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WATERPROOFING

# unii+ polar

FIBRE-REINFORCED UNIVERSAL LIQUID  
WATERPROOFING MEMBRANE WITH IMPROVED DRYING

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## Description

UNII + POLAR is a waterproofing membrane with diffused reinforcement based on IBRID copolymers in aqueous dispersion with high resistance to water stagnation which combines all the features required for the work of new waterproofing and for the renovation of existing ones. The characteristics of the unii + polar product have been significantly improved to allow drying even in the presence of relative environmental humidity of about 90%.

UNII + POLAR is a CE marked product in accordance with the CE EN 1504-2 and EN 14891 regulations, this latest one for liquid applied waterproofing products to be used under tiles and marbles glued with cementitious adhesives.

UNII + POLAR has the highest crack-bridging (capacity to make waterproof bridge on posthumous lesions) in the category (4.93 mm at + 20 ° C and at low temperatures 2.47 mm. At -5 ° C it is classified DM O1 P including the optional tests of resistance to chlorinated and basic water).

UNII + POLAR is a continuous and elastic liquid membrane with a very low capillary absorption, about 10 times lower than common two-component cementitious waterproofing; the calibrated granulometric curve and the mix of synthetic fibers makes it suitable for domestic and resistant pedestrian traffic and suitable for surfaces that can be walked on. It adheres perfectly to any surface, even non-absorbent, without the need to apply primer or adhesion promoters. VELAPRIMER ACW will be used only in special cases as an anti-dust or fixative.

High resistance to U.V. rays and degradation.

## Field of application

Suitable for continuous waterproofing (without joints) of terraces, flat and vaulted roofs, flat roofs, solar panels, balconies, plasters, concrete, plastered chimneys, metal roofing, fiber cement slabs, wood; also suitable for bituminous membranes after priming. Ideal for bathrooms, showers and waterproof protection of high humidity environments; compliant with UNI EN 14891, it can also be used for waterproofing existing floors even with a surface that is not very wettable, such as porcelain stoneware or ceramic tiles, and for the subsequent application of tiles by direct gluing with C2 or higher cementitious adhesives. The nature of the particularly water-repellent polymer and the stable colors over time make it appropriate for waterproofing to leave in view even surfaces with irregular geometries.

**Yield: 0.900 kg / m<sup>2</sup> for each layer. (The product must be applied in two layers min.)**

## Laying instructions

For an optimal distribution of the fibers it is recommended to apply UNII + POLAR with a smooth spatula. The supports must be compact, clean, free of dust, oil or grease and dry without the possibility of capillary rising. →

## Certifications

<b>MARKING</b>	<b>PRINCIPLES</b>
	<b>PI-MC-IR</b>
<b>EN 1504-2</b>	<b>PROTECTION SYSTEMS FOR CONCRETE SURFACES</b>

<b>MARCATURA</b>	<b>PRINCIPI</b>
	<b>DM01-P</b>
<b>EN 14891</b>	<b>IMPERMEABILIZZANTE APPLICATO LIQUIDO DA UTILIZZARE SOTTO PIASTRELLATURE IN CERAMICA INCOLLATE CON ADESIVI</b>

## UNII+ ENSURING SUBSEQUENT DIRECT BOND APPLICATION OF TILES



Consider connecting elements between the horizontal plane and the vertical plane type VELAJOINT BAND.

In extended waterproofing, contraction and expansion joints must be provided; in the case of tiles or similar, it is advisable to create 2x2 mt joints. or 3x3 mt .; for balconies exceeding 6 m<sup>2</sup> the construction of joints every 4-6 m<sup>2</sup> with VELAJOINT BAND is required. If a reinforcement is required, use VELASET stabilized polyester reinforcement.

Use the pure product (max. 1 kg / m<sup>2</sup> for each layer). Wait for the complete drying of the first layer - approx. 6/8 hours before applying a subsequent layer by spreading the product crosswise. In any case, wait 72 hours before applying cementitious claddings.

**Recommended application: by trowel**



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## Warning

Avoid applying at temperatures below + 5 ° C and above + 35 ° C, always considering either environmental or substrate temperature. For outdoor installation **never apply with wet support**. One coat of EPX TIXO should be applied to slabs, leaks and surfaces with a residual moisture content of more than 3 percent.

Check the possibility of formation of surface condensates (**dew point**) that could nullify the characteristics of the product. The verification must be performed even before the application of the second layer.

**Unii + polar** is a one-component product ready for use. Therefore it is recommended not to dilute. Before application, shake slowly only if necessary.

Do not apply on recently applied bituminous membranes, , since the migration of light substances contained in bituminous mixes may cause coating detachment and colour alteration.

