

System

Platon

Membranes for horizontal external constructions



- *Balconies and terraces*
- *Separation layer*
- *Ballasted roofs*
- *Roof parking*
- *Green roofs*
- *Walkways*
- *Artificial turf*

isola[®]

Dry and healthy buildings

Solutions for drainage of horizontal constructions

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Isola, a reliable partner

Product development is important to us. Continuous development in manufacturing technology, raw materials and application techniques allows us to improve our products to meet specific building requirements. Isola invented the studded membrane known as System Platon. For 40 years, System Platon has ensured protection against a wide range of moisture problems. The design of the studs and the membrane has evolved over time in order to meet the challenges of new construction and buildings. The raw material used in our products is polypropylene and/or high density polyethylene, which offers strong

resistance against chemicals and high flexibility and weldability. If burnt, it gives off very little toxic gas. Our quality assurance system ensures the high quality standard of our products, which are:

- Resistant to aging. The studded membrane will maintain its strength throughout the lifetime of the construction.
- Resistant to the usual chemicals in construction
- Completely damp-proof. The material protects against rising damp and gas.

Specific needs of horizontal installations

The effects of humidity and damp on horizontal waterproofing and drainage layers demand that the system performs well. Any malfunction can damage the layers above, and will require expensive repair work. High quality products are critical in horizontal installations. The entry of rainwater from above and continuous water pressure mean that the materials must have lasting drainage capacity in order to avoid problems. When the drainage is defective, it means that frost can damage the concrete, as well as surface materials such as tiles.

Platon Plaza offers the solution

Platon – the inventor of the studded membrane – has developed a product range specifically for use in horizontal installations. Based on more than 40 years of experience in product development of studded membranes, Platon Plaza has been designed to respond to the high demands of these structures. Platon Plaza is therefore the only safe option for the use of studded membranes in horizontal installations.

- Protection against damp and gas during the lifetime of a construction
 - All products made from high quality virgin raw materials to avoid premature aging
 - Production process incorporating pinhole detection to stop all damp and gas
- Flat and straight products, manufactured in sheets or in rolls using special raw materials to avoid installation problems due to waves and curves in the material.
- Solutions designed with all the necessary accessories and components needed for different installations.

Platon P5+

Under the building

Platon MultiDrain

Tiled terraces, balconies, walkways and ballasted roofs

Platon DE25

Flat green roofs

Platon ATD

Artificial turf

Platon PerfoDrain

Landscaped green roofs and parkings



Isola Factory, Eidanger, Norway



Platon Factory, Notodden, Norway

Balconies and terraces



Platon MultiDrain can be used for the drainage and protection of balconies and terraces. It is applied on top of the waterproofing. Afterwards, the concrete is poured directly onto MultiDrain and the tiles are fixed on top of the concrete.

This construction protects the waterproofing against damage during installation and throughout the lifetime of the construction.

In addition, it provides a floating layer between the different layers in the structure, which reduces potential damage from internal movements.

Platon MultiDrain also gives efficient and lasting drainage between the surface and the waterproofing for any moisture which seeps through the construction.

Main advantages and functions:

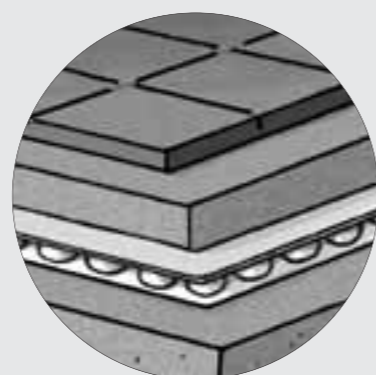
- 1. Lateral force absorption:**
Effectively neutralizes the differential movement stresses between the substrate and the surface cover, eliminating the major cause of damage to the waterproofing layer
2. Reduces the risk of ceramic tiles being loosened by frost
3. Reduces the discolouring of tiles from alkali in the concrete and tile adhesive
4. Drainage through an air gap in the MultiDrain and under the concrete construction on top of MultiDrain
5. Can be used down to a 0° slope
6. Loads are distributed evenly over the entire waterproofing surface
7. Lets moisture from defective joints drain through the construction

Installation:

MultiDrain is rolled out with the drainage felt upwards on top of the load-bearing and sloped waterproofed structure, and can be loose laid in any direction.

Overlap by two rows of studs so that water flows over the joint, and not into it. Filter fabric is loosened from the membrane for successive overlaps.

