATMOSPHERIC POLLUTION

Acid rain accelerates the weathering process by dissolving the binding matrix of the substrate.

APPLICATION

TRIPROOF AQ should be applied by a coarse low pressure spray or by flooding after dilution with water. Apply at least two coats, wet on wet, to maximise penetration into the substrate. Apply each subsequent coat when the substrate has absorbed the previous one and is no longer shiny wet. Surfaces to be treated should be dry. The ideal temperature for application are between +10°C and +25°C. Application and dilution rates vary according to the porosity of the substrate to be treated:

TRIPROOF AQ

	Application rate	Dilution ratio
Concrete	0.25 L/m ²	1:2 or 1:3
Render	0.5-1 L/m ²	1:9
Brickwork	0.5-2 L/m ²	1:9

In all cases it is advisable to conduct a small site trial to determine the most appropriate application rate and dilution ratio.

DILUTION:

Half fill mixing container with water, add **TRIPROOF AQ** and stir. Add remaining water and stir thoroughly. Use within a week of mixing.

GENERAL INFORMATION

Concentrate

Density	1.0 g/cm ³
Shelf life	At least 6 months
Pack size	2.5 Litre (makes 25 Litres)

RELATED PRODUCTS

Triton OH 100 - stone strengthener
Triproof 290 - solvent borne water repellent solution.

For further information contact:

Triton Chemical Manufacturing Co Ltd

Unit 5, Lyndean Industrial Estate
129 Felixstowe Rd, Abbey Wood, London, SE2 9SG
Telephone: 020-8310-3929 Fax: 020-8312-0349
www.triton-chemicals.com
info@triton-chemicals.com

Ref: 05/04 DATA.TRIPROOF AQ



TRITON TT VAPOUR MEMBRANE

DESCRIPTION

Triton TT Vapour Membrane is a single component acrylic modified coating that once cured, provides a liquid applied waterproof, methane and carbon dioxide barrier.

TYPICAL APPLICATIONS

1. As a retro applied waterproof and gas proof membrane to concrete, masonry and brick substrates.
2. Can be applied by airless spray, roller or brush to walls, floors or soffits.
3. As an alternative to sheet membranes in new construction.

CHARACTERISTICS

1. A 0.7mm thick (dry film) coating provides an effective methane barrier when applied to most clay or cementitious-based construction materials.
2. Also an effective waterproof membrane
3. Excellent adhesion, bonds to porous and non-porous substrates.
4. Flexible.
5. Non-toxic.
6. Will withstand temporary light trafficking.
7. Cannot be punctured as fully bonded.
8. Easily repaired by locally over-coating.
9. Can be painted, plastered or screeded over.
10. Rapid drying, in good conditions two coats can be applied in the same day.
11. Can be applied by brush, roller or airless spray.
12. Can be applied to damp and 'green' substrates.

TECHNICAL DATA

Components	1
Form	Thixotropic Liquid
Specific Gravity	1.40 (approx)
Application Temp	Plus 4 ⁰ C
Toxicity	Non-toxic
Cured Properties	
Adhesion to concrete	>1.1N/mm ²
Elongation ASTM D2370 %	>100%
Tensile Strength ASTM D2370	11 N/mm ²

CHEMICAL RESISTANCE

Triton TT Vapour Membrane has good chemical resistance to gasoline, sodium hydroxide, calcium chloride, de-icing salts and effluent.

PERFORMANCE CRITERIA

The performance of Triton TT Vapour Membrane is illustrated in the following table 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 $<1.40 \times 10^{-10}$ kg/m²/s.

APPLICATION GUIDELINES

1. Surfaces must be clean, free from dust and loose material, oil, paint, fungal growth etc.
2. Non-structural cracks >0.5mm wide must be filled.
3. Structural cracks must first be repaired and filled.
4. The substrate must be sound and ideally present a smooth face.
5. Old repairs must be inspected and re-repaired if necessary.
6. Newly laid concrete should have a clean textured surface; Triton TT Vapour Membrane can be applied to concrete or mortar within 24 hours of laying.
7. Apply 45° fillets into angles formed of Triton Fillet Seal where practicable.

