

G-TEX AIRFULL

GEOMEMBRANE IN FPO, WATERPROOF, DECOUPLING, WITH VAPOUR DIFFUSION CONTROL, ANTI-FRACTURE, ELASTIC, FLEXIBLE, WITH A MULTILAYER STRUCTURE, CRACK-BRIDGING ABILITY AND DIMENSIONAL STABILITY BETWEEN -40 °C AND +80 °C, SUITABLE ON ANY TYPE OF SUBSTRATE EVEN CRACKED, FOR THE WATERPROOFING OF POOLS, BATHS, TANKS AND SURFACES OF ANY TYPE AND DIMENSION.



Technical Data Sheet – Rev. 09/2018

DESCRIPTION

G-TEX AIRFULL is a multilayer polymeric geomembrane with exclusive technology consisting of:

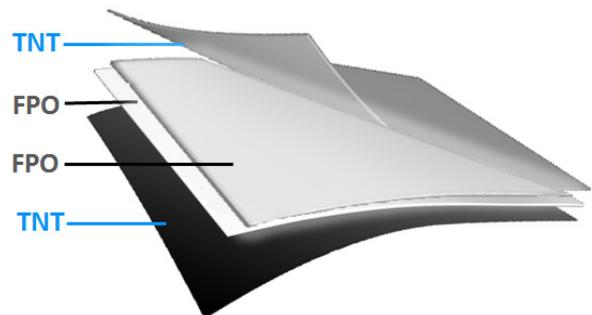
- NWF: TerBond Nonwoven Fabric (alkali resistant polyester fibres) which guarantees high bonding with specific GEODRY adhesives and high tensile strength;
- FPO: Flexyble PolyOlefin + EVA (Etilene Vinil Acetato), double layer with permanent elasticity and variable shape compensating and absorbing the dimensional variations of the substrates.

G-TEX AIRFULL is capable of compensating thermal and physical-mechanical stress to which it is subject without altering its properties.

G-TEX AIRFULL is waterproof, separating, anti-fracture, elastic, flexible, deformable, with high crack bridging ability, high resistant to mechanical stress, to temperature changes, to bacterial aggression, to mould and moss proliferation, anti-root, alkali resistant, resistant to hydrocarbons.

G-TEX AIRFULL allows you to implement waterproofing and separating systems of swimming pools, tubs, roofs, flat roofs, terraces and surfaces of any size, even with possible vapour pressure, before laying any type of ceramic, protective or decorative covering. It guarantees continuity in the waterproofing of the sub-base, even with surface cracks on the substrate, without deteriorating. Its elasticity enables separating (decoupling) of different layers, limiting the transmission of movements and vibrations to top layers.

Thanks to its features of elasticity, flexibility and low thickness (0.80 mm), G-TEX AIRFULL is ideal for waterproofing of even especially complex architectonic surfaces, such as drains, foundations, retaining walls, pillars, beams, stairs, windowsills.



FIELDS OF APPLICATION

G-TEX AIRFULL, used in the GEODRY system, allows you to implement low thickness waterproofing and decoupling (2.5 mm – 3.5 mm), also for waterproofing on overlaying of old flooring and separation and on cracked substrates.

Designed to guarantee long lasting water tightness and decoupling between the various layers, G-TEX AIRFULL is used for horizontal and vertical applications on swimming pools, concrete tanks, hanging tanks, collection tanks, fresh air channels, septic tanks, balconies, terraces, roofs and large surfaces, even in the presence of sectioning, expansion and structural joints and in the presence of possible vapours pressure. Its multilayer structure, which guarantees high bonding with specific GEODRY adhesives, makes it especially suitable as a substrate for laying a wide range of materials such as ceramic, porcelain stoneware, ceramic and glass mosaics, glass, natural stone, reconstructed stone, resilient materials (PVC, rubber, rugs, wood flooring, linoleum), plastic, wood, protective and decorative materials.

In the construction of cool roofs, G-TEX AIRFULL is used as a substrate for protective high-emission heat-reflecting gels to reduce the absorption of solar rays thus lowering the roof temperature.

In the construction of green roofs, G-TEX AIRFULL is used as a waterproof support of raised bed system.

