AQUAPROOF GEOLASTIC A+B

MINERAL ORGANIC MEMBRANE, BI-COMPONENT, ALKALI-RESISTANT, BREATHABLE FOR THE FLEXIBLE, HIGHLY ADHESIVE AND DURABLE WATERPROOFING OF BALCONIES, TERRACES AND ROOFING BEFORE LAYING CERAMIC TILES.

CE EN 14891 — CM02P EN 14891

CE EN 1504-2 — PI-MC-IR EN 1504-2

Technical Data Sheet – Rev. 11/2019

DESCRIPTION

AQUAPROOF GEOLASTIC (A+B) is an organic, mineral alkali-resistant, breathable membrane, composed of: *"component A"* based on cementitious binders, selected fine-grained aggregates and special additives; *"component B"* based on synthetic polymers in aqueous dispersion. By mixing them, you obtain a mixture with a consistency that is easily worked with a trowel, which can be applied with a smooth trowel both horizontally and vertically up to a thickness of 2 mm in one single coat. AQUAPROOF GEOLASTIC (A+B) adheres perfectly to all concrete, masonry and ceramic surfaces. Thanks to its composition, in combination with the G-TEX ZERO microporous non-woven fabric or with the fibre-glass mesh G-NET 160, it allows for the application of flexible waterproofing, with high adhesion and durability on balconies, terraces and bathrooms, forming a continuous layer that is resistant to the aggressive action of agents such as CO_2, SO_2 or the chemical attack of de-icing salts.

Complies with European Standard EN 14891 (*"Liquid applied waterproofing products to be used under ceramic tiles glued with adhesives"*) for waterproof products applied as cementitious liquids with improved crack-bridging capacity at very low temperature (-20°C) and resistant to contact with chlorinated water (CM02P).
Complies with European Standard EN 1504-2 (*"Concrete surface protection systems"*) covering (C) according to PI (protection against penetration risks), MC (moisture control) and IR (increase in resistivity) principles.

FIELDS OF APPLICATION

AQUAPROOF GEOLASTIC (A+B) is used together with G-TEX ZERO or with G-NET 160, to apply flexible waterproofing and to protect cementitious screeds or concrete surfaces in general, provided they are perfectly cured and not subject to rising damp, in both new building projects and for restoring old structures. AQUARESET GEOLASTIC (A+B) can be used to waterproof balconies, terraces and large roofs, also subject to deformations or vibrations, retaining walls in concrete, as well as stone and concrete tanks used to contain water. The perfect combination between high adhesion and high deformability, even in particular climatic conditions, makes the applied waterproof layer suitable for the final covering to be applied, which can consist of a wide range of finishing materials, such as ceramic, porcelain stoneware, mosaic, natural stone and reconstructed stone.
AQUARESET GEOLASTIC (A+B) is also suitable to protect plaster or concrete showing cracks caused by shrinkage, and are therefore subject to water penetration, and to treat works that can come into contact with de-icing salts, forming a continuous, flexible and waterproof layer, resistant to the aggressive action of CO_2 or SO_2.

SUBSTRATE PREPARATION

Create surfaces with adequate slopes that guarantee the correct flow of water and avoid stagnation. The substrate to be waterproofed must comply with the requirements set forth by Standard UNI 11493 regarding curing, integrity, mechanical and superficial strength, dimensional regularity, moisture and absence of contaminating agents.
Regardless of the type of substrate, waterproofing requires giving proper consideration to all the details such as positioning of the drains, regularisation of interconnecting points between floor and wall, of both interior and exterior corners and treatment of any structural couplings.

Cementitious screeds
The cementitious screeds must have already performed hydrometric shrinkage, which takes at least 28 days, they must be dry with a moisture content below 4%, flat, solid, compact, without loose parts, free of dust and grease and any other material which could jeopardise perfect bonding of the membrane.
Even off any irregularities using specific GEODRY products.
Very porous, absorbent and superficially crumbling surfaces must be reinforced with the water bonding promoter GEODRY AQUAGRIP RECONTACT.

