

## (Liquid-applied polyurethane waterproofing membrane)

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**Specifications:** **HYDROBLOCK** is a premium, liquid-applied, highly permanent elastic, cold applied and cold curing, one component polyurethane membrane used for long-lasting waterproofing. The **HYDROBLOCK** is based on pure elastomeric hydrophobic polyurethane resins, which result in excellent mechanical, chemical, thermal, UV and natural element resistance properties. Cures by reaction with ground and air moisture.

### Advantages:

- Simple application (roller or airless spray).
- When applied forms seamless membrane without joints.
- Resistant to water/frost, to root penetration, (it can be used in green roofs).
- Crack-bridging up to 2mm, even at -10°C.
- Provides water vapor permeability, so the surface can breathe.
- Provides excellent thermal resistance (it never turns soft), weather and UV resistance.
- Waterproofs old bitumen membranes by covering them, without the need to remove them prior to application.
- Provides high sun reflectivity, contributing to thermoinsulation.
- Maintains its mechanical properties over a temperature span of -30°C to +90°C.
- Provides excellent adhesion to almost any type of surface.
- The waterproofed surface can be used for domestic and public pedestrian and vehicular traffic.
- Resistant to detergents, oils, seawater and domestic chemicals.
- Even if the membrane gets mechanically damaged, it can be easily repaired locally within minutes.
- Does not need the use of open flames (torch) during application.
- Over 15 years of positive feedback worldwide.

### Usage:

- Waterproofing of Roofs, Balconies, Terraces and Verandas
- Waterproofing of Wet Areas (under-tile) in Bathrooms, Kitchens, Balconies, Auxiliary Rooms, etc
- Waterproofing of Pedestrian and Vehicular traffic Decks, Green Roofs, Flowerbeds, Planter Boxes
- Waterproofing of old Bitumen felts, Asphalt felts, EPDM and PVC membranes and old Acrylic coatings.
- Protection of Polyurethane Foam Insulation
- Waterproofing and protection of Concrete constructions/Bridge-Decks, Tunnels, Stadium Stands, etc.

### Technical Data:

s/n	PROPERTY	RESULTS	TEST METHODS
1	Elongation at Break	> 800 %	ASTM D 412 / DIN 52455
2	Tensile Strength	> 4 N/ mm <sup>2</sup>	ASTM D 412 / DIN 52455
3	Water Vapor Permeability	> 25 gr/m <sup>2</sup> /day	ISO 9932:91
4	Resistance to mechanical damage by static impression	High Resistance (class:P3)	EOTA TR-007
5	Resistance to mechanical damage by dynamic impression	High Resistance (class:P3)	EOTA TR-006
6	Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928

7	Adhesion to concrete	>2,0 N/mm <sup>2</sup> (concrete surface failure)	ASTM D 903
8	Crack Bridging Capability	up to 2 mm crack	EOTA TR-008
9	Hardness (Shore A Scale)	65	ASTM D 2240 (15")
10	Resistance to Root Penetration	Resistant	UNE 53420
11	Solar Reflectance (SR)	0.87	ASTM E903-96
12	Solar Emittance (ε)	0.89	ASTM E408-71
13	Thermal Resistance (80oC for 100 days)	Passed - No significant changes	EOTA TR-011
14	UV accelerated ageing, in the presence of moisture	Passed - No significant changes	EOTA TR-010
15	Resistance after water aging	Passed	EOTA TR-012
16	Hydrolysis (5% KOH, 7days circle)	No significant elastomeric change	Inhouse Lab
17	Construction Material Fire class	B2	DIN 4102-1
18	Resistance to Flying Sparks and Radiating Heat	Passed	DIN 4102-7
19	Service Temperature	-30°C to +90°C	Inhouse Lab
20	Shock Temperature (20min)	200°C	Inhouse Lab
21	Rain Stability Time	4 hours	Conditions: 20°C, 50% RH
22	Light Pedestrian Traffic Time	12 hours	
23	Final Curing time	7 days	
24	Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

### Application:

#### Surface Preparation:

Careful surface preparation is essential for optimum finish and durability.

The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 25MPa, cohesive bond strength at least 1.5MPa. New concrete structures need to dry for at least 28 days. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothed. Any loose surface pieces and grinding dust need to be thoroughly removed.

**WARNING:** Do not wash surface with water at least 2 days before application!

#### Repair of cracks and joints:

The careful sealing of existing cracks and joints before the application is extremely important for long lasting waterproofing results.