SUBSTRATES

Cement screeds, radiator systems, concrete, plaster, plasterboard, cellular concrete, fibre cement slabs, heat insulation panels (eps, xps, rock wool, glass wool, cork, wood fibre), OSB (Oriented Strand Board) wood, wooden floors, ceramic floors, natural stone, reconstructed stone, metal, rubber, resilient materials in general, glass, glass mosaics, ceramic mosaics, cement membranes, elastomeric membranes, decorative coverings.

SUBSTRATE PREPARATION

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 contaminant 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.

Cement screeds

Provide suitable slopes and set up drains for correct water outflow. The cement 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 inconsistent parts, free of dust and grease and any other material which could jeopardise perfect bonding of G-TEX AIRFULL.

Even off any irregularities using specific GEODRY products.

Very porous, absorbent and superficially crumbling surfaces must be reinforced with water-based adhesion promoter AQUAGRIP RECONTACT by GEODRY.

Ceramic floors

The floors must be intact, resistant, well adherent, dry and clean from residues of previous processing and anything which could jeopardise bonding such as oil, grease or 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 inconsistent 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 clean the oxidation of the iron reinforcements. For their active and passive protection, treat the reinforcements with mineral mortar single-component thixotropic GEOFER 1 K. Restore the initial concrete volumes and regularise the surface with mineral mortar, fibre-reinforced, of the line GEOGROUT by GEODRY.

In case of high temperatures or dried substrate, may be useful moisten the concrete before applying the specific adhesive to glue the geomembrane.

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.

APPLICATION

Waterproofing of swimming pools and tubs

a) Waterproofing vertical walls

1. Beforehand, treat based on the manufacturer's specification each type of accessories, such as skimmers, lights, ducts, PVC, steel or aluminum pipes and other elements.
2. Mix the AQUASAFE ULTRATECH adhesive with water, specific for continuous immersion bonding of G-TEX AIRFULL geomembrane, complying with the mixture preparation methods described in the relative TECHNICAL SHEET.
3. Cut and shape G-TEX AIRFULL, according to the size of the walls, laying the geomembrane on all the vertical walls.

4. Spread the AQUASAFE ULTRATECH adhesive with a 6-8 mm square notched trowel, making sure to spread the adhesive in one direction, coinciding with the direction G-TEX AIRFULL was spread.
5. Glue G-TEX AIRFULL to the entire surface on the fresh layer of adhesive, proceeding from top to bottom, taking care to place the sheets as close as possible to one another.
6. Press the surface of the geomembrane with a smooth trowel so there are no air bubbles and to guarantee perfect bonding.

b) Waterproofing horizontal support

7. Proceed with the same installation technique to laying the geomembrane on all the horizontal support, gluing to the entire surface on the fresh layer of adhesive, taking care to place the sheets as close as possible to one another.
8. When you have finished laying G-TEX AIRFULL on the entire surface, treat the overlapping joints between adjacent geomembranes (included at the screed-wall connection): make sure that the sections of the overlapping geomembrane sections have no dust, cement residues or any other material which can compromise bonding of G-TEX STRIP H 12 joint sealing tape. Apply the AQUAFIX POLYS sealant adhesive, specific for bonding and sealing overlaps between G-TEX geomembranes, by a 3 mm triangular notched trowel. Glue the G-TEX STRIP H 12 on the fresh layer of adhesive and exert sufficient pressure on the entire length of the seals using a smooth trowel so there are no air bubbles and to guarantee perfect sealing.
9. If necessary, treat the internal and/or external corners by gluing shaped elastic waterproof G-TEX STRIP 90 and G-TEX STRIP 270, specific for sealing joints between floor and wall respectively in 90° or 270° corners, using the AQUAFIX POLYS sealant adhesive.
10. Each type of drillings caused by installations of other accessories should be treated sealed with the specific AQUAFIX HYBRID adhesive, specific for bonding and sealing G-TEX geomembranes on any kind of metal, plastic, synthetic and cement surfaces, even damp.
11. When you have finished waterproofing, make sure that the water-impermeable layer is fully hardened and then use the same AQUASAFE ULTRATECH adhesive to lay the ceramic covering, complying with that set forth by standard UNI 11493 (Ceramic covering a floors and walls - Instructions for the planning, for the installation and for the maintenance). Design the expansion joints of the covering on those existing in the substrate. If needed, provide additional expansion joints in proportion to the size of the surface to be covered, to the format and the type of material used (as an indication, make expansion joints each 9-15 m²). Always envisage joints between tiles measuring at least 2 mm wide.