Ceramic floors
The floors must be intact, resistant, well adherent, dry and clean from residues of previous processing and anything that could jeopardise bonding such as oil, grease and wax.
Remove any tiles which are detaching and even off the surface with specific GEODRY products.
For correct cleaning, wash the old floor with a water and caustic soda solution (30%) and rinse with plenty of water to eliminate any residues.

Concrete
Concrete surfaces must be compact, cured, solid, dry, clean, without loose parts, free of dust and traces of release agents.
In the presence of downgraded concrete structures, remove detaching concrete (hydro-sandblasting or high pressure water wash recommended) and then clean the oxidation of the iron reinforcements. For their active and passive protection, treat with GEOFER 1 K single-component thixotropic mineral mortar. Reconstruct the initial volumes of the concrete and regularise the surface with GEODRY GEOGROUT line fibre-reinforced mineral mortars.

Plaster
The plaster must have performed hydrometric shrinkage and be sufficiently flat, cured, dried, solid, consistent and superficially mechanically resistant. Any finish levelling or old painting must be removed to avoid jeopardising bonding of the system. Excessively porous and crumbly surfaces must be appropriately treated and reinforced with specific GEODRY products.

PRODUCT PREPARATION

Pour AQUAPROOF GEOLASTIC *"component B"* 8 kg (liquid) into a clean container and slowly add AQUAPROOF GEOLASTIC *"component A"* 24 kg (powder) while stirring it mechanically. Use an electric whisk mixer at low speed to avoid excessive incorporation of air. Mix the mixture for about 5 minutes, taking care to remove the powder that has not dispersed perfectly from the sides and the bottom of the container, until a smooth and lump-free mixture is obtained.

APPLICATION

1. Provide the treatment of pipeline systems and, beforehand, position discharge systems like the G-DRAIN ducts, AQUA-GO LATERAL lateral drains, AQUA-GO VERTICAL vertical drains or ESALATORE breather. Apply the AQUAPROOF GEOLASTIC (A+B) mixture with a smooth trowel and incorporate the heat-sealed geomembrane to the exhaust element.
2. Provide the treatment of perimeter joints with elastic waterproof tape G-TEX STRIP EASY H 15 and the treatment of joints between floor and wall in 90° and 270° corners with shaped elastic tapes G-TEX STRIP 90 and G-TEX STRIP 270. Apply a coat of AQUAPROOF GEOLASTIC (A+B) and make sure it is correctly positioned, with no folds, creases or air bubbles.
3. Proceed with the waterproofing of the surface by applying a first coat of AQUAPROOF GEOLASTIC (A+B) with a smooth trowel.
4. While still wet, place the microporous, water-repellent and breathable non-woven fabric G-TEX ZERO (or alternatively, the fibre-glass mesh alkali-resistant G-NET 160) always applying the fabric on the surface with a flat, clean trowel so as to ensure perfect contact and allow any air bubbles to be expelled.

5. Keep on placing G-TEX ZERO (or G-NET 160), creating overlaps of at least 10 cm between one fabric and another, sealing the overlaps with the same AQUAPROOF GEOLASTIC (A+B), so as to guarantee continuity of the waterproofing.
6. When the treated surface can be walked on, apply a second coat of product to ensure complete coverage of G-TEX ZERO (or G-NET 160), respecting a total consumption of about 3.2 kg/m^2, according to the conditions of the substrate.
7. After complete curing of waterproofing membrane (at least 5-6 days), proceed with the laying of the intended ceramic covering with class C2TE S1, AQUABOND EXTRAFLEX cementitious adhesive, or for faster interventions, with cementitious adhesive class C2FT S1, AQUABOND RAPID. Apply the adhesive with a suitably notched trowel and lay the covering according to the provisions of UNI 11493 (Floor and wall ceramic tiles - Instructions for design, installation and maintenance). Design the expansion joints of the covering on those existing in the substrate. If needed, provide additional expansion joints according to the size of the surface to be covered, to the format and the type of material used (indicatively, make fraction joints every 9-15 m^2). Always envisage joints between tiles as per standard UNI 11493.
8. If you do not intend to lay a ceramic covering, always apply a protective waterproof layer with AQUAGEL ECO or AQUAGEL REFLEX permanently elastic organic mineral protective gel.

