



Structural Waterproofing: Cavity Drain Systems



CAVITY DRAIN MEMBRANES

In basement construction or refurbishment, cavity drain membranes provide an alternative to conventional cementitious tanking systems, which work by holding the water back. Internal cavity drain membranes work on the principle of allowing water to continue to penetrate the structure but control it in the air gap and divert it to a suitable drainage point. They do not allow pressure to build up against the internal construction and the air gap behind the membrane allows the structure to breathe and to some extent to dry out. The membranes are loose laid on floors and fixed to walls using special plugs and sealing materials, with little or no preparation required to the substrate. Once the membrane has been fitted, wall surfaces can be dry lined or plastered directly and floors can be screeded or a floating dry board system installed. External cavity drain membranes provide a drainage and protective layer to the primary waterproofing system.



Cavity Drain Membranes for Internal Use:

PLATON MULTI

- BBA approved
- 5mm PP cavity drain membrane
- fast track solution for walls or floors
- suitable for use above or below ground
- impermeable to water, gas and water vapour

Platon Multi can be dry lined on walls, screeded, or finished with a dry board system on floors. Particularly suitable for floors in industrial buildings, as it will transfer loading through screed layers to the underlying concrete floor. Allows contaminated floors to be upgraded.

Platon Multi can be used in conjunction with other Platon membranes and the Triton Aqua Channel and Pump system.

Specification:

In accordance with NBS Specification J40 (clause 290)
– Flexible Sheet Tanking/Damp Proofing.

Availability:

Direct from Triton.

PLATON P5

- Economical 5mm HDPE cavity drain membrane
- Suitable for both walls and floors, above or below ground
- Impermeable to water, gas and water vapour
- Compatible with other Platon membranes

P5 is a tough and economical membrane for both remedial and new build construction. It is suitable for sub-ground tanking and also for use above ground to isolate walls which are damp or contaminated with salts.

P5 can be dry lined on walls and screeded or a floating dry board system fitted on floors.

Specification:

In accordance with NBS Specification J40 (clause 290)
– Flexible Sheet Tanking/Damp Proofing.

Availability:

Direct from Triton.

Technical Data:

Roll size	2.05m x 20m x 5mm
Sheet thickness	nominal 0.50mm
Stud height (net)	approx. 5.0mm
Unit weight	0.45kg/m ²
Softening temperature	+160°C
Life expectancy	at least 50 years
Air gap volume	3.3 litre/m ²
Drainage capacity	max. 2.95 litre/m ²
Colour	clear



Technical Data:

Roll size	2.07m x 20m x 5mm 2.47m x 20m x 5mm
Sheet thickness	nominal 0.50mm
Stud height (net)	approx. 5.0mm
Unit weight	0.48 kg/m ²
Max. compressive strength	180 kN/m ²
Softening temperature	+125°C
Life expectancy	at least 50 years
Air gap volume	3.25 litre/m ²
Drainage capacity	max. 2.4 litre/m ²
Colour	black or clear



PLATON PLASTER BASE

- BBA approved
- HDPE cavity drain membrane for direct plastering
- single component, no mesh or fabric layer
- unique undercut stud design creates mechanical key for plaster
- easy to cut, fix and seal
- impermeable to water, gas and water vapour
- compatible with other Platon membranes

Platon Plaster Base can be installed on internal walls and vaulted ceilings above or below ground level. The substrate remains visible through the clear membrane for precise fixing. It is suitable for use with sand and cement renders and most lightweight and renovating plasters.

Specification:

In accordance with NBS Specification J40 (clause 290)
– Flexible Sheet Tanking/Damp Proofing.

Availability:

Direct from Triton.



PLATON PLASTER MESH

- HDPE membrane with integrated mesh layer for direct plastering
- For internal application on walls above or below ground level
- Compatible with other Platon membranes

Platon Plaster Mesh is a double layered cavity drain membrane comprising a studded HDPE layer bonded to an 'HDPE twist' mesh layer which forms a key for most common plasters and renders. As with other Platon membranes, Platon Mesh can be fixed directly to existing wall finishes without the need for extensive hacking off or preparation.

Specification:

In accordance with NBS Specification J40 (clause 290)
– Flexible Sheet Tanking/Damp Proofing

Availability:

Direct from Triton.

