Post Flood Remediation and Resilience – Overview

in association with Watertight International Limited

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Outline Specification

Post Flood Remediation and Resilience Details: Overview

1. Introduction

The outline specification below is intended as a general guidance document for remediation works after flooding to properties. It gives guidance on initial post flood remediation and offers a suitable reinstatement programme to minimise the time delay before reoccupation and use of the property following a flooding episode.

The outline specification below is intended for use on properties constructed of brick and plastered/rendered walls and with solid concrete, brick or flagstone floors. For timber floors, unless these can be suitably replaced with concrete floors, please contact Triton's technical department prior to any reinstatement works.

Also highlighted in this specification is reference to improving the flood resilience at the property at the same time as carrying out the reinstatement works. We recommend reference to our detailed specification on flood resilience to existing properties for additional information and advice on this.

The products and systems proposed in this remediation specification following an episode of flooding reduce the time lapse between flooding episode and reoccupation of the property, by the creation of a dry internal environment whilst still allowing the structure to "dry out".

We would strongly advise that prior to starting this specification, all data sheets and installation guidelines and drawings be read and understood. We would also advise that all product installation must be carried out in accordance with the manufacturer's data sheets and guidelines, and by suitably trained contractors and/or site technicians.

This outline specification covers the following areas:

- Disinfection, cleaning and sanitising
- Remediation works to walls
- Remediation works to floors
- Service entry points
- Flood resilience measures

2. Disinfection, Cleaning and Sanitising

Given the nature of flood water and that it may/will contain contaminants and sewage (commonly known as black water), it is important to ensure the property has been sanitised prior to any removal and stripping out.

Once flood water has subsided, initially spray ALL contaminated areas prior to handling with Triton X5 Micro Sanitizer.

Remove all fixtures, fittings, floor coverings etc, including any soft gypsum plasters.

Apply a second application of Triton X5 Micro Sanitizer to all areas to ensure that the property has been properly disinfected and sanitised prior to any remediation works taking place.

Application rate for Triton X5 Micro Sanitizer is approximately 1 – 2 litres per square metre. For full guidelines on application and use, please refer to data sheet for further information. The Triton X5 data sheet is attached to this document for ease of reference.

3. Remediation to Walls

Where existing concrete floors are to remain, and subject to proposed floor reinstatement method, see section on floors, either:

- Chase a 75mm deep x 50mm wide chase to the perimeter of the concrete floor at the base of the walls. Install either Platon Plasterbase or Platon Multi membranes to the walls, installation to be in accordance with manufacturer's installation guidelines and BBA certification (attached). The base of the membrane to the walls should terminate in the chase at wall/floor junction.
- Where Platon membranes are to be utilised across the floor area then the installation of the Platon Plasterbase or Platon Multi membranes to walls should terminate at wall/floor junction.
- Where existing floors are to be removed, the area should be sanitised as per the details shown above, and the wall membrane installation continued down to the sub base level.

The top edge of the wall membrane installation at wall/ceiling line to be sealed to the wall. Apply a 150mm band of Triton TT Vapour membrane to wall and seal Platon membrane to this by way of Platon Overtape or Cornerstrip. This is shown in attached drawing no. IP022.1.

Sealing to door and window reveals should be as per attached drawing no.IP026.1. Where the door and window frames are not removed, then the Platon membrane should butt up to window/door reveal and sealed as per detail above for wall/ceiling edge detail.

Service pipe entries through the walls and membrane should be sealed as per attached drawing no.IP027.1.

4. Remediation to Floors

Where the existing floor is to remain, and Platon membrane is not to be utilised across floor area (for reasons of floor/ceiling height), fill chase at base of wall membrane with Triton Fillet Seal, finishing flush with existing floor level.

Apply either two coats of Triton TT Vapour Membrane or Triton Tri-Seal to floors. Application and preparation of existing floors to be in strict accordance with manufacturer's data sheets attached.

If using the TT Vapour Membrane then once cured, a protective layer must be installed above, i.e a screed or self levelling floor compound. See attached drawing no. IP020.1.

Where a new floor is to be installed, as per building regulations, install Platon Multi membrane to sub floor area as dpm, and return up wall by a minimum of 150mm in front of Platon membrane to walls.

The Platon membrane to floor area to be sealed to wall membrane by way of Platon Cornerstrip, and as indicated in attached drawing no. IP001.1.

In areas of high risk and/or where water has risen up through the ground, then the high capacity Platon P20 should be laid to the floor area, and Triton Aquachannel be installed at the wall/floor junction, as shown in attached drawing no. IP002.1.

The Triton Aquachannel should lead to a suitable discharge point, invariably this will be a sump and pump, such as the Triton Aquapump Plus kit.

Within the Aquachannel installation, inspection/rodding points should be included, so as to ensure the system can be maintained. Also following future flooding periods it can be flushed through with Triton X5 Micro Sanitiser.

Installations in areas of high risk are similar to the installation required and used in basement waterproofing using a cavity drain system.

5. Wall and Floor Finishes

After the installation of Platon Multi to walls, a suitable dry lining system should be installed. Where Platon Plaster Base has been installed, then either dot 'n' dab plaster board using a suitable dab adhesive.

If a rendered or plaster finish is required to walls over Platon Plasterbase, then most common light weight plasters can be used or Triton Renovating Plaster. Alternatively a sand cement render (6:1) can be used incorporating Triton Trimix1.

Any replastering or rendering to Platon Plasterbase membrane to be in accordance with the re plastering requirement s as stated on the data sheet attached.

Where either Triton TT Vapour Membrane or Platon membranes have been installed to the floors, then these will require a floor finish to be laid over them. Either a screed or timber floor to the Platon Membranes, a screed would need to be a minimum of 50mm for Platon Multi or 75mm for Platon P20.

A screed or other suitable protective layer should be installed to the Triton TT Vapour Membrane.

Where Triton Tri-Seal has been installed this can be left as a wearing surface for general lightweight foot traffic, for alternative floor finishes see data sheet attached.

6. Ventilation

Following the installation of the above, and given the nature of the "sealed system" it would be necessary to ventilate the internal dry space created.

This can be achieved by the installation of Triton Air Bricks to the walls, sealed through the system as per service entry sealing, or by way of installation of humidistat fans.

7. Future Flood Resilience Measures

Whilst carrying out any post-flooding remediation works, it is at this point that measures to reduce risk of future flooding, and improve the flood resilience of the property, should be carefully considered and/or carried out.

For suitable flood resilience measures please see separate specification guidelines on flood resilience to existing properties.

8. Summary

The above post flood remediation specification and guidelines detailed above are general guidelines, each property is unique and therefore specific measures should be detailed for each property. The above guidance is given in good faith and is not an exhaustitive list of possible measures.

The details given offer a suitable method for dealing with post flood remediation and to facilitate the speedy reoccupation of the flooded property.

All installation and applications as detailed above should be carried out in accordance with manufacturer's data sheets and installation and application guidelines attached, which form part of this outline specification.

Work carried out should not commence until the above information and attached data sheets have been read and understood. We would advise that all installations and works be carried out by suitably trained technicians/contractors.

