



HYDROSTOP- PENETRATING MAT

Concrete-waterproofing membrane - sheeting with a layer of crystallizing compound



PRODUCT PROPERTIES

- Rolled waterproofing membrane,
- Waterproofs due to a layer of plastic and deep penetration,
- No gluing or heat-sealing required,
- Easy to apply,
- Penetrates concrete to at least 5cm deep,
- Ensures an unlimited durability of the barrier,
- Eliminates carbonatation in concrete.

USE

Hydrostop-Penetrating Mat is laid on horizontal, sloped and vertical surfaces prior to pouring reinforced concrete slabs, walls, strip footings etc. The membrane waterproofs reinforced concrete elements and structures after fresh concrete is poured over it. It features a layer of penetrating agents which crystallize inside the concrete, sealing the pores that appear as more storeys are constructed and seasonal thermal stresses occur. This provides an incomparably more effective protection than bituminous layers or bentonite membranes. To be installed on: foundation slab sides, strip footings, spread footings, monolithic walls and the bottoms of reinforced floor slabs.

The product has been designed for waterproofing the basements of buildings and other structures (cellars, underground parking lots), water reservoirs, sewage treatment plants and pumping stations, septic tanks, swimming pools. It is mainly used in locations hard to reach for this purpose. Installation is only done while construction is in progress. This item's range of applications as outlined above is utilized in residential, industrial and public utility construction.

Other parts of structures are often constructed using Hydrostop-Professional Compound and Hydrostop-Mix. Masonry walls and expansion joints are to be waterproofed with other Hydrostop products.



Pic. 1. The side of a foundation slab and an elevator shaft pit waterproofed with Hydrostop-Penetrating Mat.

HOW IT WORKS

Hydrostop-Penetrating Mat features construction sheeting with a rough layer of penetrating compound. A fresh concrete mix poured over the membrane bonds with the penetrating layer. The membrane waterproofs through coating and penetration. In the waterproofing penetration the ingredients diffuse into the wet concrete to a depth of at least 5cm and crystallize inside the pores, which permanently prevents water from permeating the concrete.

The concrete to be poured should be at least class C12/15 for strength and W2 for water permeability.

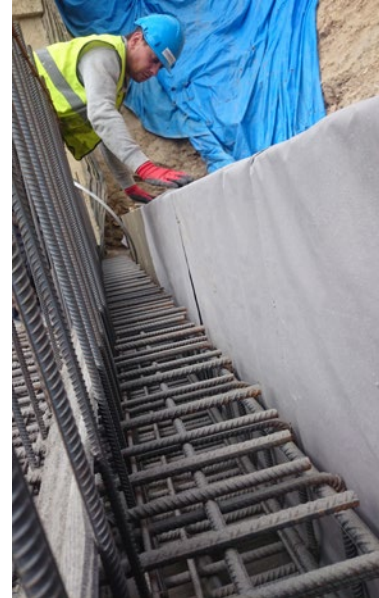


Photo. 1. The side of a foundation slab and an elevator shaft pit waterproofed with Hydrostop-Penetrating Mat.



Photo. 2. Concrete being poured over a wall, with the surface covered with Penetrating Mat.

APPLICATION OF MEMBRANE TO SUBSTRATE

On surfaces which are horizontal and sloped at up to 25% the membrane can be secured with concrete blocks supporting the reinforcement. On severely sloped and vertical surfaces the membrane should, if possible, be secured at the top edge of the surface. In the case of Berlin walls or permanent wooden formwork e.g. roofing nails with washers can be used above the concrete pouring area. With steel formwork, the membrane can be secured with double-sided adhesive tape stuck to a degreased substrate, or better with slats to support the membrane at the top edge of the formwork. Adjacent sheets should have an overlap of ca. 5cm. The overlapping areas of the membrane are not to be glued together, and discontinuities of up to 5cm wide do not cause loss of waterproofing properties due to the membrane's penetrating effect. Once installed, the membrane should be checked for ponding every two days prior to pouring concrete. If water puddles deeper than 1cm are found, the water needs to be removed with a pump or drained under the sheeting through a hole made for this purpose.

POURING CONCRETE

Concrete should be poured from the middle of the sheet toward the edge, avoiding ridge formation and detachment of the membrane from the substrate.

CARE

Hydrostop-Penetrating Mat ensures the right humidity of the concrete surface when curing and facilitates removal of formwork from newly made walls.

ADDITIONAL INFORMATION

Hydrostop-Penetrating Mat is resistant to rain and small water puddles in birdbaths on horizontal surfaces. Prior to pouring, regular checks should be done in accordance with this instruction as described above in order to remove excess water.

FINISHING WORK

If a surface covered with the membrane requires subsequent layers, it is recommended to drill holes up to 5cm deep and use wall plugs. If it is necessary to fasten using deeper holes, every hole needs to be injected prior to anchor/plug installation with 1cu.cm of Hydrostop-Professional Compound diluted with water until a creamy mix is obtained or a 10cm long strip of Hydrostop-Penetrating Mat needs to be inserted into the bottom of every hole, with a width equal to that of the hole diameter.

HEALTH AND SAFETY

Hydrostop-Penetrating Mat is as safe in terms of work health and safety as regular construction sheeting. The safety sheet and certificate are available upon request.

TECHNICAL DATA

Name and no: **Hydrostop-Penetrating Mat 541**
Type of product: sheeting with a layer of crystallizing sealant
Type: roll
Fresh concrete: developed to a minimum strength class of C12/15 and water permeability class of W2
Package size: 20m x 2m roll (40m²)
Thickness: $\geq 0.3\text{mm}$
Approx. yield: 1.05m²/m²
Unit mass: 0.35kg/m²
Width of crystallized non-structural crack: $\leq 0.3\text{mm}$
Water permeability after 28 days: $\geq 0.6\text{MPa}$
Installation temperature: -15°C to 50°C
Exposure class: XA3
Reaction to fire Euroclass: F

SCHEDULING

Time from pouring concrete to removal of formwork with pre-applied penetrating membrane: once concrete has hardened.
Concrete should be poured within 60 days of when membrane was installed.
Between membrane installation and concrete pouring checks should be done every 2 days for water puddles over 1cm, which need to be removed.
Use before: 2 years from production date for complete packages.

References: PN-EN 13967:2012, Certyfikat ZKP Nr 1454-CPR-1022, Atest Higieniczny PZH HK/B/1089/01/2015, Safety sheet.
Document updates available at: www.hydrostop.eu

HYDROSTOP®

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Sales include courier delivery or in-store pick-up. The manufacturer guarantees product quality whereas the buyer is responsible for the selection of the product as well as its application and conditions of use. Hydrostop is a trademark protected by the Patent Office. The use of Hydrostop means the Delivery Terms have been accepted. This information is subject to change without notice. Last updated on 20 September 2013.