MIXING

Triton TT Vapour Membrane is supplied ready blended in a pail. The product requires agitation using a slow speed paddle mixer. Mix carefully for 5 minutes before use. If containers are stored for more than 2 hours after opening, re-agitate.

Do not add water.

SURFACE APPLICATION

1. Pre-dampen (not wet) the substrate before applying the first coat.

Interface with other media

1. For expansion joints ensure that Triton TT Vapour Membrane is applied well into the rebate before the expansion media is applied.
2. Other gas membranes must be exposed and lapped with Triton TT Vapour Membrane where present.

Dealing with cracks

1. Cracks must be stabilised and filled. Apply the first coat of Triton TT Vapour Membrane and apply plasterers polyurethane scrim along the line of the crack, apply a further coat of Triton TT Vapour Membrane to fully cover the scrim; apply the final coat as stated below.

Application of the main coating system

1. The product can be applied by stiff brush, roller or airless spray with a minimum 17 thousands of an inch nozzle. The spray method is especially suitable for less accessible locations and uneven substrates.
2. The first, primer, application is applied at the rate of >0.5lt/m² for waterproofing and >0.3lt/m² for an effective gas proof membrane. Ensure that the coating is even; use a circular action when spraying.
3. Allow the primer coat to dry before applying the second coat.
4. Apply the second coat at the rate of >0.7lt/m² for waterproofing and >0.5lt/m² for gas proof applications; for brush application, apply at right angles to the first coat. Again use a circular action when spraying. Application rate will depend on substrate surface.
5. Do not apply over bitumen.
6. The total application thickness must not exceed 4mm if splitting or cracking is to be avoided.

PACKAGING

Triton TT Vapour Membrane is supplied in a 20lt pail.

COLOUR

Mid grey

STORAGE

Triton TT Vapour Membrane must be stored at temperatures above 5°C and below 35°C in dry conditions, off the ground and away from direct sunlight.

The shelf life is 12 months in original unopened packaging when stored correctly.

HEALTH & SAFETY

Protect hands with rubber gloves. Avoid contact with skin and eyes. Should this occur flush with plenty of clean water. If irritation persists, seek professional medical advice.

For further information please contact:

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Ref: TT Vapour Membrane 06/07



TRITON SBR

SBR Latex admixture for cementitious mixes e.g.; Renders, Screeds, Tile adhesives, Patch repairs and waterproof slurry coatings.

TRITON SBR improves the workability and durability of cement mixes. The resultant cured material has the following improved properties over a non latex mix:

- Higher strength, density and water impermeability.
- Increased flexibility and crack resistance.
- Improved adhesive bond allowing thinner layers to be laid.
- Increased chemical resistance.

DIRECTIONS FOR USE

PREPARATION: Surfaces to be rendered, screeded etc. must be free from all loose and friable material, dust, dirt, plaster, bitumen, grease etc.

PRIMING COAT: The application of a priming coat is normally recommended to obtain maximum adhesion to the substrate. The prepared surface should be thoroughly dampened with water (but with no free standing water). A primer coat consisting of two parts Portland cement mixed with one part of TRITON SBR by volume should be thoroughly worked into the surface by brush or broom. The topping (screed, render etc.) should be applied whilst the primer is still wet.

MIXING: Premix the sand and cement. Add 9 - 10litres TRITON SBR for every 50kg of cement used. Add small amounts of water until the desired consistency is achieved. TRITON SBR has a plasticizing/water reducing effect and less water than normal will be required. Do not over-mix.

APPLICATION: The thickness of Renders should be restricted to about 7mm per coat to avoid sagging. Multi coats can be applied in relatively quick succession:- 30-60 minutes. Screeds can be placed as normal (priming coat recommended). Avoid over-finishing or rapid drying, if necessary cover with polythene for 24-48 hours after placing.

TECHNICAL DATA

TOTAL SOLIDS	%	44.5
SPECIFIC GRAVITY	g/l	1.01
PH		10.5

SAFETY PRECAUTIONS

- Wear gloves and eye protection.
- Wash hands and exposed skin after use.
- Store in original container in a safe place.

PACKAGING

Available in 5 litre and 25 litre containers

PROTECT FROM FROST

For further information contact:

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