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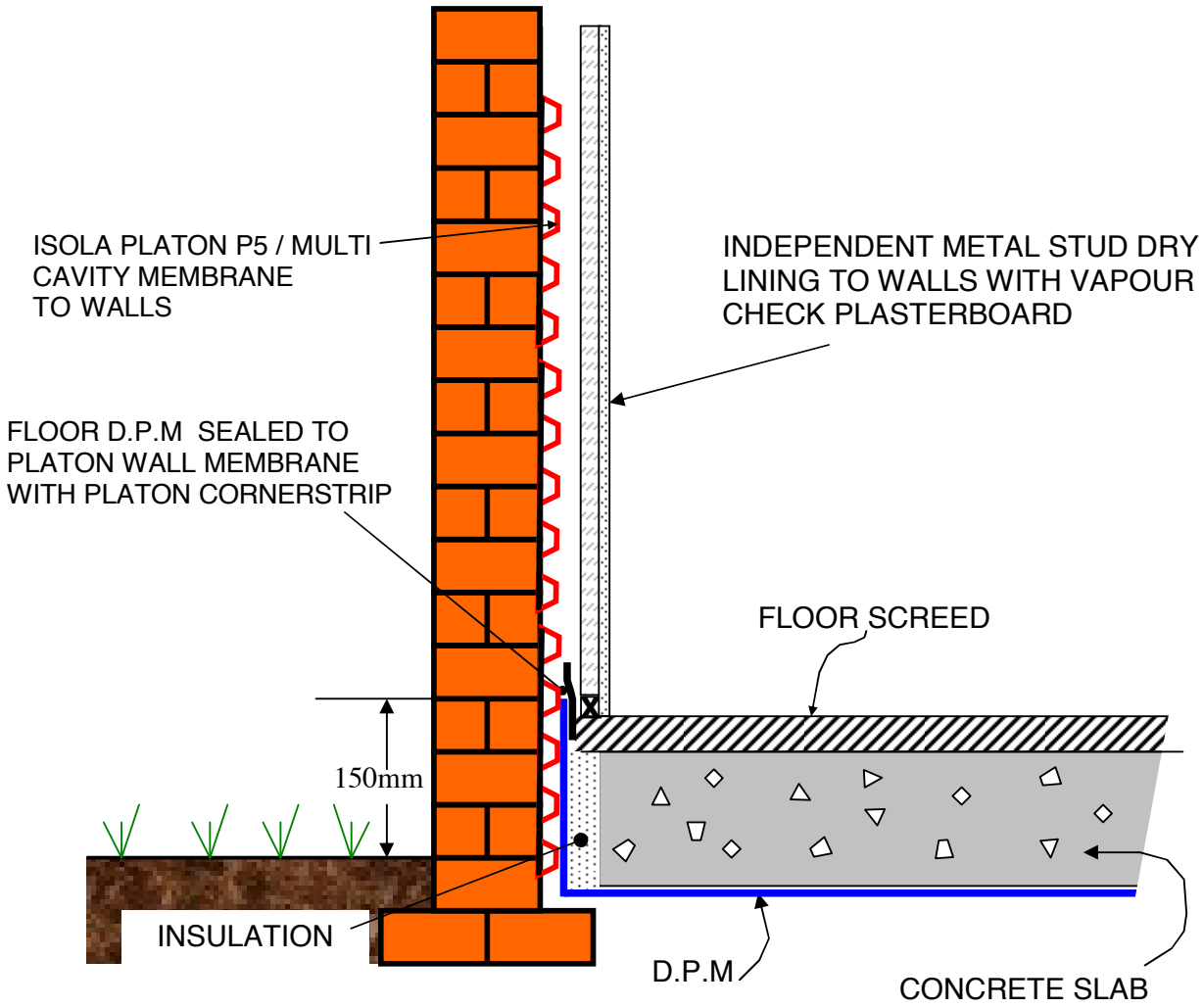
Above ground contaminated/damp wall detail
Using Platon Multi/P5
Drawing No. (I P 001.1)



All installations to be strictly in accordance with manufacturer's guidelines which are set out in the Isola Manual. For any non-standard details, please contact our technical department on 020 8310 3929

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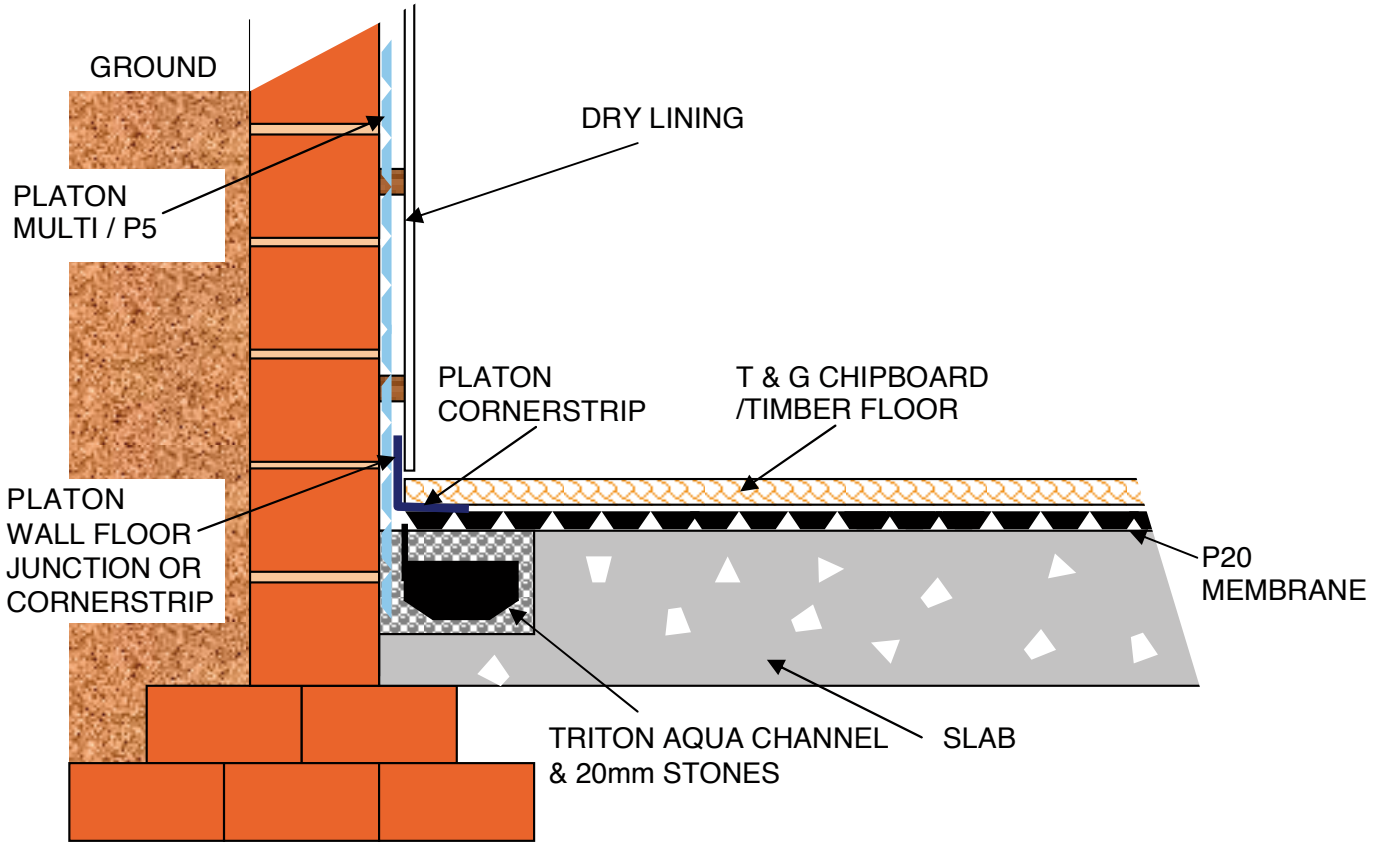
Typical wall/floor detail below ground
Drawing No. (I P 002.1)