Technical Data:

Roll size	2.0m x 20m x 5mm
Sheet thickness	nominal 0.50mm
Stud height (net)	approx. 5.0mm
Unit weight	0.48kg/m ²
Softening temperature	+125°C
Life expectancy	at least 50 years
Air gap volume	3.2 litre/m ²
Drainage capacity	max. 1.84 litre/m ²
Colour	clear



Technical Data:

Roll size	2.0m x 20m x 8mm
Studded sheet thickness	0.7mm
Stud height (net)	8mm
Unit weight	70g/m ²
Compressive strength	150 kN/m ² (15t/m ²)
Service temperature range	- 40°C to + 80°C
Life expectancy	at least 50 years
Air gap volume	5.5 litre/m ²
Colour (both layers)	Clear



Cavity Drain Membranes for Internal Use:

PLATON P20

- BBA approved
- heavy duty, deep studded HDPE cavity drain membrane
- principally used on floors
- for areas subject to high volume water penetration
- impermeable to water, gas and water vapour

P20 is a high capacity drainage membrane recommended for use on all floor applications below ground, due to its ability to control free flowing water. The deep stud profile is designed to resist blockages caused by lime deposits.

Specification:

In accordance with NBS Specification J40 (clause 290)
– Flexible Sheet Tanking/Damp Proofing.

Availability:

Direct from Triton.

Technical Data:

Roll size	2.0m x 20m x 20mm
Sheet thickness	nominal 1.00mm
Stud height (net)	approx. 20mm
Unit weight	0.95 kg/m ²
Max. compressive strength	150 kN/m ²
Softening temperature	+125°C
Life expectancy	at least 50 years
Air gap volume	14 litre/m ²
Drainage capacity	max. 13 litre/m ²
Colour	black



Triton Drainage System:

- a complete “off the shelf” drainage system
- system comprises drainage channel, sump, pumps and all fittings
- suitable for use with all Platon Cavity Drain Membranes

The system comprises Triton Aqua Channel (a PVC drainage conduit which is fitted around the perimeter of the floor) and the Triton Aqua Pump Kit (a mains powered submersible pump and pre-formed sump). The sump is located into the floor with the removable, structural lid finishing flush with the surrounding floor level. The submersible pump is then installed inside the sump and controlled by an automatic integral float switch. A non-return valve is available to avoid water backing up and a high level water alarm which warns of mechanical or power failure. A 12v Battery Back-up Pump is also available.

For more detailed information about drainage and ancillary products supplied by Triton, please refer to separate leaflet entitled: ‘Triton Drainage Systems’ or see our website at www.triton-chemicals.com.



Triton Aqua Pump Kit

Triton Fixing and Jointing Products:

Platon Brick Plugs	10mm x 75mm (100/box)
Platon Plaster Plugs	8mm x 70mm (500/box)
Platon Sealing Tape	2mm x 30mm x 20m (5/box)
Platon Sealing Rope	10mm x 5m (10/box)
Platon Overtape	115mm x 1mm x 25m
Platon Corner Strip	150mm x 1.5mm x 10m
Platon Wall/Floor Junction	2m strip (10 per pack, black)
Platon Ventilated Wall/Floor Junction	1.3m strip (12 per pack, blue)
Platon X Cramps	60 per box
Platon Top Edge Mould	2m
Platon Dab Collars	50 per box
Platon DPC Plain	400mm x 20m
Platon Sealer	300ml cartridge



