COMPANY
MANUFACTURING
WATERPROOFING
MATERIALS

IIVELA+

TOP WATERPROOFING

unii+

FIBRE-REINFORCED UNIVERSAL LIQUID WATERPROOFING MEMBRANE

Technical data sheet

Description

Diffused reinforcement waterproofing membrane based on water-dispersed HYBRID copolymers **with high resistance to standing water** combining all the features required for the waterproofing of new structures or for the restoration of the existing ones.
CE marked products according to the European standard EN 1504-2 or EN 14891, the latter one refers to liquid applied water impermeable products for use beneath ceramic or marble tiles bonded with adhesives.

Its crack-bridging capacity (ability to provide waterproofing bridge deck protection against posthumous damage) **reaches the highest values in its category** (4,93 mm at +20°C and 2,47 mm at low temperatures, according to DM O1 P classification at -5° C, including chlorinated and basic water resistance optional tests. Continuous elastic liquid membrane with the lowest capillary absorption rate, approximately 10 times less than commonly used bicomponent concrete waterproofing membranes; due to calibration granulometric curves and synthetic fibre mixes, it is suitable for domestic foot traffic, highly resistant and suitable for walkable surfaces, providing perfect adhesion to any kind of surface, even non absorbent ones, **without having to apply any primer** or adhesion promoter. VELAPRIMER ACW should only be used in special cases as an antidust.

Product highly resistant to UV rays and ageing.

Field of application

Suitable for continuous seamless waterproofing of terraces, flat or vaulted roofs, roof terraces, balconies, plaster or concrete coatings, plastered chimneys, metal coverings, fibre cement sheets, wooden coatings; also suitable for bituminous membranes after applying a suitable primer. Suitable for bathrooms, shower cabins and waterproofing enclosures for high moisture environments, in compliance with UNI EN 14891; also suitable for waterproofing existing floors with little wettable surfaces such as gres porcelain or ceramic tiles in general or for subsequent application of tiles with direct bonding C2 cement adhesives or higher.
Due to high water repellency of polymers and colour long lasting stability, it is suitable for waterproofing exposed surfaces with irregular geometry.
Consumption: 0,900 kg/m² of product for each coat. (It should be applied in two coats minimum).

Laying instructions

For an optimal distribution of the fibres, it should be applied by trowel. Surfaces should be compacted, perfectly dry and clean, free of dust, oil and grease, with no possibility of capillary rise.

Certification

MARKING	PRINCIPLES
CE	PI-MC-IR
EN 1504-2	PROTECTION SYSTEMS FOR CONCRETE SURFACES

ACCORDING TO	PRINCIPLES
EN 14891	O-P
LIQUID APPLIED WATER IMPERMEABLE PRODUCTS FOR USE BENEATH CERAMIC TILING BONDED WITH ADHESIVES	

UNII+ ENSURING SUBSEQUENT DIRECT BOND APPLICATION OF TILES

Connecting elements should be established between horizontal and vertical planes.

Large waterproofing surfaces should be provided with contraction and expansion joints; in case of tile coatings or similar, it is advisable to create reticulated joint systems having a size of 2x2 or 3x3 metres; for balconies exceeding 6 m² , it is necessary to create joints every 4-6 m² with VELAJOINT. If you need additional reinforcement, you can use VELASET, a stabilized polyester reinforcing band. It should be used in pure form (max. 1 kg/m2 of product for each coat).
Wait until the first coat has completely dried - approximately 6/8 hours, before applying the second one. It should be laid crosswise.
Wait 72 hours before laying concrete coatings.
Recommended application: by trowel

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Warning

Do not apply at a temperature below + 5°C or higher than + 35°C, always considering either environmental or substrate temperature. The product should not be applied outdoors **in the presence of persistent fog or in case of imminent risk of rain** which may wash it away, ensuring that climatic conditions remain unchanged even 72 hours after application. Check the presence of any surface condensation (**dew point**) which may affect product characteristics. Checks should be carried out even before applying the second coat.

It's a single-component ready to use product which should not be diluted. Before application, shake it slowly only if necessary.

Do not apply to recently laid 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 before applying the product. For damaged or highly deteriorated membranes, please contact our technical department asking for support.

The surface should have a 3 percent 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.

One coat of EPX TIXO should be applied to slabs, leaks and surfaces with a residual moisture content of more than 3 percent.

Chemico-physical properties

Parameter	Value	Measurement unit	Tolerance	Test method
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)	16000	Cps	± 500	-
pH (25°C)	8,5	-	± 0,5	-
COLD FLEXIBILITY	-15	°C	-	UNI 1109
TENSILE STRENGTH L/T	200	N/50mm	± 20%	UNI EN 12311-1
ELONGATION AT BREAK	50	%	± 20%	UNI EN 12311-1
*RAIN-FREE DRYING TIME **	6/8	Hours	-	-
*WAITING TIME BEFORE APPLYING A SUBSEQUENT OVERLAPPING LAYER **	24	Hours	-	-
WAITING TIME FOR COMPLETE DRYING AND COATING APPLICATION	72	Hours	-	-
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.

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 CE 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/mm²):	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	µ
		2,4	1915
		CLASS I	Thickness 1269 µm
Impermeability to water expressed as capillary absorption according to EN 1062-3 (kg/m²·h^0,5):	< 0,1	< 0,012	
Carbon dioxide (CO2) permeability according to EN 1062-6 - diffusion equivalent air layer thickness SDCO2 (m):	> 50	> 50	
CONFORME ALLA NORMA EN 14891 / PRINCIPI 0-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 a +20°C according to EN 14891-A.8.2 (mm):	> 0,75	4,93	
Crack-bridging ability a -5°C according to EN 14891-A.8 (mm):	> 0,75	2,47	
Initial adhesion according to EN 14891-A.6.2 (N/mm²):	> 0,5	1,5	
Adhesion after water immersion according to EN 14891-A.6.3 (N/mm²):	> 0,5	0,9	
Adhesion after heat action according to EN 14891-A.6.5 (N/mm²):	> 0,5	1,0	
Adhesion after freeze-thaw cycles according to EN 14891-A.6.6 (N/mm²):	> 0,5	1,1	
Adhesion after contact with chlorinated water according to EN 14891-A.6.7 (N/mm²):	> 0,5	0,7	
Adhesion after immersion in basic water according to EN 14891-A.6.9 (N/mm²):	> 0,5	1,0	

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