G-TEX TUTOR

GEOMEMBRANE IN FPO, MULTI-FUNCTION, WATERPROOF, SOUND-ABSORBING, WITH VAPOUR DIFFUSION CONTROL, ANTI-FRACTURE, DECOUPLING, CRACK-BRIDGING ABILITY AND DIMENSIONAL STABILITY BETWEEN -40 °C AND +80 °C FOR WATERPROOF BARRIERS ON SUBSTRATES OF ANY TYPE AND SIZE BEFORE LAYING CERAMIC, PORCELAIN STONEWARE TILES, NATURAL STONE, RECONSTRUCTED STONE, WOOD, RESILIENT, PROTECTIVE AND DECORATIVE MATERIALS.

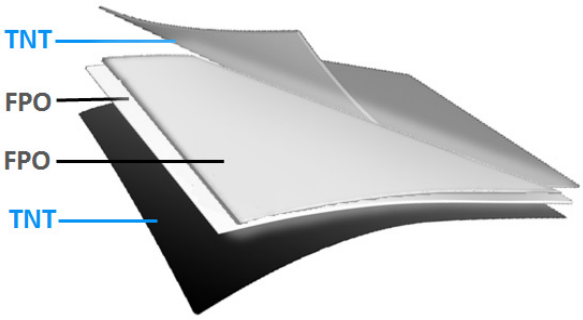
CE
EN 13956

Technical Data Sheet – Rev. 09/2018

DESCRIPTION

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

- NWF: 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;
- Polyester fibre mix subjected to a specific co-extrusion treatment that gives the product the ability to dampen the effects of sound waves for effective acoustic insulation of inter-subflooring.



G-TEX TUTOR is waterproof with high vapour diffusion control on the substrate, anti-fracture, separating, elastic, flexible, with high crack-bridging capacity and high resistance to mechanical stress, variations in temperature, bacterial aggression, proliferation of mould and moss, resistant to hydrocarbons and alkalis, and anti-root.
G-TEX TUTOR has been designed to meet the main construction needs:

- waterproofing on any size sub-base;
- control of substrate vapour diffusion;
- compensation for the thermal and physical-mechanical stresses to which it is subjected, without altering its characteristics;
- counteracting of the propagation of surface cracks in the substrate by limiting them without deteriorating;
- guaranteed substrate waterproofing continuity, decoupling the various layers, preventing the transmission of motion and vibrations to the upper layers;
- allowing, thanks to its multilayer structure, the implementation of sound-absorbing systems with reduced walking noise up to 17 dB, without the need to provide self-supporting intermediate screeds.

Compliant with European Standard EN 13596 ("Flexible membranes for waterproofing - Membranes of plastic and rubber material for waterproofing roofing").

FIELDS OF APPLICATION

G-TEX TUTOR, used in the GEODRY system, allows for the implementation of guaranteed high durability waterproofing systems, decoupling between the various layers and low thickness sound insulation. Designed to guarantee long lasting

water tightness and decoupling between the various layers, G-TEX TUTOR is used for new construction or for restoring deteriorated waterproofing, including overlapping existing floors, on cracked surfaces or on surfaces with excessive residual moisture. With a thickness of just 2.00 mm, G-TEX TUTOR can be used on terraces, large roofs, and horizontal and vertical surfaces, both inside and outside. 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.
G-TEX TUTOR is ideal as a separating layer before laying ceramic flooring on radiant substrates or wood flooring and as a substrate for implementing continuous waterproofing before laying technical or floating floors.

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 TUTOR.
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.

Metal surfaces
Metal surfaces must be dry and clean, free from any residues from previous processing and from anything that could compromise anchoring of the adhesive, such as oils, greases, or waxes. As these are particular, difficult to classify sub-bases, it is advisable to always contact the GEODRY TECHNICAL DEPARTMENT and/or request an on-site inspection.

APPLICATION

Waterproofing terraces, roofs and surfaces of every size

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 TUTOR, according to the size of the surface to be waterproofed, juxtaposition between the various geomembrane sheets.
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 TUTOR was spread.
6. Glue G-TEX TUTOR 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 TUTOR 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 TUTOR, 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 TUTOR 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 seals 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, 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.
10. 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.
11. 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 m^2). Always envisage joints between tiles measuring at least 2 mm wide.
12. 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 TUTOR 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.

■ Waterproofing of non-absorbent, metal, treated wood surfaces or surfaces particularly sensitive to water

For waterproofing of non-absorbent, metal, treated wood surfaces or surfaces particularly sensitive to water, lay G-TEX TUTOR with polyurethane-based bi-component adhesive AQUAFIX ULTRA (A+B) by GEODRY. In this case, the adhesive can be used both for direct laying of G-TEX TUTOR on the substrate and for sealing overlapping between geomembranes (overlapping, perimeter tape, corners, etc.).
As these are particular, difficult to classify sub-bases, it is however advisable to always contact the GEODRY TECHNICAL DEPARTMENT and/or request an on-site inspection.

YIELD

1.00 m^2 per m^2 of surface to be waterproofing.

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.
- 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 TUTOR is available in roll on cardboard tube wrapped with heat-sealed polyethylene, in 30 m^2 (20 m long x 1.50 m wide).

TECHNICAL DATA

Identification data	
Length (m):	20
Width (m):	1.50
Weight (g/m^2):	975
Thickness (mm):	2.0
Operating temperature:	from -40 °C to +80 °C

FINAL PERFORMANCE according EN 13956

	Requirements	**Results**	**Test method**
Water tightness:		Approvato	EN 1928 Meth. B
Tensile strength (N/50 mm):	MLV L ≥ 820 MLV T ≥ 1325	L = 820 T = 1325	EN 12311-2 Meth. A
Elongation (%):	MLV L ≥ 85 MLV T ≥ 75	L = 85 T = 75	EN 12311-2 Meth. A
Resistance to static load (kg):	MLV ≥ 20	20	EN 12730 Meth. B
Impact Resistance (mm):		2000	EN 12691
Longitudinal tear strength:	MLV L ≥ 170	170 MLV min (N)	EN 12310-2
Transversal tear strength:	MLV T ≥ 200	200 MLV min (N)	EN 12310-2
Resistance to overlaps – shear (N/50 mm):		170	EN 12317-2
Flexibility (°C):		-40	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
Effects of chemical products in solution saturated with Calcium Hydroxide at +23 °C:	values unchanged after 28 days		EN 1847

| MLV = Limit value declared |

Other features	Requirements	Results	Test method
Bonding of AQUABOND EXTRAFLEX over G-TEX TUTOR: TRACTION (N/mm^2)		0.9	Meth. CSTB
Bonding of AQUABOND EXTRAFLEX over G-TEX TUTOR: SHEAR (N/mm^2)		1.28	Meth. CSTB
Reducing noise pollution (dB): - ceramic floors - wood floor		 13 17	EN ISO 717-2

| 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

Supply and installation of GEODRY waterproofing system, implemented with ***G-TEX TUTOR*** by GEODRY geomembrane, multilayer composite polymeric waterproofing in FPO with high elasticity, sound-absorbing, 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 TUTOR*** 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**.
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