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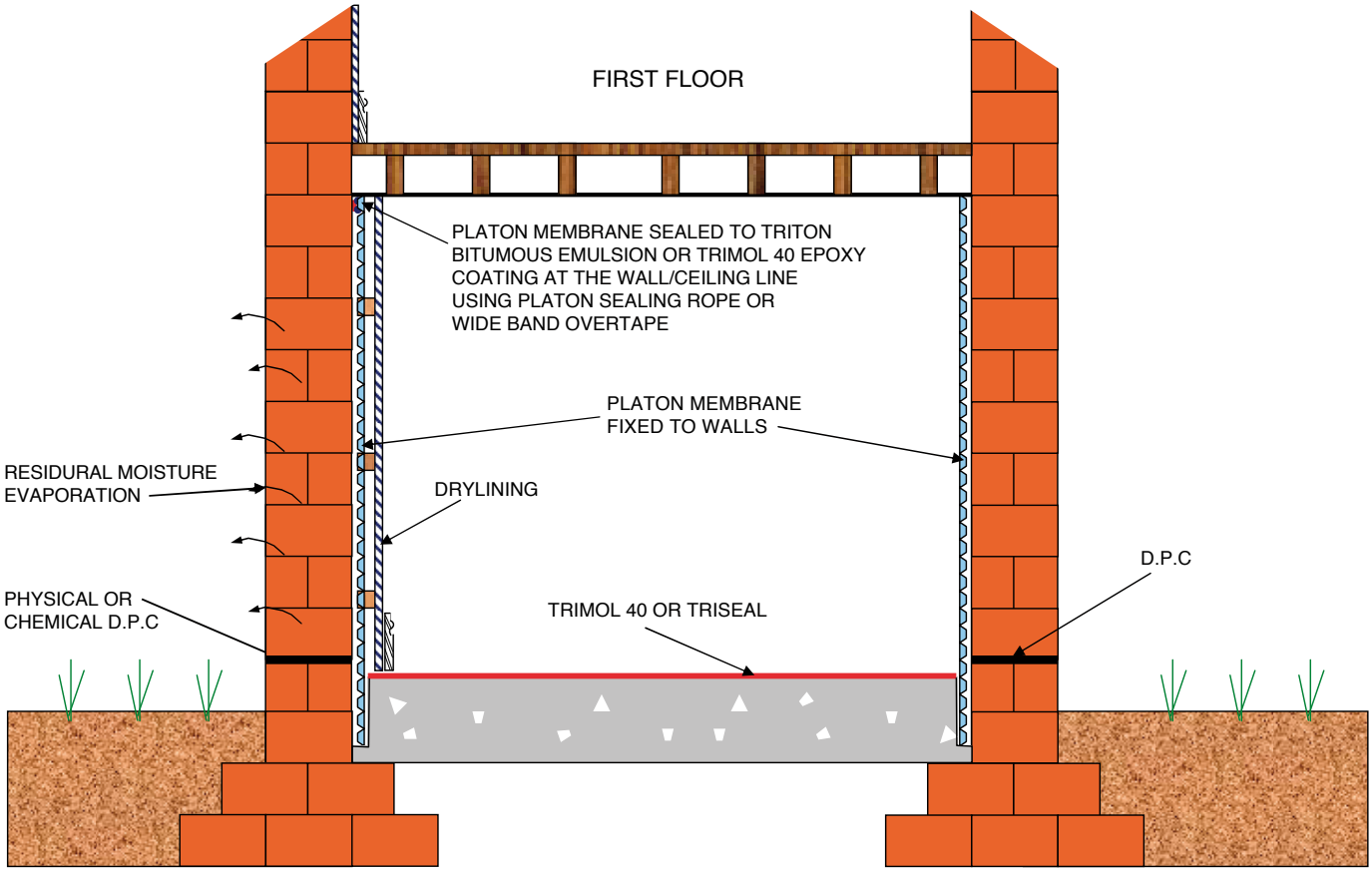
Typical above ground Platon membrane installation

Drawing No. (I P 020.1)



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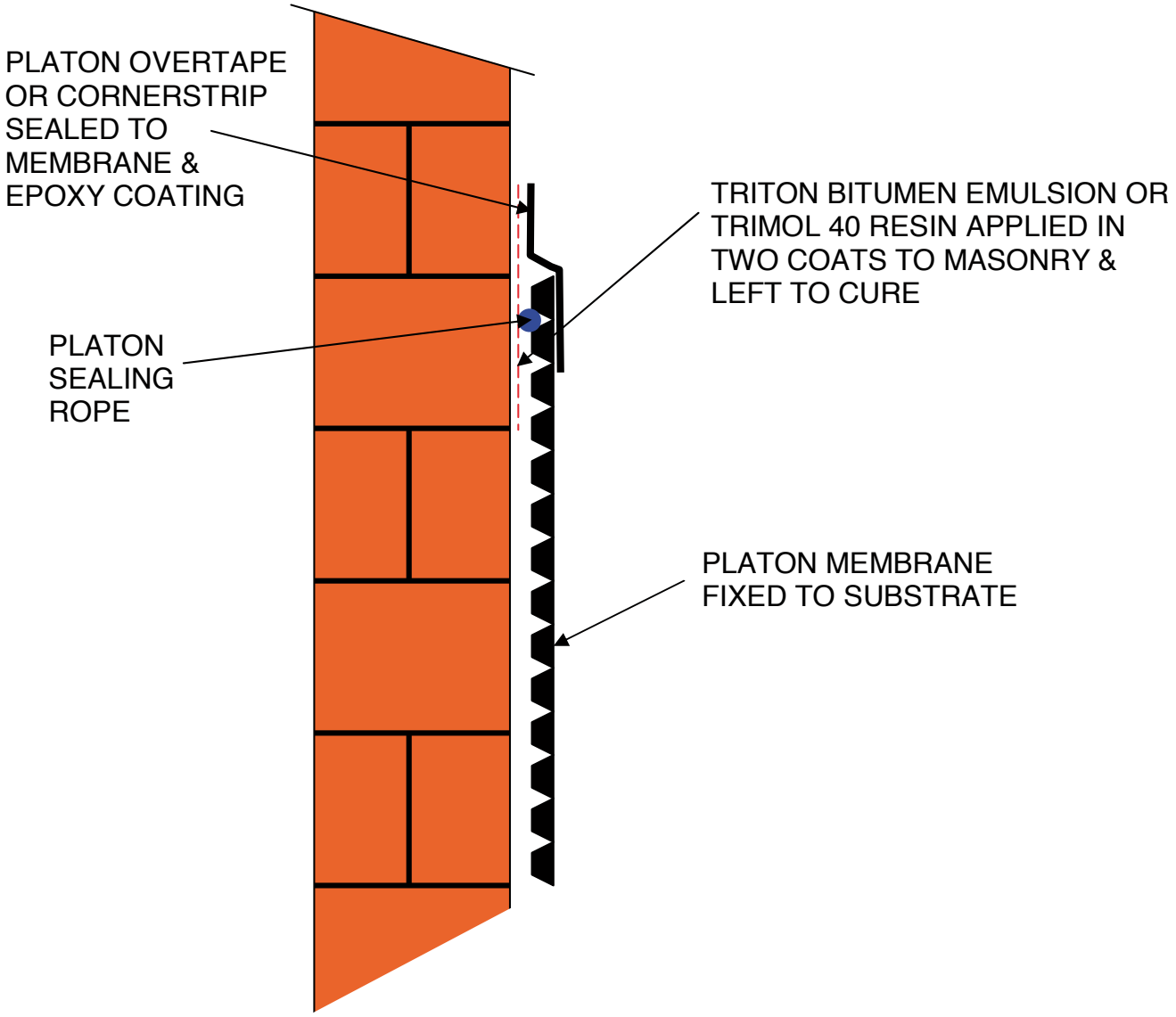
Sealing Platon membrane to masonry
Drawing No. (I P 022.1)