YIELD

3.2 kg/m^2 depending on the condition of the surface.

RECOMMENDATIONS

- Do not apply on screeds, plaster and concrete not perfectly cured or on wet substrates or if imminent rain is forecast and on very sunny surfaces.
- When the weather is very hot, do not expose the material to sunlight before use, regardless if in powder or liquid form.
- Do not add binders, aggregates or additives.
- Protect the waterproofed surface from rapid evaporation, especially on hot or very windy days, covering it with waterproof sheets.
- Temperature variations can significantly affect the curing time of the product.
- Protect the waterproofed surface from rain, frost or direct sunlight until it is fully cured.
- Any technological systems present, such as external downpipes, railings, antenna supports or similar, must be sealed with AQUAFIX HYBRID sealant adhesive. Once completed, thoroughly check all the critical points and, if necessary, seal them with AQUAFIX HYBRID.
- Do not work in temperatures below +5°C or above +35°C.
- Always apply a final protection of the waterproof layer with AQUAPROOF GEOLASTIC (A+B), depending on the intended use.
- Wash all the equipment used for preparing and applying the product with water before it hardens. After setting, the mortar can only be removed mechanically.

PACKAGING

AQUAPROOF GEOLASTIC (A+B) is provided in 32 kg units containing AQUAPROOF GEOLASTIC *“component A”* in 24 kg polyethylene coated paper bags and AQUAPROOF GEOLASTIC *“component B”* in 8 kg jerry cans. Store the product in a dry place and in its original packaging, well closed. In these conditions its stability is of at least 12 months.

TECHNICAL DATA

Compliant with Standard:	**EN 14891**	
Class according to EN 14891:	**CM02P**	
Compliant with Standard:	**EN 1504:2**	
Class according to EN 1504-2:	**covering (C), principles: - protection against penetration risks (PI) - moisture control (MC) - increase in resistivity (IR)**	
	COMPONENT A	*COMPONENT B*
Appearance:	powder	liquid
Colour:	grey	white
Apparent volume mass (kg/m^3):	1600	1100
Solid residue (%):	100	50
Mixing ratio:	component A : component B = 3 : 1	
Mixture consistency:	plastic-trowable	
Minimum applicable thickness per coat (mm):	≤ 2	
Maximum achievable thickness (mm):	≤ 4	
Mix pot life (h):	~ 1	
Allowed application temperature:	from +5 °C to +35 °C	

FINAL PERFORMANCE according to EN 14891 Class CM02P

	Requirements	**Results**	**Test method**
Initial adhesion (N/mm^2):	≥ 0.5	1.1	EN 14891
Adhesion after immersion in water (N/mm^2):	≥ 0.5	0.6	
Adhesion after heat action: (N/mm^2):	≥ 0.5	0.9	
Adhesion after freeze-thaw cycles ((N/mm^2):	≥ 0.5	0.8	
Adhesion after immersion in basic water (N/mm^2):	≥ 0.5	0.8	
Impermeability to pressurised water:	no penetration	no penetration	
Crack-bridging ability (mm):	≥ 0.75	0.8	

FINAL PERFORMANCE according to EN 1504-2 PI-MC-IR principles

	Requirements	**Results**	**Test method**
Adhesion to concrete after 28 days at +20°C and 50% RH (N/mm^2):	for flexible systems with no traffic ≥ 0.8 with traffic ≥ 1.5	1.02	EN 1542
Thermal compatibility with storm cycles, measured as adhesion (N/mm^2):		0.92	
Permeability to water vapour – equivalent air thickness S_D (m):	Class I S_D < 5 (permeable to vapour)	S_D < 0.31	EN ISO 7783-1
		μ = 71	
Capillary absorption and impermeability to water (kg/m^2·h$^{0.5}$):	< 0.1	0.06	EN 1062-3
Permeability of carbon dioxide (CO_2) – diffusion in equivalent air thickness S_{DCOS} (m):	S_D > 50	S_D = 285	EN 1062-6
Linear shrinkage (%):	< 0.3	< 0.3	EN 12617-1