- Clean concrete cracks and hairline cracks, of dust, residue or other contamination. Prime locally with the HYDROMER and allow 2-3 hours to dry. Fill all prepared cracks with HYDROSEAL sealant. Then apply a layer of **HYDROBLOCK**, 200mm wide centered over all cracks and while wet, cover with a correct cut stripe of fabric. Press it to soak. Then saturate the fabric with enough **HYDROBLOCK**, until it is fully covered. Allow 12 hours to cure.

- Clean concrete expansion joints and control joints of dust, residue or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width: depth ratio of the movement joint should be at a rate of approx. 2:1.

Apply some HYDROSEAL Joint-Sealant on the bottom of the joint only. Then with a brush, apply a stripe

layer of **HYDROBLOCK**, 200mm wide centered over and inside the joint. Place fabric over the wet coating and with a suitable tool, press it deep inside the joint, until it is soaked and the joint is fully covered from the inside. Then fully saturate the fabric with enough **HYDROBLOCK**. Then place a polyethylene cord of the correct dimensions inside the joint and press it deep inside onto the saturated fabric. Fill the remaining free space of the joint with HYDROSEAL sealant. Do not cover. Allow 12-18 hours to cure.

**Priming:**

Prime absorbent surfaces like concrete, cement screed or wood with HYDROMER or with POLYPRIMER SB. Prime surfaces like bitumen membranes, asphaltfelts with HYDROMER. Prime non-absorbent surfaces like metal, ceramic tiles and old coatings with PRIMER. Allow the primer to cure according its technical instruction.

**Waterproofing membrane:**

Stir well before using. Poor the **HYDROBLOCK** onto the primed surface and lay it out by roller or brush, until all surface is covered. You can use airless spray allowing a considerable saving of manpower.

After 12-18 hours (not later than 48 hours) apply another layer of the **HYDROBLOCK**.

For demanding applications, apply a third layer of the **HYDROBLOCK**.

Reinforce always with Fabric at problematic areas, like wall-floor connections, 90° angles, chimneys, pipes, waterspouts (siphon), etc. In order to do that, apply on the still wet **HYDROBLOCK** a correct cut piece of Fabric, press it to soak, and saturate again with enough **HYDROBLOCK**. For detailed application instructions with the Fabric, contact our R+D department.

**RECOMMENDATION:** We recommend reinforcement of the entire surface, with the Fabric. Use 5-10cm stripe overlapping.

**ATTENTION:** Do not apply the **HYDROBLOCK** over 0.6 mm thickness (dry film) per layer. For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperatures retard cure while high temperature speed up curing. High humidity may affect the final finish.

**Finishing:**

If a color stable and chalking-free surface is desired, apply one or two layers of the **HYDROBLOCK** ALTOP over the **HYDROBLOCK**. The application of the **HYDROBLOCK**ALTOP, is especially required, if a dark final color, is desired. (e.g. red, grey, green)

If a heavy duty, abrasion resistant surface is desired (e.g. Public Pedestrian Deck, Car Parking, etc), apply two layers of the POLYTRANS H (aliphatic hard coat transparent) .

For the several Top-Coats application procedures, please consult their technical instructions or contact our R+D Department.

**WARNING:** The **HYDROBLOCK** is slippery when wet. In order to avoid slipperiness during wet days, sprinkle suitable aggregates onto the still wet coating to create an anti-slip surface. Please contact our R+D Dept. for more details.

**Consumption:**

1,4 – 2,5 kg/m<sup>2</sup> applied in two or three layers.

This coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.

**Packaging - Colors:**

**HYDROBLOCK** is supplied in 25 kg, 15 kg, 6 kg, 1kg metal pails. Pails should be stored in dry and cool rooms for up to 9 months. Protect the material against moisture and direct sunlight. Storage temperature: 5°-30°C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

The **HYDROBLOCK** is supplied in white color. Other colors may be supplied on demand.

**Safety measures:**

**HYDROBLOCK** contains isocyanates. See information supplied by the manufacturer.

Please study the Safety Data sheet ([M.S.D.S.](#)).

**PROFESSIONAL USE ONLY**

**Certifications:**

**HYDROBLOCK** was tested by the German state testing institute for construction materials MPA-Braunschweig according the European Union Directive for liquid-applied roof waterproofing kits ETAG 005 and was found conforming.

