

Mantoflex

TECHNOLOGICAL READY TO USE LIQUID MEMBRANE, ELASTIC, BREATHABLE, UV RESISTANT, IDEAL FOR WATERPROOFING CEMENTITIOUS SUBSTRATES AND FOR THE PROTECTION AND MAINTENANCE OF OLD WATERPROOFING SYSTEMS. SUITABLE FOR PROTECTING VISIBLE CONCRETE SURFACES AND FOR WATERPROOFING SURFACES BEFORE LAYING CERAMIC TILES WITH ADHESIVES. APPLY ARMOFLEX 160 AS A REINFORCEMENT BETWEEN THE FIRST AND SECOND COAT ON LARGE SURFACES OR ON DAMAGED SUBSTRATES.



TECHNICAL DATA SHEET - REV. 01/2024

DESCRIPTION

MANTOFLEX is a single-component liquid membrane based on synthetic elastomers in water dispersion. It is in the form of a thixotropic paste that can be easily applied to horizontal and vertical surfaces. Once polymerised, it forms an elastic, continuous, waterproof membrane that is resistant to temperature changes, ultraviolet radiation and acid rain. MANTOFLEX is moderately permeable to water vapour. It adheres perfectly to various substrates, such as bituminous sheathing, concrete, fibre cement, wood.

Compliant with European Standard EN 1504-2, coating (C) according to PI (protection against penetration risks), MC (moisture control) and IR (increased resistivity).

FIELDS OF APPLICATION

MANTOFLEX is used for the guaranteed durability protection of concrete surfaces and for waterproofing bathrooms, shower cubicles, saunas, laundry rooms, wet rooms, balconies, kitchens and terraces prior to the installation of ceramic floors, either on new substrates or overlaying old floors.

MANTOFLEX can also be used for the protection or maintenance of old, already oxidised bituminous waterproofing or for the waterproofing and protection of concrete structures, fibre cement structures, chimney conduits, guttering and roofing.

On large surfaces or damaged substrates, place ARMOFLEX 160 between the first and second coat as a reinforcement.

SUBSTRATE PREPARATION

Always provide the appropriate slopes and flatten the evenness of surfaces to eliminate hollows and allow water to drain off properly. On large surfaces, provide, if necessary, for the placement of vapor vents or steam evacuators. Substrates must be sufficiently dry and seasoned, flat, solid, compact, free of crumbling or loose parts, and free of dust, grease, oils, paints, waxes or anything else that may affect the perfect adhesion of the product. Cementitious screeds must have already undergone hygrometric shrinkage, which can be estimated to take at least 28 days, and must be dry with a moisture content of less than 4% to prevent the formation of possible swelling due to excessive residual moisture. 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 rebars. Particularly deteriorated and rusted substrates must be vigorously brushed or sandblasted and treated to prevent further oxidation. Reconstruct the initial concrete volumes and even out the surface with thixotropic, fibre-reinforced, shrinkage-compensated mineral mortar PRATIKO R 3 TIXO. Regularise the evenness of old cement screeds with NEOCEM PRONTO FIBRATO fast-drying, shrinkage-compensated ready-mixed screed.

Particularly absorbent substrates must first be treated with PRIMER A 16 synthetic resin-based insulating primer or RASOTECH CONSOLIDATING PRIMER ultra-fine-particle synthetic resin in aqueous dispersion. Particularly non-absorbent surfaces must first be treated with GRIPEX professional water-based adhesion promoter.

Old ceramic floor coverings must be undamaged, strong, well adhered, dry and clean from residues of previous processing and from anything that could impair the adhesion of the product such as oils, greases and waxes. For proper cleaning, wash the floor with a solution of water and caustic soda (30%) and rinse thoroughly with water to remove any residue. In any case, before applying MANTOFLEX, always check for the presence of expansion joints in the existing floor or substrate screed. Always respect existing structural or fractioning joints in the substrate.

APPLICATION

MANTOFLEX is ready for use and can be used as it is. Stir the product briefly in the pack before use to achieve perfect homogenisation. It is always advisable to previously apply a first coat of product diluted with 20-30% water as a primer, in order to saturate the porosity of the substrate and increase the adhesion of the product. Apply MANTOFLEX by brush, smooth trowel or roller in two or three crossed coats, taking care to create a uniform, thin layer (dry thickness 0.4-0.5 mm per coat), until a continuous, consistent and elastic coat is obtained. Before applying subsequent coats, always wait until the previous one is completely dry (2 to 12 hours, depending on environmental conditions and the porosity of the substrate), observing a consumption of 1.0 kg/m² per mm of thickness.