On top of MultiDrain, a lean mix concrete for load bearing is poured to a thickness of at least 50mm, according to current industry standards, where tiles or another suitable surface material can be installed. With respect to edging profiles, movement joints and floor/wall transitions, please use appropriate profile types.



Walkways on flat roofs and terraces



Platon MultiDrain can also be used to protect and drain walkways on flat green roofs and terraces. It is applied on top of the waterproofing.

Afterwards, the surface layers of the walkways are applied directly onto MultiDrain.

This construction protects the waterproofing from damage during installation, as well as from the transit of pedestrians and light machinery afterwards.

It also provides lasting drainage capacity for rainwater and humidity that seeps through the construction.

Main advantages and functions:

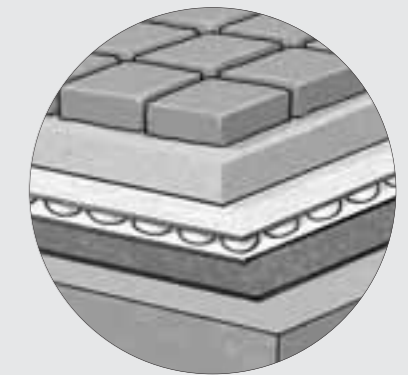
- 1. Lateral force absorption:**
Effectively neutralizes the differential movement stresses between the substrate and the surface cover, eliminating the major cause of damage to the waterproofing layer in transited walkways and parking areas
2. Drainage through the air gap in the MultiDrain and under the surface construction
3. Can be used down to a 0° slope
4. MultiDrain prevents gravel or sand from being embedded in the bituminous waterproofing layer.

Installation:

MultiDrain is rolled out with the drainage felt upwards on top of the load-bearing and sloped waterproofed structure, and loose laid in any direction.

Overlap by two rows of studs so that water flows over the joint, and not into it. Filter fabric is loosened from the membrane for successive overlaps.

Directly on top of MultiDrain are the surface layers, a construction of pavers, or stone laid on a layer of sand, concrete or gravel.



Ballasted roofs



Platon MultiDrain is a horizontal protection and drainage layer for normal and inverted ballasted roofs. It will simplify the number of layers and avoid problems related to deficient horizontal drainage.

MultiDrain is placed on top of the waterproofing in normal roofs, or on top of the thermal insulation in inverted roofs.

It provides a layer composed of a non-woven geotextile for filtering of loose particles, with an underlying air gap formed by the studs for evacuation of drained water.

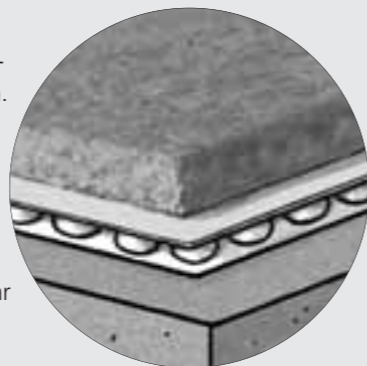
Main advantages and functions:

1. Holding back particles from the gravel or mortar, eliminating build-up of material in the drainage outlets
2. Effective drainage of rain water, eliminating standing water in the surface layers like the gravel or the joints of the thermal insulation
3. Good physical protection of the water proofing (traditional structure) and of the thermal insulation (inverted roofs) from the gravel or mortar on top

Installation:

MultiDrain is rolled out with the drainage felt upwards on top of the load-bearing and sloped waterproofed structure, and loose laid in any direction. Overlap by two rows of studs so that water flows over the joint, and not into it. Filter fabric is loosened from the membrane for successive overlaps. Directly on top of MultiDrain are the surface layers, a construction of gravel or alternatively mortar with tiles for transited areas.

In an inverted roof MultiDrain is rolled out with the drainage felt upwards on top of the thermal insulation. The surface layers, either gravel or mortar with tiles, can then be poured directly on top of Platon MultiDrain.



Flat green roofs



Platon DE-25 is used in extensive green roof systems, above the waterproofing and root protection and under a filter fabric with the soil directly on top, creating a drainage and water storage layer ideal for this type of construction.

This construction offers an effective protection for the waterproofing, as the soil is physically separated from this layer and any standing water is drained away.

DE-25 also provides storage of excess water and distribution of this across the entire surface of the green roof.