Platon Brick Plugs



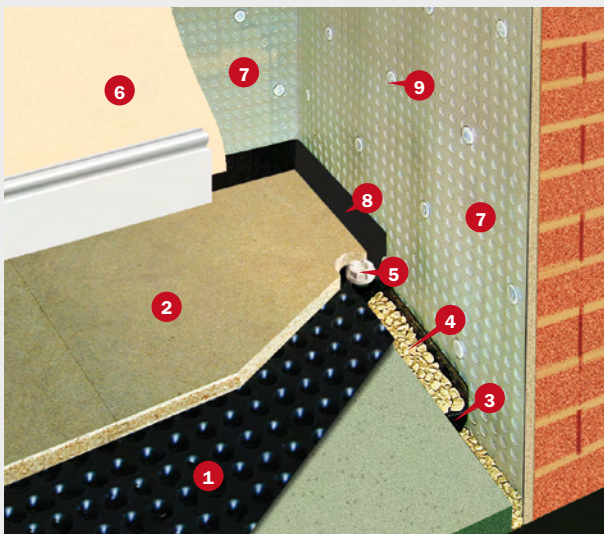
Platon Sealing Tape



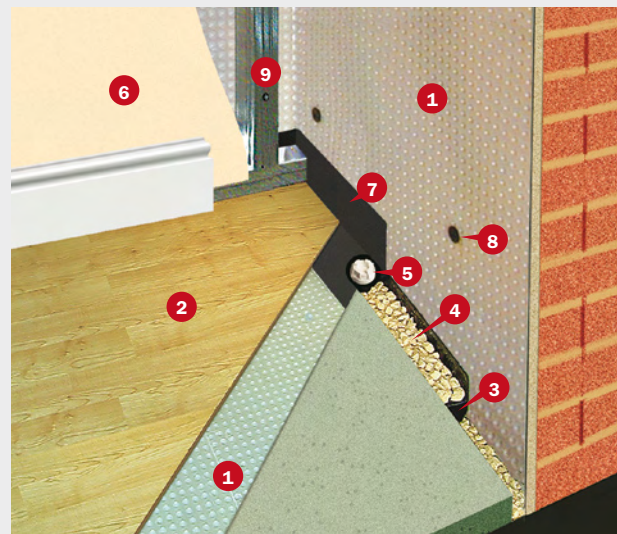
Service Sealing

Typical Installation:

Platon Multi and Platon P5 is installed using Platon Brick Plugs. A hole is drilled through the stud of the membrane and the Brick Plug is hammered into the hole. Below ground level, a seal must be made behind the head of the Brick Plug using Triton's Plug Seal Washers or Platon Sealing Rope. A minimum of five Brick Plugs per m² is required. Platon Plaster Base is installed using Platon Plaster Plugs. A hole is drilled through the membrane between four studs and the Plaster Plug hammered into place. Below ground level, a seal must be made behind the head of the Plaster Plug using Platon Sealing Rope. A minimum of 13 Plaster Plugs per m² is required. Any joints or overlaps must be made watertight and Triton supplies a full range of butyl components for sealing joints vertically, horizontally and at the floor/wall junction.



1) P20 Membrane 2) Chipboard 3) Aqua Channel 4) 20mm Stone
5) Jetting Eye 6) Plaster/Render 7) Plaster Base Membrane
8) Wall/Floor Junction 9) Plaster Plug



1) Multi Membrane 2) Floating Hardwood Floor 3) Aqua Channel
4) 20mm Stone 5) Jetting Eye 6) Plasterboard 7) Wall/Floor
Junction 8) Brick Plug 9) Timber/Metal Studwork

Cavity Drain Membrane for External Use:

PLATON DOUBLE DRAIN

- a membrane system for external basement walls which protects underlying waterproofing from backfill damage
- filter fabric layer ensures soil cannot enter membrane cavities to impede drainage

Double Drain is installed with the filter fabric facing the backfill. It is fixed mechanically along its top edge using Platon X Cramp, which provides tear resistant fixing points.

Specification:

In accordance with NBS Specification J40 (clauses 290/295/380) – Flexible Sheet Tanking/ Damp Proofing.

Availability:

Direct from Triton.



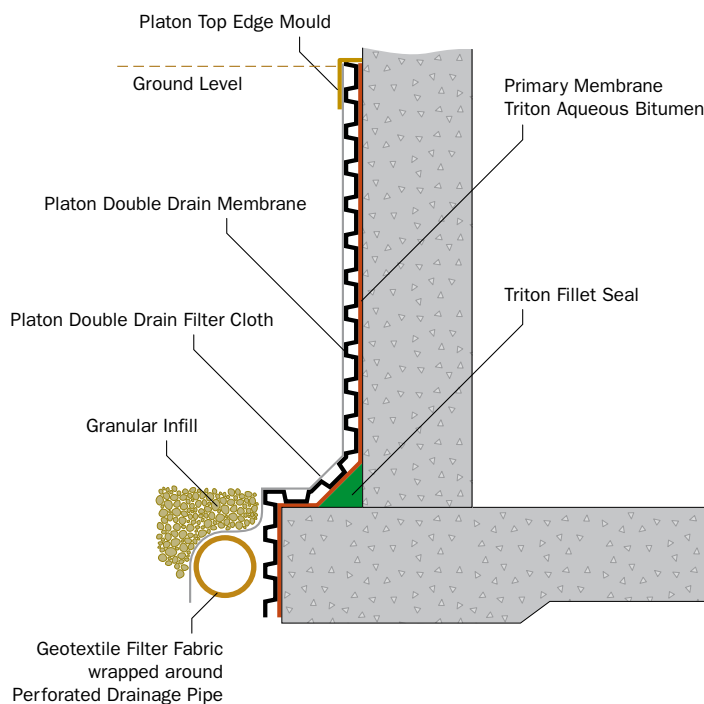
Installation:

Platon Double Drain can be fixed vertically or horizontally to suit the application. It must be installed over a primary membrane, such as Triton Aqueous Bitumen. Fix Double Drain along the top edge above the primary membrane, with Platon Double Drain cramps at 250mm centres. Overlap vertical joints by 500mm and horizontal joints by 150mm. Filter fabric can be pulled back for successive overlap of the membrane and filter fabric. Fix Platon Top Edge Moulding along the top edge of the membrane to avoid debris or backfill material from blocking the drainage channels. Ensure adequate drainage from Platon Double Drain to drainage pipes.

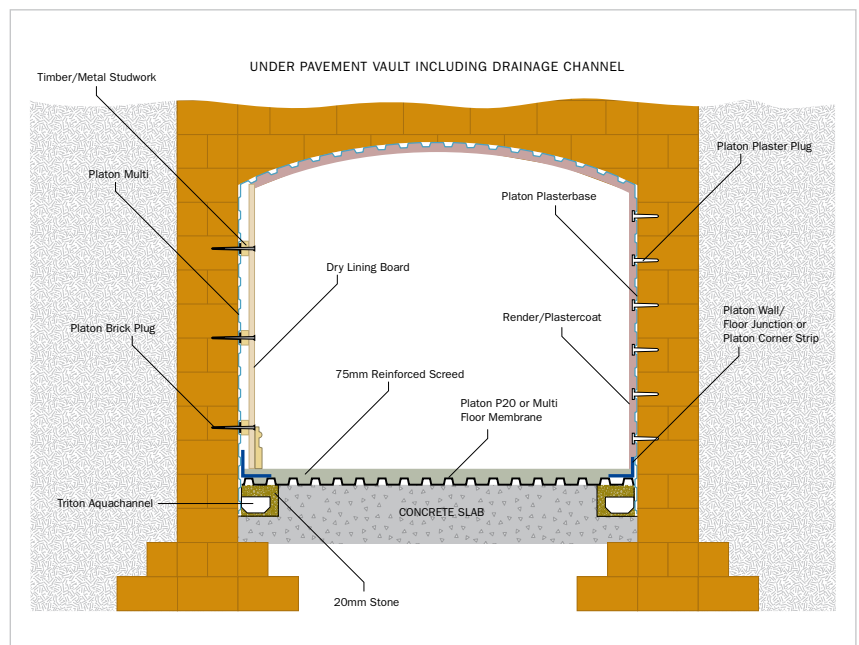
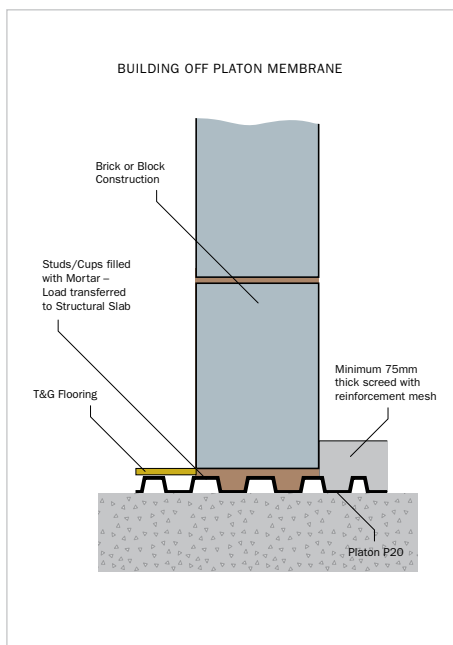
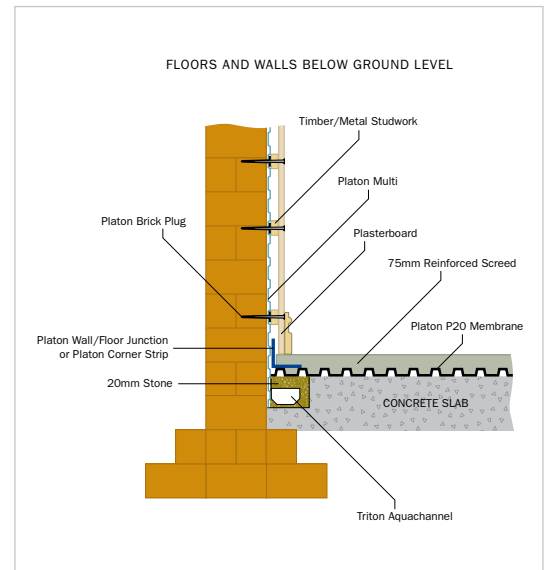
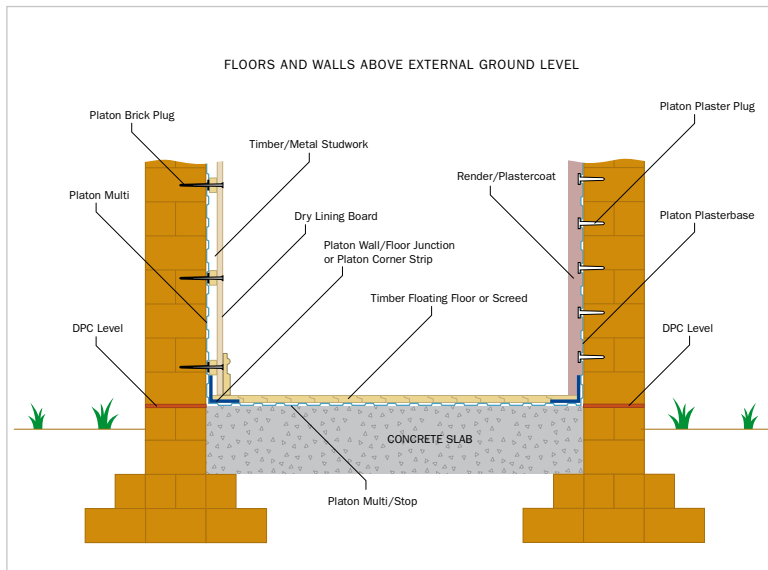
Technical Data:

Roll size	2.0m x 15m x 7mm
Sheet thickness	nominal 0.50mm
Stud height (net)	approx. 8.0mm
Unit weight	0.58 kg/m ²
Max. compressive strength	200 kN/m ²
Softening temperature	+125°C
Life expectancy	at least 50 years
Air gap volume	4.0 litre/m ²
Drainage capacity	max. 2.3 litre/m ²
Colour	black

PLATON DOUBLE DRAIN – EXTERNAL BASEMENT WALLS



Technical Drawings:



Please consult BS 8102, Code of Practice for Waterproofing Structures Below Ground, before considering or designing any waterproofing system. Full installation guidelines, technical information and further drawings relating to the systems in this leaflet are available at www.triton-chemicals.com or can be obtained direct from Triton – call **0208 8310 3929**



Guarantees

Triton approved contractors have access to TUG Insurance Backed Guarantees which are issued for a maximum of 30 years and which cover wall tie replacement, below ground waterproofing and damp and timber treatment. The TUG Insurance Backed Guarantee provides peace of mind to clients by coming into force in the event of the approved contractor ceasing to trade.

Triton also issues its own guarantees to cover the performance of Triton products plus the workmanship of the Triton Approved Contractor. These are designed for contractors who do not issue their own company guarantees. Triton Guarantees are valid for up to 30 years from date of completion of the works (up to 10 years for below ground waterproofing).

Visit www.tug.uk.com to apply for Triton Approved Contractor status and to download the guarantee application forms.



Also available from Triton

- Replacement Cavity Wall Ties
- Damp Proofing and Replastering Systems
- Protective Coatings, Structural Repair
- Timber Preservation and Repair
- Green Roof Systems
- Condensation Control
- Pumps and Drainage
- Flooring Systems



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