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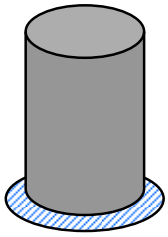
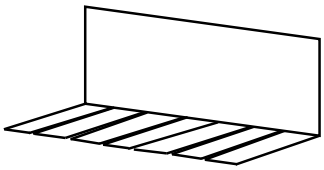
Vertical service entry through floor detail
Drawing No. (I P 026.1)

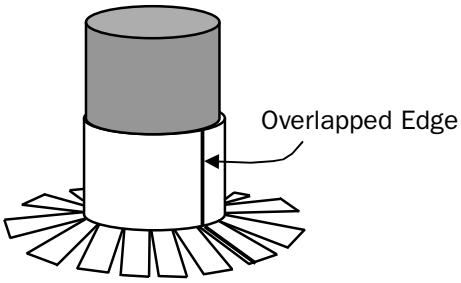
Stage 1
Clean base of service entry then wrap Platon Sealing Rope around base of service entry. **NB:** If floor conditions are wet then Triton Epoxy Putty can be used.



Stage 2
Cut Wall/floor junction material with scissors in segments of 25mm wide up to the centre fold to create a cloak.



Stage 3
Wrap Wll/floor junction'cloak' round entry pipe and press down Sealing Rope. The overlapping edge is sealed with Sealing Tape.



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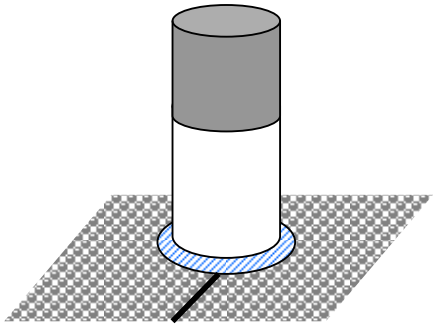
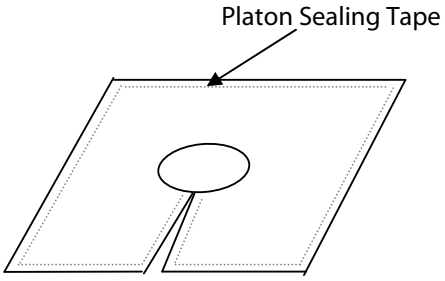
Vertical service entry through floor detail
Drawing No. (I P 026.1)

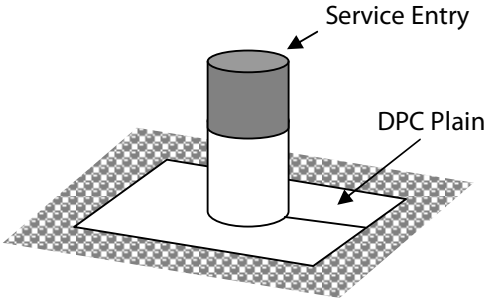
Stage 4
Lay Platon Floor membrane cutting the membrane around the profile of the service entry and wrap another rope seal at the base between the floor membrane and vertical section of Wall/floor junction.



Stage 5
Cut a 300mm (min) square piece of Platon DPC plain and cut out a hole the size of the service entry. Using scissors cut from one edge of the DPC Plain to the centre hole. Apply Platon Sealing Tape around all edges including the cut section.



Stage 6
Fir Platon DPC Plain around service entry and seal to floor membrane by pressing down on sealing tape.



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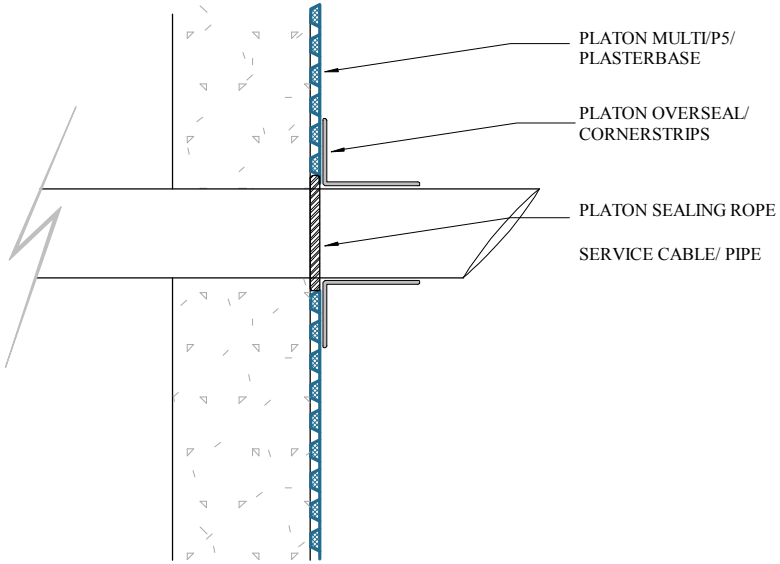

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NOTE

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

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

Alterations

TITLE:

Service Pipe Sealing Detail

DRG. No. IP 027.1 REV 1

		System Files:
DRAWN	THF, CBS	IP 027.1pdf
DATE	11-01-07	
SCALE (A3)	Not To Scale	
CHECKED		
APPROVED		

MICRO-X5 SANITISER

HIGH PERFORMANCE DISINFECTANT & SANITISER

AQUAPACK FORMULATION TECHNOLOGY AquaPack technology makes available a new revolutionary range of liquid micro-emulsion cleaning & sanitising chemicals in water soluble sachets incorporating modern formulation technology along with environmental friendly packaging.

DESCRIPTION MICRO-X5 SANITISER is an extremely concentrated sanitiser and disinfectant containing a highly potent biocide system making it very effective for use in the sanitisation of properties subjected to flood damage. It should be used as a sanitiser prior to initial cleaning out of the property and also used as a port of the subsequent remedial works.