Waterproofing of terraces, roofs and surfaces of any size, even with possible vapour pressure

1. Beforehand, position and seal the G-DRAIN, AQUA-GO or ESALATORE drains, ducts or breather vents selected, setting up the right slopes according to the thickness of the ceramic covering.
2. Mix the AQUABOND EXTRAFLEX adhesive with water, specific for bonding G-TEX geomembranes on cement supports, complying with the mixture preparation methods described in the relative TECHNICAL SHEET.
3. TREATMENT OF EVENTUAL CONSTRUCTION OR EXPANSION JOINTS: proceed with treatment the construction or expansion joints by shaping a geomembrane strip (for this operation, it's recommended the use of G-TEX INFINITY geomembrane in FPO) in proportion to the joint dimensions, including to glue to the substrate at least 15 cm per side of geomembrane. Position the strip reinforcing the joint, so as to create an omega, and glue to the substrate the sides of geomembrane using AQUABOND EXTRAFLEX adhesive. Insert the G-FOAM closed cell polyethylene foam cord into the omega.
4. Cut and shape G-TEX AIRFULL, according to the size of the surface to be waterproofed, juxtaposition between the various geomembrane sheets and overlapping it at least 10 cm on the vertical walls.
5. Proceed to surface waterproof by spreading the AQUABOND EXTRAFLEX adhesive with a 6-8 mm square notched trowel, making sure to spread the adhesive in one direction, coinciding with the direction G-TEX AIRFULL was spread.
6. Glue G-TEX AIRFULL to the entire surface on the fresh layer of adhesive, taking care to place the sheets as close as possible to one another and press the surface of the geomembrane with a smooth trowel so there are no air bubbles and to guarantee perfect bonding.
7. At the joint treated with G-FOAM, do not glue G-TEX AIRFULL on the entire surface but stop application respecting with the joint. Specially shape another geomembrane strip (it's recommended the use of G-TEX INFINITY) based on the width of the joint, and position it on top of G-FOAM to create an inverse omega. Seal the strip along both sides, overlapping on G-TEX AIRFULL, with the AQUAFIX POLYS sealant adhesive, specific for bonding and sealing overlaps between G-TEX geomembranes, by a 3 mm triangular notched trowel, making sure to pressure on the entire length of the overlaps using a smooth trowel so there are no air bubbles and to guarantee perfect sealing.
8. When you have finished laying G-TEX AIRFULL on the entire surface, treat the overlapping joints between adjacent geomembranes: make sure that the sections of the overlapping geomembrane sections have no dust, cement residues or any other material which can compromise bonding of G-TEX STRIP H 12 joint sealing tape. Apply the AQUAFIX POLYS sealant adhesive with a 3 mm triangular notched trowel and glue the G-TEX STRIP H 12 on the fresh layer of adhesive. Exert sufficient pressure on the entire length of the overlaps using a smooth trowel, by removing the excess of product, so there are no air bubbles and to guarantee perfect sealing. During this operation must be done a work as neatly and cleanly as possible, because an excessive smudge of AQUAFIX POLYS out of the overlapping geomembrane to seal could reduce the AQUABOND EXTRAFLEX's adherence for the next laying of the ceramic covering or the protective gel.

9. At the screed-wall connection, overlap the geomembrane by at least 10 cm on the vertical sides and glue the overlap with AQUABOND EXTRAFLEX adhesive leaving the geomembrane free of G-TEX AIRFULL adhesive for at least 1 cm before and after the screed-wall connection.
10. At the screed-wall connection where G-TEX AIRFULL has not been turned up, use elastic waterproof G-TEX STRIP H 20: glue the edge in contact with walls with AQUABOND EXTRAFLEX adhesive and yet for the edge overlapping the horizontal plane use the AQUAFIX POLYS sealant adhesive.
11. If necessary, treat the internal and/or external corners by gluing shaped elastic waterproof G-TEX STRIP 90 and G-TEX STRIP 270, specific for sealing joints between floor and wall respectively in 90° or 270° corners, using the AQUAFIX POLYS sealant adhesive.
12. When you have finished waterproofing, make sure that the water-impermeable layer is fully hardened and then use the same AQUABOND EXTRAFLEX adhesive to lay the ceramic covering, complying with that set forth by standard UNI 11493 (Ceramic covering a floors and walls - Instructions for the planning, for the installation and for the maintenance). Design the expansion joints of the covering on those existing in the substrate. If needed, provide additional expansion joints in proportion to the size of the surface to be covered, to the format and the type of material used (as an indication, make expansion joints each 9-15 m²). Always envisage joints between tiles measuring at least 2 mm wide.
13. If ceramic covering is not foreseen, always provide a protection of the water-impermeable layer be carried out with mineral organic protective gel with permanent elasticity AQUAGEL ECO or AQUAGEL REFLEX.