| Data collection at +23 °C - RH 50% and no ventilation |

SAFETY INSTRUCTIONS

AQUAPROOF GEOLASTIC *"component A"* contains cement that in contact with body perspiration produces an irritant alkaline and sensitising reaction for the skin. AQUAPROOF GEOLASTIC *"component B"* is not classified as hazardous according to current regulations on mixtures. Use suitable clothing, gloves and protective glasses.
Refer to the respective Safety Data Sheet for more information about how to use the product safely.

SPECIFICATIONS

Supply and installation of organic mineral bi-component, alkali-resistant, breathable, membrane, based on cementitious binders, selected fine-grained aggregates, special additives and synthetic polymers in water dispersion, classified as CM02P by EN 14891 and compliant with EN 1504-2 covering (C), according to the PI-MC-IR principles, such as GEODRY ***AQUAPROOF GEOLASTIC (A+B)*** *(characteristics and performance as per Technical Data Sheet)*, specific for flexible waterproofing with high adhesion and durability before laying ceramic tiles.
The surfaces must be clean, solid, degreased, free of loose parts or detaching parts and you must evaluate whether adequate slopes are required so as to guarantee the correct flow of water, thereby preventing stagnation, or whether a regularisation layer is required (to be calculated separately).
Two coats of the product must be applied, using a smooth trowel, for a total consumption of 3.2 kg/m^2, depending on the conditions of the substrate, interposing microporous non-woven fabric that is water-repellent, breathable, elastic, alkali-resistant and in polypropylene between the first and second hand, such as GEODRY **G-TEX ZERO**. Adjacent fabrics must be overlapped along the edges for a length of at least 10 cm and sealed with the same ***AQUAPROOF GEOLASTIC (A+B)***.
When the waterproof layer is fully hardened, the surface must be coated with a mineral adhesive classified as C2TE S1 by Standard EN 12004, such as GEODRY **AQUABOND EXTRAFLEX**, or with a rapid-setting mineral adhesive classified as C2FT S1 by Standard EN 12004, such as GEODRY **AQUABOND RAPID**. Comply with the provisions of Standard UNI 11493 regarding the joints present, the dimensions of the surface to be covered, the size and type of covering used, to be calculated separately. In the absence of ceramic covering, the waterproofing must be protected by applying double-cross-linking and permanent elasticity waterproofing gel, such as GEODRY **AQUAGEL REFLEX** or **AQUAGEL ECO**.
The product must have the following performance characteristics:

Permeability to CO_2 (m):	Compliant S_D > 50	(EN 1062-6)
Permeability to water vapour (m):	Class I (S_D < 5)	(EN ISO 7783-1)
Capillary absorption and impermeability to water (kg/m^2·h$^{0.5}$):	Compliant (w < 0.1)	(EN 1062-3)
Thermal compatibility measured as adhesion according to EN 1542 (N/mm^2): - storm cycles	 > 0.8	 (EN 13687-2)
Adhesion to the support (N/mm^2):	> 0.8	(EN 1542)
Reaction to fire:	Class A1	(EN 13501-1)

In accordance with Standard EN 14891, the product must have the following performance characteristics:

Initial traction adhesion (N/mm^2):	1.1
Traction adhesion after immersion in water (N/mm^2):	0.6
Traction adhesion after thermal aging (N/mm^2):	0.9
Traction adhesion after freeze-thaw cycles (N/mm^2):	0.8
Traction adhesion after contact with lime water (N/mm^2):	0.8
Impermeability to water:	no penetration
Crack-bridging ability (mm):	0.8

FOR FURTHER DETAILS OR SPECIAL USES CONTACT THE **GEODRY TECHNICAL DEPARTMENT**.
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