DISINFECTION CLEANING & SANITISING Floodwater carries with it many types of bacteria, virus etc. Once the floodwater has subsided these bacteria and virus remain within the remaining plaster, brickwork, timber joists/floorboards, fixtures and fittings. All these areas require to be properly disinfected and sanitised prior to re-instatement works being carried out and ultimately re-occupation of the property.

MICRO-X5 SANITISER is a disinfectant and sanitiser specifically formulated for the control of a broad range of gram+ve and gramve bacteria including hepatitis B, Salmonella, campylobacter, listeria, MRSA and many others including a wide range of viral infections. When used as part of initial remedial works after flood damage, the product will sanitise and disinfect the entire area that has been susceptible to bacterial contamination.

DIRECTIONS FOR USE Remove sachet from the outer packaging. Place sachet in suitable container. Add 25 litres of water. Allow sachet to dissolve for 2 minutes, agitate then use as required. Use warm water to speed up dissolving time.

APPLICATION Initially spray all contaminated areas prior to handling. Spray timbers that are to remain in-situ. Spray brickwork prior to plaster reinstatement. Spray sub floor areas and soil.

AQUAPACK

Dilutes easily to a ready to use product.
Environmentally sound packaging
Convenient and easy to use.
Reduced waste plastic packaging
Convenient single dose packaging
Free of solvents & VOC's

TECHNICAL

Contains:	Quart. Ammonium Compound	66.7%
Dilution Contains:	Cationic surfactant < 1%	non-ionic surfactant < 1%

Store at ambient temperatures and protect from frost.
Shelf life is 2 years

Refer to material safety data sheet and product label for full Health and Safety data.

For further information contact:
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MICRO-X5 FLOOD SANITISER

The MICRO-X5 FLOOD SANITISER formulation is based on a blend of two quaternary ammonium compounds, which provide excellent biological efficacy against a very broad spectrum of pathogenic organisms.

The active ingredients have been very extensively tested throughout the world (UK, USA, Germany, Switzerland, Japan, France, Italy, Belgium, Australia & many more) and have been show to demonstrate:

- Very broad spectrum activity against a range of both gram positive and gram negative bacteria including:

  Pseudomonas fluorescens
  Bacillus cereus
  Desulfovibrio desulfuricans
  Staphylococcus aureus (including the MRSA strain)
  Escherichia coli
  Salmonella typhi
  Pseudomonas aeruginosa
  Klebsiella pneumoniae
  Leuconostoc mesenteroides
  Legionella pneumophila
  Bacillus stearothermophilus
  Micrococcus lysodeiticus
  Streptacoccus faecium

Examples of the activity against bacteria include test carried out at the Biotech Control Laboratories, Waterford, New York, USA:

<u>Biocide @ 150 ppm (0.015%)</u>

Escherichia coli (E.Coli)	99.9992% germ reduction
Staphylococcus Aureus	99.9999% germ reduction

- Superior fungicide and mildewicide against a wide range of species including:

  Aspergillus niger
  Trichophyton mentagrophytes
  Aspergillus versicolor
  Cladosporium cladosporoides
  Penicillium verrucosum
  Candida albicans

- Powerful activity against a wide range of viruses including:

  Poxvirus (WR 119-ATCC)
  Herpes Virus (1-HF-VR260 ATCC)
  Orthomyxovirus (AWSN-Smith Klyne)
  Enterovirus (Poliovirus tipo 1)
  Adenovirus (Adenovirus tipo 2)
  Rhabdovirus (VSV-1145/67)
  Hepatitis B virus
  HIV-1

PLATON PLASTER BASE

PLATON PLASTER BASE is a High-Density Polyethylene membrane for plastering directly onto. The unique patented undercut stud is a dovetail shape, which forms a key to most common plasters and renders. Platon Plaster Base does not have any mesh or fabric on its surface, which makes cutting and fixing faster and easier.

Platon Plaster Base is for use above or below ground and can be fixed directly to existing wall finishes without the need of extensive "hacking off" or preparation.

BENEFITS OF PLASTER BASE

- No extensive preparation of structure.
- Water can be directed behind the membrane to conventional drainage or a sump and pump.
- Ingress of water is controlled within the system and not diverted to other areas.
- Complete freedom of choice of wall finishes.
- Quick and easy to install.
- Impermeable to water and water vapour.

THE PRODUCT

Platon Plaster Base is manufactured from high-density polyethylene with a stud height of 5mm. Plaster Base is supplied in rolls 2m x 20m and is clear/translucent in colour. It is recommended only for internal applications.

PRODUCT AND APPLICATION

Platon Plaster Base can be applied onto existing solid wall finishes. All surfaces must be of a sound, firm nature and any loose areas should be removed prior to application. Any voids or hollow areas should be filled or dubbed out prior to application. Where necessary a fungicide wash should be applied to the wall surface. Platon Plaster Base can be used above or below ground in either a ventilated or sealed system. Plaster Base is compatible with other Platon membranes. Platon Plaster Base should not be used on floors.

During installation care must be taken to ensure that sufficient fixings are used, "**minimum 13/m²**" in a diamond pattern. The 8mm diameter Plaster Plug should be drilled in the spacing between 4 studs, not through the stud itself. In below ground situations Platon Sealing Rope must be placed behind the head of the Plaster plug to form a waterproof seal, whereas in an above ground applications (not subject to penetrating dampness) Platon Sealing Rope need not be placed behind the head of the Plaster plug. The Plaster Base must be fitted tight against the structure with no voids or hollow areas left between the wall and the membrane as this could cause bonding problems between the membrane and the plaster/render. Care should be taken at corners to ensure the membrane is fitted tightly into the corner so to avoid snagging or tearing with a trowel.
Platon Plaster Base is joined by overlapping by a minimum of 2 studs. Fix Platon Plaster Plugs through the studs as close as possible to the edge of the membrane. Fixings should be made at 150mm centres along the joint. Once all fixings are in place, clean membrane surface thoroughly and ensure it is dry and free from dust. Apply Platon Overtape along the joint with equal overlaps onto each sheet of membrane and press firmly into place.

FINISHES

Most common lightweight and renovating plasters (Tilcon Whitewall) or sand/cement renders can be applied to Platon Plaster Base. (The use of British Gypsum Hardwall or Tuff Coat is not recommended).
When using sand/cement renders, mixes of 1 part cement to 6 parts washed plastering sand, incorporating either Triton SBR or hydrated lime should be used. **NB** Grade 'M'; medium sharp sand should be used. **Do not use soft or building sand**.
All renders/plasters should be applied in a minimum of two coats, allowing the 1st coat of 7mm – 10mm to be trowelled firmly into the membrane studs and then scratched to provide a key for subsequent coats to be applied. The first scratch coat should be left to cure and harden. Ideally this should be 7 – 10 days depending on site & atmospheric conditions. The minimum plaster thickness should be 15mm and the maximum thickness (sand/cement 30mm) (lightweight plasters 40mm).

DRAINAGE

If free water is present or there is a risk of it occurring, provision must be allowed for water to flow to natural drainage or a sump and pump. (*BS8102)*
System Platon Membranes do not involve the use of any chemicals or associated procedures covered by COSHH regulations. It is safe to use in all circumstances and has no effect on rooms or other properties adjoining the area where it is being installed.