■ Waterproofing surfaces requiring rapid commissioning

When rapid commissioning is required, lay G-TEX AIRFULL with AQUABOND RAPID adhesive by GEODRY, rapid setting adhesive with variable rheological gel-sol-gel effect with high hydrophilicity and high performance, zero vertical slip and total wettability, classified C2FT S1 in accordance with standard EN 12004. The adhesive can also be used for subsequent laying of ceramic tiles, even large-sized, trafficable after 3 hours from laying.

YIELD

1.00 m² per m² of surface to be waterproofing. Always taken into consideration the technical losses depending on the surface to waterproof.

RECOMMENDATIONS

- Not use on substrates and sub-bases that are not perfectly cured and with residual moisture ≥4%. In this case contact the GEODRY TECHNICAL DEPARTMENT for correct ESALATORE breather vents arrangement on the surface to be waterproofed.
- Lay the geomembrane orientate in favour of the slope of the surface and drainage of rainwater.
- In sealing the overlapping geomembranes or in treatment of G-TEX accessories, not smudge the AQUAFIX POLYS adhesive out of the overlapping geomembranes but conduct a work as neatly and cleanly as possible.
- Geomembrane bonding in proximity to technical installations (such as external rain or banisters), metal and steel's elements, plastic materials or another, must be carried out using AQUAFIX HYBRID sealant adhesive. Seal any drillings caused by tube installations, banisters or other using the AQUAFIX HYBRID sealant adhesive.
- Store in the original closed packages in a sheltered position at a maximum temperature of +30 °C.
- Protect from direct exposure to light.

PACKAGING

G-TEX AIRFULL is available in roll on cardboard tube wrapped with heat-sealed polyethylene, in 37.5 m² (25 m long x 1.50 m wide).

TECHNICAL DATA

Identification data	
Length (m):	25
Width (m):	1.50
Weight (g/m ²):	400
Thickness (mm):	0.80
Operating temperature:	from -40 °C to +80 °C

FINAL PERFORMANCE according EN 13956

	Requirements	Results	Test method
Water tightness:		Approved	EN 1928 Meth. B
Tensile strength (N/50 mm):	MLV L ≥ 300 MLV T ≥ 320	L = 630 T = 531	EN 12311-2 Meth. A
Elongation (%):	MLV L ≥ 30 MLV T ≥ 100	L = 51 T = 76	EN 12311-2 Meth. A
Resistance to overlaps – shear (N/50 mm):	MLV ≥ 110	160	EN 12317-2
Impact Resistance (mm):		150	EN 12691
Resistance to static load (kg):	MLV ≥ 20	20	EN 12730 Meth. B
Flexibility at low temperatures (°C):		-35	EN 495-5
Fire resistance:	Euroclass	F	EN 13501-1
Visible defects:		Approved	EN 1850-2
Straightness (mm):	g ≤ 50	g = 50	EN 1848-2
Planarity (mm):	p ≤ 10	p = 10	EN 1848-2
Dimensional stability (%):	L ≤ 0.2 T ≤ 0.9	L = -0.2 T = 0.9	EN 1107-02

| MLV = Limit value declared |

Other features	Requirements	Results	Test method
Water resistance of overlaps:		Water tightness	Water column
Bonding of AQUABOND EXTRAFLEX over G-TEX AIRFULL: TRACTION (N/mm ²)		0.9	Meth. CSTB
Bonding of AQUABOND EXTRAFLEX over G-TEX AIRFULL: SHEAR (N/mm ²)		1.28	Meth. CSTB
Shock resistance with ball on ceramic floor (no. of blows):		4	Meth. CSTB

| The statements are valid for room temperature +23 °C with a typical test period of 28 days |

CHEMICAL RESISTANCE

Extract of table C.1 reported in APPENDIX C of EN 13956 on the chemical resistance of synthetic membranes referring to the most common chemical substances (concentration % represents the concentration limit at which the polymeric materials are resistant, by exposure to higher or chemical substances concentrations which are not shown in the prospectus, tests must be carried out according to EN 1847, please contact the GEODRY TECHNICAL DEPARTMENT).