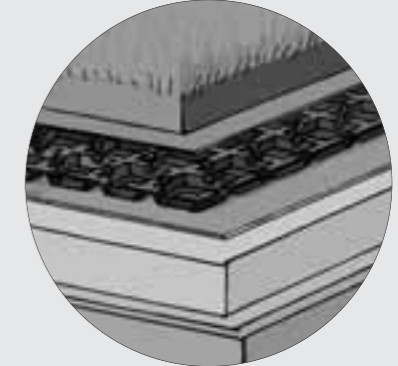
Main advantages and functions:

1. Storage and drainage of rainwater
2. Simple installation of the construction
3. Healthy, green plants even in dry periods, due to storage capacity
4. Good drainage during wet seasons
5. Lighter and lower construction than traditional solutions
6. Effective protection of waterproofing

Installation:

Install with the studs down, without fixing, on top of the roof waterproofing membrane (already covered by a root protection layer, if necessary). Overlap with a minimum of one stud in both directions. Cut as necessary at drainage gully, or at change in roof slope.

Cover with a filter fabric, before the earth covering is laid. Select root protection and filter fabric according to local norms.



Roof parking areas



Platon PerfoDrain is a horizontal drainage layer for roof parking areas that have to handle the high loads from the transit of cars and machines. It offers protection of the waterproofing membrane combined with high load-bearing capacity, due to the large surface of the square studs. Platon PerfoDrain also helps drain away the humidity that seeps through the construction, through the special drainage slits of the studs.

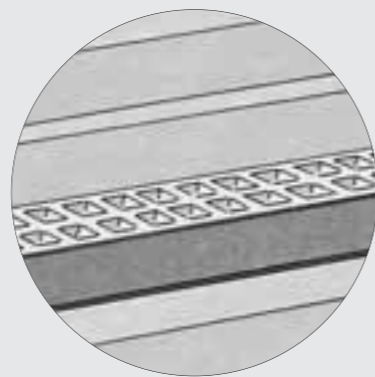
Main advantages and functions:

- 1. Lateral force absorption**
Effectively neutralizes the differential movement stresses between the substrate and the surface cover, eliminating the major cause of damage to the waterproofing membrane
- 2. High load-bearing capacity** due to concrete-filled studs
- 3. Good distribution of the weight** over the waterproofing, with large and flat studs that do not damage the waterproofing
- 4. Prevents frost damage** and discolouring of tiled surfaces
- 5. Quick and cost-effective installation**

Installation:

Unroll with studs down on the waterproofing membrane. Overlap by approx. 50 mm, and spot tape or hot air weld as necessary. Fold up parapets, and cut flush against pipes and chimneys. At drains, cut flush to edge of the drain and cover the edge with filter fabric or similar.

Apply concrete directly on top of Perfo Drain according to the current industry standard.



Landscaped green roofs



Platon PerfoDrain provides a horizontal drainage layer and waterproof protection under landscaped green roofs with varying soil depths, which do not require water storage.

The waterproofing in this type of construction is exposed to possible physical damage during installation and later garden work, and this can lead to expensive repair and maintenance work.

Platon PerfoDrain protects and drains the surface of the waterproofing to avoid these problems.

Main advantages and functions:

- 1. Protects the waterproofing** on the roof surface during installation
- 2. Protects the waterproofing** from accidents caused by garden maintenance work
- 3. Drains excess water** from rain or irrigation systems

Installation:

Unroll with studs down on the waterproofing membrane. Overlap by approx. 50 mm, spot taped or hot air welded as necessary. Fold up parapets, and cut flush against pipes and chimneys. At drains, cut flush to edge of the drain and cover the edge with filter fabric or similar.

Apply a thin layer of lean mix concrete (4-5 cm) on top of Perfo Drain as physical protection against later garden maintenance, and then apply soil on top of the concrete.



Separation layer for structural concrete



Platon P5+ replaces the use of lean mix concrete as a separation layer and base for structural concrete. It therefore gives an alternative to the traditional blinding layer, with Platon P5+ placed under the ground slab foundation.

As an upgrading of the system, the layer can protect against humidity and gas from the subsoil.

The installation is fast and simple, and the total solution is therefore also normally less expensive than the traditional blinding layer made from lean mix concrete.