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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 4^0C
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 x 10^{-} kg/m/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 45º 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/m for waterproofing and >0.3lt/m 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/m for waterproofing and >0.5lt/ m 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 5ºC and below 35ºC 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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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.

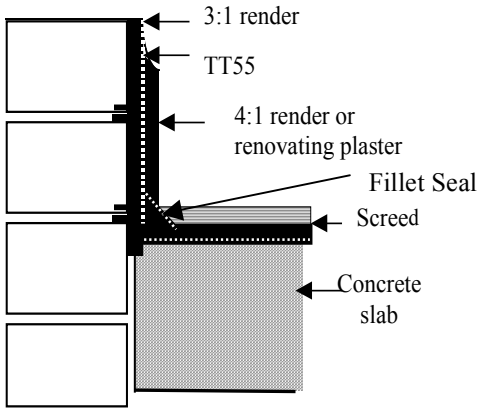

Fig. 1

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.

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Ref: 09/02 DATA TRITON FILLET SEAL

TRISEAL

DAMP PROOF MEMBRANE AND WATER VAPOUR SUPPRESSANT

DESCRIPTION

A solvent free, two part epoxy resin coating primarily for use on sand/cement or concrete floors subject to rising damp or containing residual construction moisture. TRISEAL is both a surface damp proof membrane and a water vapour suppressant.

PROPERTIES

SOLVENT FREE
LOW ODOUR
WATER PROOF
FLEXIBLE
TOUGH
RESISTANT TO OSMOTIC BLISTERING
WATER VAPOUR TRANSMISSION RATE LESS THAN 4g/m²/24hr (400 micron Film thickness)

USES

DAMP PROOF MEMBRANE	for floors where original d.p.m has failed or is non-existent.
WATER VAPOUR SUPPRESSANT	for concrete and sand/cement floors, which need to be covered but still, contain construction moisture.

NOTE: TRISEAL is not intended for use where water is under pressure; i.e. 'Tanking'.

GENERAL PURPOSE COATING	the product is sufficiently tough and flexible for use on surfaces subject to foot and light wheeled traffic.

TECHNICAL DATA

Composition;	Part 1: Low viscosity epoxy resin, reactive diluents, flow promotors and oxide red pigment. Part 2: Low viscosity epoxy curing agent and accelerator.
Mix ratio;	2 parts resin to 1 part hardener by weight.
Curing Time;	@ 20°c recoatable in 6-8 hrs. @ 10°c recoatable in 14-20 hrs.

Full cure is achieved up to 7 days after application depending on temperature.

Coverage;	1st coat 3-4m²/kg @ 200 micron film thickness 2nd coat 4-5m²/kg @ 200 micron film thickness NOTE: The coverage figures given are based on application to a smooth, dense surface. The coverage obtained will vary according to the porosity and texture of the surface to which the TRISEAL is being applied. Moisture vapour suppression is maximised when the total coating thickness is 400 micron or over.
Pack size;	5kg
Colour;	Red Oxide

PREPARATION

Surfaces to be coated must be sound, firm, clean and free from dust, grease, oil or other contaminants likely to prevent adhesion. Liquid water should not be present on the surface, which should look dry – moisture within the substrate is acceptable. If there is a risk of moisture rising to the surface under pressure, another form of damp proofing such as PLATON membrane should be used. New concrete subfloors or sand cement screeds must be left for a minimum of 7 days to cure before applying the coating, if necessary lightly shot blast or scarify the floor to remove curing agents, laitence or other undesirable contaminants. Vacuum clean afterwards to remove dust and debris.

MIXING

Empty the entire contents of the hardener pack (Part 2) in to the resin pack (Part 1) ensuring that the container sides and bottom are scraped thoroughly. Using a spatula or (preferably) a mixing paddle fixed into a slow speed drill, mix the two components together for at least two minutes. Scrape down the sides of the container and mix again for another minute. Use the mixed product immediately.
NOTE: In cold conditions (5-10°c) the viscosity of the two components will increase, to reduce viscosity and cure time store the product in a warm environment for at least 6 hours before use.

APPLICATION

Once thoroughly mixed the product should be poured out onto the floor and spread out as evenly as possible using a brush or medium pile paint roller. Do not overspread the product. Apply a minimum of two coats to achieve a total film thickness of 400 micron. Re-coat times will vary according to substrate and air temperatures. Do not apply at temperatures below 5°c or falling towards that temperature. At 20°c the poured out product has a working time of approximately 45 minutes, do not leave the mixed product in the original container, as this will reduce the pot life.
NOTE: To be effective the coating must be free of thin spots or pinholes.

CLEANING

Tools and equipment can be cleaned with TRITON Resin Cleaner whilst the coating is uncured.

CURING

Depending on temperature, full strength is achieved in 2-7 days. The maximum allowable time between coats is 48 hours.

PRECAUTIONS

Avoid skin contact – See safety data sheets.
Only mix whole packs, as mix ratios are critical.
TRISEAL will not bridge construction joints or large/mobile cracks.
Usage at temperatures above 25°c will result in a very short pot life; in such instances keep product cool before use.
Insufficient mixing of resin and hardener packs together will result in poor performance.

The information provided in this product data sheet is given in good faith, and is, to the best of our knowledge, true and accurate. However, recommendations and suggestions are made without prior guarantee as conditions of use, and labour involved, are beyond our control.

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TRITON AQUACHANNEL

DESCRIPTION & USE

TRITON AQUACHANNEL is a P.V.C drainage conduit designed for the control of water ingress in below ground situations.

TRITON AQUACHANNEL is fitted around the perimeter of the floor at the vulnerable wall/floor junction.

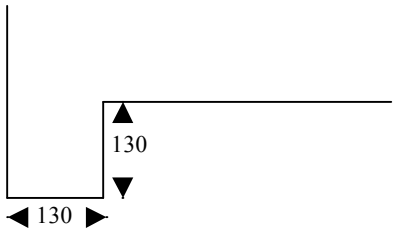
TRITON AQUACHANNEL can be used in most waterproofing situations, and is particularly suited for use in conjunction with Isola Platon Cavity Drain Membrane systems. Water entering the building through the walls is controlled behind the Platon Membrane and diverted to the Aquachannel at the base of the wall. The water enters the Aquachannel through pre-drilled drainage holes and must then be diverted to a suitable drainage point, either natural or a sump and mechanical pump (see Triton Aqua Pump).

In situations where an existing floor slab/screed is solid and showing no signs of water ingress, cracking or de-bonding, the installation of Aquachannel can eliminate the need for Platon Cavity Drain membrane on the floor, proving beneficial in areas of limited headroom.

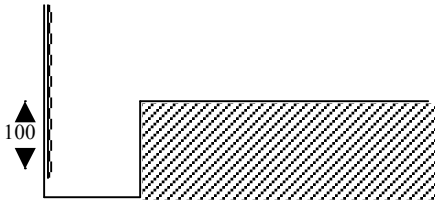
The application of a liquid waterproof coating to the existing floor would be recommended to act as a moisture suppressant.

INSTALLATION

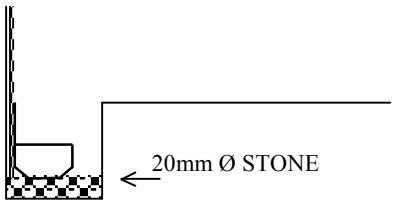
1. Form a trough 130mm deep x 130mm wide in the floor at the wall/floor junction.