Substance	Concentration %
INORGANIC ACIDS	
Sulphuric acid	≤ 25
Sulphurous acid	≤ 6
Nitric acid	≤ 5
Hydrochloric acid	≤ 10
ORGANIC ACIDS	
Benzoic acid	No limits
Acetic acid	≤ 10
Oxalic acid	No limits
Phthalic acid	No limits
Tartaric acid, aqueous	No limits
Citric acid, aqueous	No limits
INORGANIC BASES	
Sodium hydroxide	≤ 10
SALT SOLUTIONS	
Chlorides	No limits
Nitrates	No limits
Sulphates	No limits
Soap Solution	No limits

| The statements are valid for room temperature +23 °C with a typical test period of 28 days |

SPECIFICATIONS

For waterproof sealing of swimming pools, tubs and tanks:

supply and installation of GEODRY waterproofing system, implemented with **G-TEX AIRFULL** by GEODRY geomembrane, multilayer composite polymeric waterproofing in FPO with high elasticity, in accordance with Standard EN 13956. The geomembrane must be completely intact, free of any visible defects in accordance with Standard EN 1850-2 and must comply with the chemical resistance of plastic membranes referring to the most common chemical substances, as per Standard EN 13956 (*features and performance according to the attached Technical Data Sheet*). **G-TEX AIRFULL** will be glued to the substrate after suitable preparation, to be calculated separately, using gel-sol-gel mineral adhesive such as **AQUASAFE ULTRATECH** by GEODRY, specific for G-TEX AIRFULL membrane gluing in the waterproofing of structures in continuous contact with water.

Treatment of screed-wall connection, internal and external corners, horizontal or vertical drains, overlaps between geomembranes, overlapping joints, special accessories (such as skimmers, lights, etc.) and any other details will be implemented using GEODRY accessories, sealed to the substrate using specific adhesives for final sealing from the **AQUASAFE** and **AQUAFIX** by GEODRY line.

Waterproofing must then be covered using a gel-sol-gel effect adhesive classified as C2TE S1 in accordance with Standard EN 12004, such as **AQUASAFE ULTRATECH** by GEODRY, complying with that set forth by standard UNI 11493 with relation to the joints present, the size of the surface to be covered, to the format and the type of covering used, to be calculated separately.

For waterproofing of terraces, roofs and surfaces of any size, even with possible vapour pressure:

supply and installation of GEODRY waterproofing system, implemented with **G-TEX AIRFULL** by GEODRY geomembrane, multilayer composite polymeric waterproofing in FPO with high elasticity, in accordance with Standard EN 13956. The geomembrane must be completely intact, free of any visible defects in accordance with Standard EN 1850-2 and must comply with the chemical resistance of plastic membranes referring to the most common chemical substances, as per Standard EN 13956 (*features and performance according to the attached Technical Data Sheet*). **G-TEX**

AIRFULL will be bonded to the substrate with a variable rheological gel-sol-gel effect with high hydrophilicity such as **AQUABOND EXTRAFLEX** or **AQUABOND RAPID** by GEODRY after suitable preparation, to be calculated separately. Treatment of screed-wall connection, internal and external corners, horizontal or vertical drains, overlaps between geomembranes, overlapping joints and any other details will be implemented using GEODRY accessories, sealed to the substrate using specific adhesives for final sealing from the **AQUABOND** and **AQUAFIX** by GEODRY line. Waterproofing must then be covered using a gel-sol-gel effect adhesive classified as C2TE S1 in accordance with Standard EN 12004, such as **AQUABOND EXTRAFLEX** by GEODRY, or using a gel-sol-gel effect adhesive classified as C2FT S1 in accordance with Standard EN 12004, such as **AQUABOND RAPID** by GEODRY. Comply with that set forth by standard UNI 11493 with relation to the joints present, the size of the surface to be covered, to the format and the type of covering used, to be calculated separately. In the absence of ceramic covering, waterproofing must be protected by applying a specific waterproofing gel for G-TEX geomembrane protection in GEODRY waterproofing systems such as **AQUAGEL REFLEX** or **AQUAGEL ECO** by GEODRY.

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

Tel. +39 075 7825557

support@geodry.com

The information in this technical data sheet is based on our best experience. We cannot be held liable for any product misuse. We therefore recommend anyone who intends to use this product to assess whether it is suitable for the intended application and to perform preliminary tests.