Main advantages and functions:

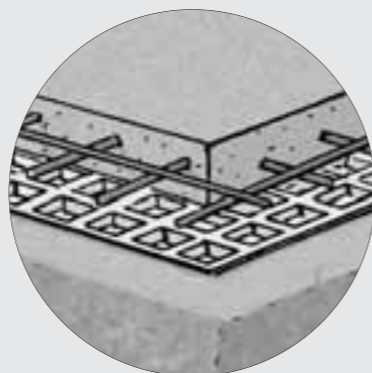
1. Protection against rising damp and capillary action
2. Lower cost than the traditional blinding layer
3. Timesaving and cleaner installation
4. Two flat edges on both sides with the possibility for sealing
5. Clean base for reinforcement

Installation:

Unroll with studs down on a levelled and compacted gravel layer without fixing. The stud-free overlapping edges of 70 mm secure longitudinal joints, preventing concrete from running through. If required, joints may be hot air-welded so that they are gas tight.

Alternatively, Platon Sealing Tape and Platon Sealer can be used to seal joints and to prevent water vapour from entering the structural concrete.

Reinforcement for the structural concrete slab is placed on top of P5+, using suitable spacers. The concrete is poured directly on top of P5+.



Drainage in fields with artificial turf



Traditionally the sub-base for artificial turf constructions is a thick layer of coarse sand and gravel with a drainage system. High attention to details in the drainage system is required for pipes and connections to fit correctly, so that water seeping through from the above layers is taken care of.

Platon ATD is an innovative product in artificial turf designs with the objective of contributing to ideal biomechanical conditions and higher performance in football pitches or similar.

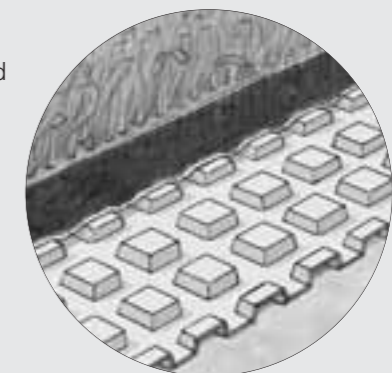
Main advantages and functions:

1. Stops any water from entering the compacted sub-base and destroying its physical condition
2. Gives sufficient stability to preserve the ergonomic properties of the artificial turf construction
3. Quick, easy and fail-safe installation
4. Can be sealed at the joints with a butyl rubber based tape






Installation:

The studded membrane is installed directly on a compacted and graded sub-base which has necessary tolerances. The membrane isolates the sub-base avoiding contamination and flooding of the sub-base, and facilitating the necessary drainage. The sand and gravel sub-base may therefore be thinner than in a conventional construction.





A prefabricated layer, normally a 20 to 25mm thick rubber mat composed of elastic agglomerate, is placed onto Platon ATD and an artificial turf with infill is installed as surface finish.



Products

	Name & Description	No.	Size	Packaging
	Platon PS+ PP membrane as an alternative to traditional blinding layer. Can be used as horizontal damp proofing and radon gas protection.	40 1025	2.34 m x 20 m	Pallet of 16 rolls
	Platon Multi Drain PP membrane with PP filter fabric for protection and drainage of tiled terraces and walkways	4021 10	1.00 m x 15 m	Pallet of 9 rolls
	Platon Perfo Drain PP membrane for protection and drainage of horizontal green roofs and parking areas.	4021 50	2.07 m x 20 m	Pallet of 12 rolls
	Platon DE 25 HDPE sheet for protection, drainage and water storage for horizontal green roofs and terraces.	4042 05	1.33 m x 2.22 m	Pallet of 170 sheets
	Platon ATD High quality virgin UV-stabilized PP membrane for drainage in artificial turf fields.	404007	2.47 m x 25 m	Pallets of 9 rolls

Components

	Sealing Tape Butyl rubber extrusion giving good bond on both faces. Supplied on release paper. For sealing of stud-free joints.	41 2002 41 2003	1x30mmx10m 1x30mmx20m	Box of 1 roll, pack of 5 rolls
	Sealing Rope Butyl rubber extrusion giving good bond to surfaces to seal air gap and fixing points. Supplied on release paper.	41 2011	8 mm diameter x 6 m	Box of 1 roll, pack of 5 rolls
	Sealer Butyl rubber based mastic, used as supplement to extruded sealing products and/or for sealing of fixing points. For use with Platon Multi, P20 and Plaster Base	41 2020	300 ml	Carton of 12 cartridges
	Platon DPC Plane Flat black membrane to be used as Damp Proof Course under internal walls and linked to Platon Membranes with Platon Sealing Tape.	41 00 10	0.40m x 20m	Single rolls Wrapped in PE