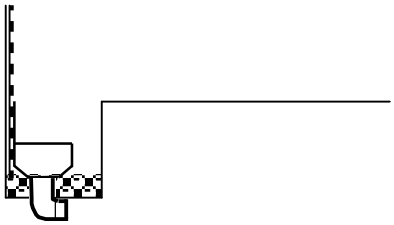
2. Apply the waterproof coating or System Platon Cavity Drain Membrane to the wall and finish 100mm minimum below existing floor level.



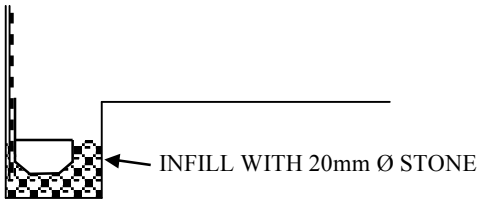
3. Lay a shallow bed of 20mm stone into the trough. Place the Triton Aquachannel onto the stone with the upstand to the top and flat against the waterproofing/cavity drain membrane to the wall. Lengths of Aquachannel are butt jointed on straight runs and can be mitred in corners. Joints should be sealed with a suitable tape, Platon over tape or builder duck tape, to avoid debris from falling into the channel



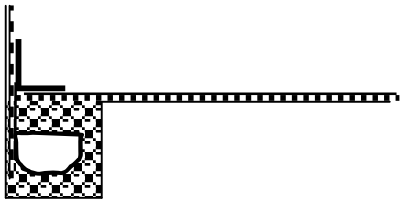
4. Fit the Aquachannel outlet into the Aquachannel at the appropriate location. The Aquachannel outlet requires a 40mm hole in the underside of the Aquachannel. The Aquachannel outlet is solvent welded to the channel using the internal male coupling. A chase should be formed into the floor to accommodate the outlet pipe from the Aquachannel to the sump or drain.



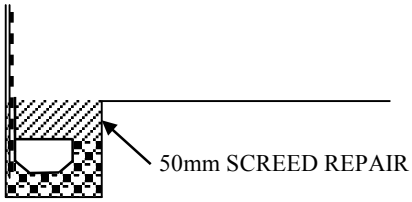
5. Infill the remaining gap between the Aquachannel and the side of the trough with 20mm stone and finish flush with the flat surface of the Aquachannel.



6. When installing Platon membrane over the floor, make good the remaining area with 20mm stone. Lay the membrane over the floor area and seal to the wall membrane using Platon wall/floor junction or Platon Sealing rope.



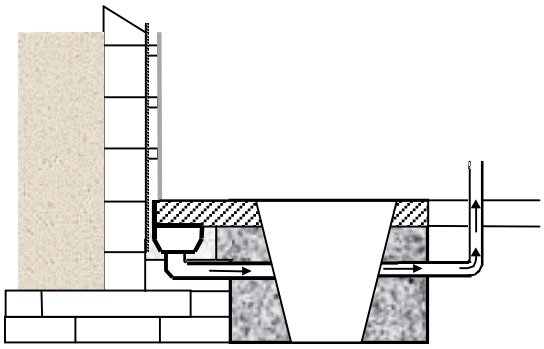
7. When Platon membrane is not going to be installed over the floor, make good the remaining area with approximately 50mm screed.



MAINTENANCE

It is recommended that the Triton Aqua channel be jet washed via the jetting ports, which should be incorporated in the channel system, at least once every six months. This should be carried out by the installing contractor (under a maintenance contract) or by the property owner. During this cleaning process the pump/s (if installed) should also be run with water out of the sump chamber to ensure they are fully operational and that the sump chamber be cleaned of any sludge/silt that may have accumulated. In addition to this, the high water level battery alarm box and alarm sensor should also checked for working order

TYPICAL INSTALLATION



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TRITON AQUA PUMP SYSTEM

DESCRIPTION AND USE

When installing Isola Platon Cavity Drainage membranes careful attention must be given to provide a suitable drainage solution. Natural drainage is not normally possible or convenient in below ground situations, so mechanical drainage must be used.

TRITON AQUA PUMP is a ready to use complete water control system principally designed for use in below ground structures to control water ingress. The system consists of a pre-formed polyethylene sump basin, a mains powered 230v submersible pump, a non-return valve assembly and a battery operated high water level alarm, which is linked to an integral float switch. The TRITON AQUA PUMP system can be linked to TRITON AQUA CHANNEL (see Triton Aqua Channel Data)to manage water ingress from retaining walls and in turn pumping out to a suitable drainage point.

IMPORTANT NOTE: The Triton Aqua Pump must only be used for pumping ground water. The pump should not be used to pump grey water from; sinks/washing machines/dishwashers/condensing boilers or effluent. Triton Chemical Manufacturing Ltd will not accept responsibility or liability for pump failure or damage caused due to the misuse of the pumping system.

COMPONENTS

SUMP BASIN – The Sump Basin is a polyethylene pre-formed chamber, measuring 560mm high x 540mm diameter (top) x 460mm diameter (base) and is most commonly located into the floor, finishing flush with the surrounding floor level. The Sump Basin is supplied with a structural foam flat lid, which can accept foot traffic. The lid can be easily removed to allow regular maintenance of the internal submersible pump or pumps.

SUBMERSIBLE PUMP – The pump is positioned within the Sump Basin and is controlled by an automatic snap-action float switch. As the water level increases within the sump the float rises and when the pre-set switch level is reached the pump will automatically operate and discharge the water. The Pump is 230v and requires wiring into an independent fused spur outlet within 1.5m of the pump.

PUMP SPECIFICATION

Discharge Bore	-	38.1mm
Max. Head	-	6m
Max. Capacity	-	220 litres/min @ 1m
Motor Output	-	1/3 Hp
Max.Width	-	214mm
Max.Height	-	258mm
Max Depth	-	270mm
Voltage	-	230v
Fuse rated	-	5.0amp

NON-RETURN VALVE ASSEMBLY – To avoid any discharged water backing-up into the sump basin, a non-return valve assembly is provided. This is fitted directly to the submersible pump outlet via flexible couplings and supplied ready to accept a standard 1½" waste pipe.

HIGH WATER LEVEL ALARM – The High Water Level Alarm is an essential component within the Aqua Pump system. In the event of mechanical failure of the pump or an unexpected power failure, the water will continue to fill the sump. When the water reaches the level of the alarm float switch, the 80db alarm will sound, giving warning of the failure. The alarm is powered by a 9v battery, which should be positioned in a convenient location such as a kitchen/lounge where it will be easily heard. Once the alarm is heard immediate action must be taken to avoid flooding. Additionally a 12v battery operated pump can be installed offering peace of mind to the client, while investigations are made into the failure. See Triton Battery Back-up Pump System data.

PREPARATION AND INSTALLATION

The site conditions or situation being encountered may well determine the positioning of the Triton Aqua Pump System. However, ideally it should be sighted at the lowest point of the room and or closest to the nearest point where water will be discharged. **The most important thing is to make sure that water can get to the pumping station.** Once the pump position has been established, dig a circular hole to a depth of 650mm and to a width of 650mm .