On large surfaces, on structures subject to particular mechanical stress or on damaged substrates, it will be necessary to interpose between one coat of MANTOFLEX and the next the ARMOFLEX 160 alkali-resistant technological fiberglass mesh. On surfaces larger than 40m², always provide expansion joints in the waterproofing.

After complete curing (at least 5-6 days), proceed with the installation of the planned ceramic coating with COLMEF mineral adhesives. Apply the adhesive using a trowel with suitable teeth and lay the covering in accordance with UNI 11493. 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 m²). Always set up joints between tiles as per standard UNI 11493.

YIELD

1.0 kg/m² per mm thickness, applied in two or three coats with ARMOFLEX 160 in between.

RECOMMENDATIONS

- ◆ Do not apply to screeds, plaster or concrete that is not perfectly cured or subject to rising damp.
- ◆ Do not apply on wet substrates or when rain is imminent.
- ◆ Do not use the product to mask imperfections or cracks in the substrate.
- ◆ Protect the covering from rain or wash-out, frost and direct sunlight until completely crosslinked.
- ◆ Do not apply the product at temperatures below +5 °C or with humidity above 90%.
- ◆ Wash all the equipment used for preparing and applying the product with water before it hardens.

PACKAGING

MANTOFLEX is supplied in 5 kg drums on 320 kg pallets and 20 kg drums on 660 kg pallets. Store the product in a dry place and in its original packaging, well closed. In these conditions its stability lasts at least 12 months.

SAFETY INSTRUCTIONS

Wear gloves, protective goggles and work clothes for protection of eyes and skin. Store the product away from the reach of children. Do not contaminate with food, drink or waterways. After handling, wash with soap and water. Refer to the respective Safety Data Sheet for more information about how to use the product safely.

SPECIFICATIONS

Protection of concrete surfaces in general or waterproofing under tiles by applying a ready-to-use, elastic, breathable, U.V.-resistant, liquid technological membrane, conforming to Standard EN 1504-2 coating (C), according to PI-MC-IR principles, type **MANTOFLEX** by Colmef Srl. The membrane must be applied in two or three coats, by brush, smooth trowel or roller, with a yield of 1.0 kg/m² per mm of thickness, depending on the condition of the substrate, placing

between the first and second coat the technological fiberglass mesh, resistant to alkali, type ARMOFLEX 160 by Colmef Srl.

TECHNICAL DATA

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)
Appearance:	thick paste
Colour:	white grey brick red
Apparent specific weight (kg/m ³):	1500
Solid residue (%):	70
pH value:	≥ 8
Surface drying time at +23 °C:	~ 30 min.
Allowed application temperature:	from +5 °C to +35 °C

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

	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	1.03	EN 1542
Thermal compatibility with storm cycles and subsequent freeze/thaw cycles, measured as adhesion (N/mm ²):		0.90	EN 1542
Direct tensile adhesion after ageing for 7 days at 70 °C (N/mm ²):		1.37	EN 1542
Permeability to water vapour - equivalent air thickness S _D (m):	Class I S _D < 5 (permeable to vapour)	S _D < 5 μ = 330	EN ISO 7783-1
Capillary absorption and impermeability to water (kg/m ² ·h ^{0.5}):	< 0.1	0.0250	EN 1062-3
Permeability of carbon dioxide (CO ₂) - diffusion in equivalent air thickness S _{DCO2} (m):	S _D > 50	S _D = 309	EN 1062-6
Crack-bridging at +23 °C expressed as maximum crack width (mm):	class A1 (0.1 mm) to class A5 (2.5 mm)	Class A3	EN 1062-7
Crack-bridging at +0 °C expressed as maximum crack width (mm):		Class A3	EN 1062-7

DATA DETECTION AT +23°C - 50% R.H. AND IN ABSENCE OF VENTILATION

The information in this bulletin 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 in any case. Always refer to the latest updated version of the technical data sheet available at www.colmef.com.

FOR MORE INFORMATION OR PARTICULAR USES, CONTACT THE COLMEF TECHNICAL SUPPORT DEPARTMENT.

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