HYDROBLOCK

Liquid-applied polyurethane waterproofing membrane

USAGE

HYDROBLOCK is a liquid, cold applied, highly permanent elastic, one component polyurethane membrane used for long-lasting waterproofing. After application, it is cured with the humidity of the environment, creating a seamless membrane without joints. **HYDROBLOCK** is used in a wide variety of applications such as waterproofing of roofs, balconies, terraces, verandas allowing the surface to be used for domestic traffic. It is also suggested for the waterproofing of wet areas (under-tile) in bathrooms, kitchens, balconies, Auxiliary Rooms, etc. Amongst others, **HYDOBLOCK** protects applied bituminous membranes and concrete constructions like bridge-decks, tunnels, foundations etc. It can be applied in places with stagnant water. It maintains its mechanical properties over a temperature span of -30°C to +80°C and it bridges cracks up to 2mm, even at -10°C providing and anti-root properties. Also, it provides high sun reflectivity, contributing to thermal insulation.

COMPONENTS

One component polyurethane varnish.

APPLICATION

The application surface must be clean, dry and free of any contamination, which may harmfully affect the adhesion of the membrane. Old, loose coatings and surface pieces, dirt etc. need to be removed either by waterjet or by mechanical means. Stir well before use. **HYDROBLOCK** can be applied with a bristle brush, paint roller or by airless spray, preferably at least in 2 layers. New concrete structures need to dry for at least 28 days. Maximum moisture content should not exceed 5%. The surface needs to have dried for at least 2 days before application. Fresh and wet concrete substrate must be protected with a primer coat of POLYPRIMER SB. It is suggested that you use POLYPRIMER SB at all surfaces in order to guarantee long-lasting insulation results. Apply the first layer after 2-3h of primer application. For the first layer apply until all the surface is covered by **HYDROBLOCK.** Then after 12h (and not more than 36h) continue to the application of the second layer. For repairing joint gaps, the prepared clean joint must have depth of 5-15mm. Ratio of with:depth should be 2:1. In case of bigger proportion, joint filling cords should be used. The cords width must be at about 30-40% bigger than the width of the gap. Fill the rest blank space with polyurethane sealant HYDROSEAL. If necessary, reinforce carefully the joint with glass paper or/and burlap and apply **HYDROBLOCK** creating an in-situ polyurethane fabric without joint gaps. The use of glass paper/burlap is recommended in critical areas like wall-floor connections, 90° angles, chimneys, pipes, waterspouts etc. Widen and deepen the joint by mechanical means, if the above joint ratio is smaller. Do not apply **HYDROBLOCK** more than 0.7mm of thickness per layer. For best results, temperature of application should be between 5-35°C. For excellent results, protect applied **HYDROBLOCK** with one protective layer of elastic polyurethane varnish PU AL-TOP.

PACKAGING

HYDROBLOCK is disposable in metallic pails of 25kg.

CONSUMPTION

1,4 – 2,5 kg/m^2 applied in 2 or 3 layers.

STORAGE

Do not store the product under high temperatures (>40°C) or under the sun exposition. You can use the product for at least 12 months when stored in original packaging and places with normal temperature and humidity. Agitate the product before use.

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SAFETY

The material is classified as dangerous as it contains amounts of flammable organic solvents. Keep away from sparks and flames. Do not smoke. Do not inhale, avoid contact with eyes and mouth, and in case you apply it by airless spray use a mask. Do not apply in closed spaces without adequate air supply. In liquid form the material contaminates the water. Do not pour it on the ground or water. Always follow the related rules. For additional info ask the MSDS of this material from the producer.

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TECHNICAL CHARACTERISTICS

PROPERTIES	RESULTS	TEST METHODS
Elongation at break	>800 %	ASTM D 412 / DIN 52455
Tensile Strength	>4 N/mm	ASTM D 412 / DIN 52455
Water Vapor Permeability	25 gr/m^2/day	ISO 9932:91
Resistance to water pressure	No leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	>2 N/mm^2 (concrete surface failure)	ASTM D 903
Hardness (Shore A Scale)	65	ASTM D 2240
Construction Material Fire class	B2	DIN 4102-1
Resistance to Flying Sparks and Radiating Heat	Passed	DIN 4102-7
Resistance to wind	>1,84 N/mm^2 (Concrete) >0,38N/mm^2 (Bituminous Membranes)	EOTA, TR-004
Gap bridging (+23^{o}C)	Yes, 2mm	EOTA, TR-008
Gap Bridging (-10^{o}C)	Yes, 2mm	EOTA, TR-008
Thermal Resistance (80^{o}C for 100 days)	Passed	EOTA, TR-011
Rain Stability time	4 hours	Conditions: 20^{o}C, 50% RH
Light Pedestrian Traffic time	12 hours	
Final Curing Time	7 days	
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	
Resistance to mechanical damage by dynamic impression	High Resistance (class P3)	EOTA TR- 007
Resistance to mechanical damage by dynamic impression	High Resistance (class P3)	EOTA TR– 006
Resistance to root penetration	Resistant	UN 53420
Solar Reflectance (SR)	0,87	ASTM E 903-96
Solar Emmitance (ε)	0,89	ASTM E 408-71
UV accelerated ageing in the presence of moisture	Passed-No significant changes	EOTA TR-010
Resistance after water aging	Passed	EOTA TR-012
Hydrolisis (5% KOH, 7days)	No significant elastomeric change	Inhouse Lab
Service temperature	-30^{o}C to +90^{o}C	Inhouse Lab
Shock Temperature (20 min)	200^{o}C	Inhouse Lab

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