At the base of the walls of the sump basin, drill 4 holes opposite each other, (12mm dia), insert two lengths of reinforcing bar (660mm long) through drilled holes .These will add additional anchoring for the sump basin in the ground.

Fit the high water level alarm float switch sensor into the pre-cut hole provided within the wall of the sump basin and ensure that the (jaw) of the switch sensor is open and hangs downwards. Bring the two cables with bullet connectors attached back into the sump basin either through one of the holes provide or by drilling a hole and leave ready to be connected to the wires of the water alarm. **NB:** if the water discharge pipe from the pump is to be concealed below the floor, then a 1½" hole will need to be cut through the side of the basin. However, the position of this hole can only be determined once the sump basin has been offered into position, otherwise the discharge pipe can be taken through the lid of the basin.

Lay approx 100mm concrete at the base of the hole and insert the sump basin. Using a spirit level, adjust the top of the basin to the level of the finished floor level. Fill the basin two thirds with water, then infill around sump basin with concrete, ensuring it is well compacted. **NB:** If Platon membrane is being installed over the floor, then the concrete will need to be finished 100m lower than top of sump, drill a number of perforations to edge of sump basin and infill void above concrete with 20mm stone. (drwg no. IP029.1) However, when Platon membrane is not going to be installed over the floor, the concrete should finish flush with top of sump basin.

Insert the Aqua Pump in the base of the sump basin and connect the water discharge pipe to the flexible coupling already attached to the pump. The discharge end of the pipe can be taken through a wall and extended to a gully outlet at ground/street level. Alternatively, the discharge pipe can be connected straight into a soil pipe using a 'boss' connection. **Where a double pump installation is being used (Aqua Pump Plus), each pump must be wired into an independent fused spur outlet. One of the Aqua Pumps (the secondary pump) in the double pump kit will have been fitted with 25mm long spacers at the base of the pump so that this pump is raised off the bottom of the sump basin.**

Connect the wires from the float switch sensor to the wires of the water alarm using the bullet connectors provided. Then connect the pump/s power cable into a fused spur outlet (fuse rating 5amp) and test the pump and alarm for working order.

MAINTENANCE

It is recommended that the Triton Aqua Pump System is maintained /serviced at a minimum every six months. This should be carried out by a competent contractor (under a maintenance contract) or by the property owner. During a service all parts of the Aqua Pump kit should be checked to ensure fully operational. The sump should be cleared of any silt/sludge that may have accumulated to avoid potential damage to the pump/s.

The sump must be filled with water to ensure the automatic float switch and pump are fully operational. We recommend renewal of the 9v battery within the alarm and that the alarm float switch checked to ensure the alarm sounds. Any defective parts must be replaced /repaired to avoid failure of the system. Example of suitable sump, pump and drainage schedule can be found in the Isola manual, or downloaded from the Triton website www.triton-chemicals.com

We recommend records of each service be kept by the property owner.

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info@triton-chemicals.com

In addition to the high levels of efficacy of the biocides the formulation has been shown to demonstrate:

- High tolerance to anionic contaminants and water hardness
- The ability to maintain high biological efficacy in the presence of high organic soiling such as faeces, urine, blood and proteins
- Excellent surfactant and wetting properties

The inclusion of the formulation in water-soluble sachets makes it very easy to use with accurate and reproducible dosing achieved every time.

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Triton Platon P20 Membrane Data Sheet

Description
The Platon P20 Membrane is manufactured from black high-density polyethylene (HDPE). It is impermeable and resistant to the usual chemicals in the building construction.

When the product acts as a damp proof membrane, both the product and floor coverings may be installed independent of the moisture content in the underlying concrete construction and with running water not under pressure in the air gap.

Studs are formed in a regular pattern on the one face of the Membrane. The studs are spaced at approx. 60mm centres. The product is supplied in rolls 2.0m x 20m.

Workability
The Platon P20 Membrane is tough but pliable and can be bent round corners and projections without risk of breaking even in very low temperatures. The Membrane can be easily cut with a knife or scissors.

Installation
Detailed installation instructions are set out in the Isola Manual, available on request from Triton or downloadable at www.triton-chemicals.com

Storage
Sheets of Platon P20 Membrane should be stored flat and rolls of P20 Membrane should be stored on end.

Technical Data

Sheet Thickness:	Nominal 1.00mm
Stud Height (net):	approx. 20mm
Unit Weight:	0.95 kg/m^2
Tensile strength at yield	at least 10 N/mm^2
Elongation at yield:	at least 15%
Max. Compressive strength	150 kN/m^2
Deformation under long term load:	max. 10% (load of 50 kN/m^2)
Working Temperature:	-50° to +80°C
Softening Temperature:	+125°C
Linear Coefficient of thermal expansion	0.13mm/m.°C
Life Expectancy:	at least 50 years for defined applications.
Thermal Resistance:	0.17m^2.°C/W
Water Vapour Resistance:	3500m^2.s.Gpa/KG
Drainage Capacity:	Max. 13 l/sm
Air Gap Volume:	14 litre/m^2
Colour:	Black

Chemical Resistance

The Platon P20 Membrane is resistant to all chemicals to which it can be exposed, in normal building construction. A small number of aggressive chemicals (e.g. solvents) in large concentrations, can to some extent attack the Platon P20 Membrane during prolonged exposure. If the product is to be applied, for example as cladding to storage tanks for aggressive chemicals, the supplier should be contacted, with a view to assessing necessary action.

For normal applications of the Platon P20 Membrane, relevant aggressive chemicals are very volatile, because of their very nature. This means that if they should come in contact with the Platon P20 Membrane, following an accident, they will evaporate of flow away from the construction without permanent damage occurring.

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www.triton-chemicals.com

Triton Platon Multi Membrane Data Sheet

Description
Platon Multi Membrane is manufactured from translucent high-density polypropylene. It is impermeable and resistant to the usual chemicals in building construction.

When Platon Multi is acting as a damp proof membrane, both the product and the wall and floor coverings may be installed independent of the moisture content in the underlying structure and with running water not under pressure in the air gap.

Studs are formed in a regular pattern on one face of the membrane. The studs are round and spaced at 20mm centres. Platon Multi is supplied in rolls 2.05m x 20m.

Workability
Platon Multi Membrane is tough but pliable and can be bent round corners and projections without risk of breaking even in very low temperatures. The Membrane can be easily cut with a knife and scissors.

Installation
Detailed installation instructions are set out in the Isola Manual, available on request from Triton or downloadable at www.triton-chemicals.com

Storage
Rolls of Platon Multi should be stored upright.

Technical Data

Dimension:	Roll 2.05m x 20m
Raw Material:	PP (High Density Polypropylene)
Colour:	Translucent
Stud Height:	5mm
Membrane Thickness:	0.5mm
Weight:	480 g/m²
Loading Performance:	Defined by floor covering
Water vapour resistance:	Approx. 1800m².s.Gpa/kg or 360n equivalent air layer.
Air Gap Volume:	3.3 l/m²
Filling Volume:	1.7 l/m²
Biological resistance:	Does not rot or support growth
Chemical resistance:	Resistant to all chemicals in normal building construction
Thermal resistance:	0.10 m².°K/W
Flammability:	B2

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