For smooth oxidized membranes in good condition or in the presence of residues of ancient coatings, the surface should be previously cleaned with a high pressure washer and primed first the application of **Unii+ polar**. For damaged or highly deteriorated membranes, please contact our technical department asking for support. The surface should have a 3% minimum slope. In summer, at the highest irradiance levels, it is advisable to apply multiple low thickness layers in order to avoid abnormal product drying.

## Chemico-physical properties

Parametro	Valore	Unità di misura	Tolleranza	Metodo di prova
APPEARANCE	PASTY PRODUCT	-	-	-
COLOUR	GREY, RED, WHITE, GREEN	-	-	-
DILUTION RATE	READY TO USE	-	-	-
DRY RESIDUE	70	%	± 5	UNI EN ISO 3251
SPECIFIC WEIGHT	1,35	Kg/l	± 0,05	UNI EN ISO 2811-1
BROOKFIELD VISCOSITY (20 RPM, Spindle. n°5 20 °C)	25000	Cps	± 3000	-
pH (25°C)	8,5	-	± 0,5	-
COLD FLEXIBILITY	-15	°C	-	UNI 1109
TENSILE STRENGTH L/T **	350	N/50mm	± 20%	UNI EN 12311-1
ELONGATION AT BREAK	90	%	± 20%	UNI EN 12311-1
RAIN-FREE DRYING TIME *	2	ore	-	-
WAITING TIME BEFORE APPLYING A SUBSEQUENT OVERLAPPING LAYER *	24	ore	-	-
WAITING TIME FOR COMPLETE DRYING AND COATING APPLICATION	72	ore	-	-
DRY FILM THICKNESS (2kg/m² of product)	1,4	mm	-	-

\* Test conditions: at temperature of 23±2°C, 50±5% R.H. The data indicated above may change depending on building site conditions, including temperature, moisture, ventilation, substrate absorption.

\*\* Tests performed with unii + polar armed with Velaset for a total thickness of 2mm

## Packaging and storage

Products packed in 1, 5, 10 e 20 Kg buckets to be stored in sheltered areas at a temperature not below + 5 ° C or not higher than + 35°C. **IT FEARS THE FROST**. It must be used within one year of the purchase date.



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THE FOLLOWING DATA HAVE BEEN CERTIFIED ACCORDING TO CURRENT LEGISLATION:

 MARCATURA EN 1504-2	PRINCIPI PI-MC-IR	Acceptance limits according to EN 1504-2, PI, MC and IR principles	Unii+ performance results	
Adhesion to concrete according to EN 1542: - after 28 days at +20° C and 50% R.H. (N/mm <sup>2</sup> ):		For flexible systems with no traffic: ≥ 0,8 with traffic: ≥ 1,5	1,0	
Water vapour permeability according to EN ISO 7783-2: - equivalent air layer thickness SD (m):		class I: SD < 5m (permeable to water vapour)	SD 2,4	μ 1915 CLASS I Thickness 1269 μm
Impermeability to water expressed as capillary absorption according to EN 1062-3 (kg/m <sup>2</sup> ·h <sup>0,5</sup> ):		< 0,1	< 0,012	
Carbon dioxide (CO <sub>2</sub> ) permeability according to EN 1062-6 - diffusion equivalent air layer thickness SDCO <sub>2</sub> (m):		> 50	> 50	
 MARCATURA EN 14891	PRINCIPI DM01-P	Acceptance limits according to EN 14891	Unii+ performance results	
Impermeability to water under pressure according to EN 14891-A.7 (1,5 bar for 7 days of positive lift):		No penetration	No penetration	
Crack-bridging ability at +20°C according to EN 14891-A.8.2 (mm):		> 0,75	4,93	
Crack-bridging ability at -5°C according to EN 14891-A.8 (mm):		> 0,75	2,47	
Initial adhesion according to EN 14891-A.6.2 (N/mm <sup>2</sup> ):		> 0,5	1,5	
Adhesion after water immersion according to EN 14891-A.6.3 (N/mm <sup>2</sup> ):		> 0,5	0,9	
Adhesion after heat action according to EN 14891-A.6.5 (N/mm <sup>2</sup> ):		> 0,5	1,0	
Adhesion after freeze-thaw cycles according to EN 14891-A.6.6 (N/mm <sup>2</sup> ):		> 0,5	1,1	
Adhesion after contact with chlorinated water according to EN 14891-A.6.7 (N/mm <sup>2</sup> ):		> 0,5	0,7	
Adhesion after immersion in basic water according to EN 14891- A.6.9 (N/mm <sup>2</sup> ):		> 0,5	1,0	

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