The **HYDROBLOCK** was certified by the German state Institute for construction techniques DIBt–Berlin with the European Technical Approval (ETA) and with

the CE-mark and certification according to the EOTA (European Organization of Technical Approval).

**European Technical Approval: ETA05/0197 DIBt**

Levels of use categories according to ETAG005, for liquid-applied Polyurethane waterproofing kits:

Working life:	W2	10 Years
Climate Zone:	M and S	All
Imposed loads:	P1 to P3	High
Roof slopes:	S1 to S4	<5° to >30°
Lowest surface temperature:	TL3	-30°C
Highest surface temperature:	TH4	+90°C
Reaction to fire:	Class E	EU Norm
Resistance to wind loads	≥ 50 kPa	EU Norm

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#### Membrana de impermeabilizare poliuretan aplicat-lichid)

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Specificatii: HYDROBLOCK este o vopsea speciala, poliuretanică, foarte elastică, aplicată la rece, o membrană poliuretanică aplicată lichid pentru impermeabilizare de lungă durată.

HYDROBLOCK se bazează pe rășini pure elastomerică poliuretanică hidrofobe, care au ca rezultat excelente proprietăți de rezistență mecanice, chimice, termice, UV, pentru toate tipurile de suport.

Se polimerizează prin reacție cu umiditatea aerului.

avantaje:

- Aplicare simplă (cu rolă sau prin pulverizare fără aer).
- membrană fără sudură, fără îmbinări.
- Rezistent la apă / îngheț, la penetrarea rădăcină, (această poate fi utilizată în cazul acoperișurilor verzi).
- acoperă fisuri de până la 2 mm, chiar și la -10 C.
- Asigură o rezistență termică excelentă (niciodată nu devin moale), intemperii și rezistență la UV.
- Hidroizolează membrane bituminoase vechi, prin acoperirea lor, fără a fi nevoie de a le elimina înainte de aplicare.
- Asigură reflectivitate ridicată la soare, contribuind la termoizolație.

- Menține proprietățile mecanice pe un interval de temperatură de -30°C la + 90°C.
- Oferă o aderență excelentă la aproape orice tip de suprafață.
- Suprafața impermeabilizată poate fi folosită pentru pietoni în interior și a traficului auto.
- Rezistent la detergenți, uleiuri, apă de mare și substanțe chimice interne.
- Chiar dacă membrana este deteriorată mecanic, aceasta poate fi reparată cu ușurință la nivel local în câteva minute.
- Nu are nevoie de utilizarea focului deschis (ajutaj) în timpul aplicării.
- Peste 15 ani de feedback pozitiv la nivel mondial.

Mod de utilizare:

- Hidroizolare acoperisuri, balcoane, terase și verande
- Hidroizolare a zonelor mede (sub țiglă), în băi, bucătării, balcoane, camere auxiliare, etc.
- Hidroizolare a pardoselilor de pietoni, trafic vehicular, acoperișuri verzi, flori,
- Hidroizolare de păsle vechi bitum, păsle asfalt, EPDM și membrane PVC și acoperiri acrilice vechi.
- Protecția spumă poliuretanică de izolare
- Hidroizolare și protecție construcții din beton / pentru poduri, tunele, Stadion Standuri etc.

Timp de întărire finală 7 zile

Pregătirea suprafeței:

de pregătire a suprafeței este esențială pentru finalizarea optimă și durabilitate.

Suprafața trebuie să fie curată, uscată și solidă, fără nici o contaminare, care ar putea afecta aderența membranei. Conținutul maxim de umiditate nu trebuie să depășească 5%. În substrat rezistent la compresiune trebuie să fie de cel puțin 25 MPa, o rezistență a legăturii de coeziune, cel puțin 1.5 MPa. Noile structuri de beton trebuie să se usuce timp de cel puțin 28 de zile. Îndepărtați în profunzime murdăria, grăsimi, uleiuri, substanțe organice trebuie să fie îndepărtate printr-o mașină de rectificat. Neregularitățile de suprafață posibile trebuie să fie netezite, praful trebuie îndepărtat în totalitate.

**AVERTISMENT:** Nu spălați cu apă de suprafață cu cel puțin 2 zile înainte de aplicare!

Repararea fisurilor și a rosturilor:

Sigilarea cu atenție a fisurilor și rosturilor existente înainte de aplicare este extrem de importantă, rezultatul pentru impermeabilizări de lungă durată.

- Consultați producătorul, care vă recomandă primerul sau morsa, specifică de suportului.