



Aquaflex Roof



Ready-to-use flexible liquid membrane with fibres for continuous waterproofing layers on exposed surfaces

WHERE TO USE

For waterproofing and protecting:

- flat roofs;
- paving slabs;
- cupolas and curved roofs.

Once the substrate has been prepared (see relative preparation section) **Aquaflex Roof** may be used on:

- ceramic and stone coatings;
- cementitious screeds and screeds made using special binders (**Topcem** and **Topcem Pronto**);
- concrete;
- existing bitumen sheaths;
- wooden trimmings;
- galvanized sheet, copper, aluminium and iron.

TECHNICAL CHARACTERISTICS

Aquaflex Roof is a ready-to-use coloured waterproofing product for external applications made from synthetic resins dispersed in water, and when dry forms a continuous, flexible, waterproof membrane.

Aquaflex Roof is resistant to all atmospheric conditions and UV rays, and guarantees long-lasting protection for the substrate.

Aquaflex Roof is easy to apply using a long-haired roller, brush or spray on horizontal, sloping and vertical

surfaces. Once dry, **Aquaflex Roof** forms a strong, flexible, tack-free coating, suitable for occasional light foot traffic.

Due to its flexibility, **Aquaflex Roof** is compatible with normal dynamic expansion and contraction stresses caused by temperature variations and vibrations.

Aquaflex Roof complies with the principles defined in EN 1504-9 (*"Products and systems for protecting and repairing concrete structures: definitions, requirements, quality control and conformity assessment. General principles for the use of products and systems"*) and the requirements of EN 1504-2 coating (C) according to principles PI, MC, RC and IR (*"Concrete surface protection systems"*).

RECOMMENDATIONS

- Do not use **Aquaflex Roof** if the temperature is lower than +5°C or higher than +35°C, or if rain is imminent.
- Do not apply if there is dew on the substrate.
- Do not apply **Aquaflex Roof** on wet substrate or on substrates with rising damp.
- Apply **Aquaflex Roof** on surfaces without depressions or hollows and, where required, with the correct amount of slope.
- Do not apply **Aquaflex Roof** on weak or dusty substrates.

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Cleaning a substrate before applying Aquaflex Roof



An example of old terracotta floor requiring treatment before applying Aquaflex Roof



Waterproofing a distribution joint with Mapeband fixed in place with Aquaflex Roof

- Do not apply **Aquaflex Roof** on painted metal substrates.
- If it rains between one coat and another of **Aquaflex Roof**, wait at least 12 hours before applying the next coat, and only if there is no residual moisture, otherwise adhesion between the two coats could be affected.
- Do not use on bituminous membranes that have only recently been applied (< 6 months). Always wait until the surface to be treated has completely oxidised.

APPLICATION PROCEDURE

Preparation of the substrate

All substrates, whether they are new or old, must be solid, clean, dry and free of all traces of oil, grease, old paint, rust, mould and any other material which could compromise the bond.

Concrete and in general mineral substrates must be solid and dry with no rising damp. Any loose parts must be removed. Any hollows in the surface must be repaired with **Mapeslope**.

Prime the surface with a coat of **Aquaflex Roof** diluted with 10% of water.

All wax, water-repellent treatments, etc. must be removed from the surface of ceramic substrates with a suitable detergent and/or by sanding. On old ceramic floors with gaps in the joints between the tiles, grout the joints with **Adesilex P4** before applying **Aquaflex Roof**. Apply **Eco Prim Grip** on non-absorbent ceramic substrates, while on any other type of substrate apply **Aquaflex Roof** used as primer diluted with 10% of water.

If applied on existing bituminous membranes, carefully hydro-blast the surface, wait until the water has drained off and treat the surface with **Primer for Aquaflex**.

When applying the product on metal substrates, thoroughly clean the surface and apply a coat of **Eco Prim Grip** primer.

Before applying **Aquaflex Roof**, pay particular attention to the expansion joints and the fillets between horizontal and vertical surfaces, which must be waterproofed using **Mapeband Easy**, rubber tape sandwiched between two layers of non-woven fabric, or **Mapeband SA**, self-adhesive butyltape, **Mapetex 50** (h 20), bonded to the substrate with **Aquaflex Roof**. Structural joints must be waterproofed with **Mapeband TPE** bonded in place with **Adesilex PG4**. Use a suitable kit from the **Drain** range to seal any drains.

Preparation of the product

The product is supplied ready to use. It is however recommended to mix the contents to perfectly blend the product.

Application of the product

Aquaflex Roof must be applied with a

long-haired roller, brush or airless spray. Apply two dry coats of **Aquaflex Roof** approximately 0.4-0.5 mm thick each. Wait until the first coat is completely dry and that it becomes slightly darker in colour before applying the next coat. The second coat must be applied in a criss-cross direction to the previous coat. The dry thickness of **Aquaflex Roof** must never be less than 0.8-1 mm. If the substrate has micro cracks, insert **Mapetex 50**, non-woven polypropylene fabric between the two layers of **Aquaflex Roof**. Spread on a generous coat of **Aquaflex Roof**. While gradually applying the product, immediately lay the **Mapetex 50** and go over the surface with a flat spreader or spiked roller to ensure it is perfectly wetted. Spread on a second coat of **Aquaflex Roof** once the first coat is completely dry to cover completely **Mapetex 50**. Protect the **Aquaflex Roof** membrane from rain until it is completely dry.

Cleaning the tools

Tools must be cleaned with water immediately after use.

CONSUMPTION

Waterproof membrane: at least 2 kg/m².
Protective finish on bitumen membranes:
– approx. 0.5 kg/m² on smooth membranes.
– approx. 0.9 kg/m² on mineral-filled membranes.

The consumption rates indicated are for a seamless film on a flat surface and could be higher on uneven substrates and according to the absorbency of the substrate.

PACKAGING

20 kg and 5 kg drums.

COLOURS AVAILABLE

White	Grey	Brick red	Oxide red	Green 4040G70Y	RAL 6005	RAL 7013	Black 9005
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STORAGE

Aquaflex Roof may be stored for up to 24 months in its original packaging in a dry place. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Aquaflex Roof is not considered hazardous according to current norms and guidelines regarding the classification of mixtures. It is recommended to use protective gloves and goggles and to take the usual precautions for handling chemicals.

For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above

Aquaflex Roof: ready-mixed liquid elastic membrane with fibres for waterproofing exposed surfaces. Complies with the requirements of EN 1504-2 coating (C) principles PI, MC and IR

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:	paste
Colour:	oxide red, grey, white, terracotta red, green 4040G70Y, Ral 6005, Ral 7013, black 9005
Density (g/cm³):	1.35
Dry solids content (%):	64
Brookfield viscosity (mPa·s):	36,000 (# 6 - 10 rpm)

APPLICATION DATA

Application temperature:	from +5°C to +35°C
Waiting time at +23°C and 50% R.H.:	- between Primer for Aquaflex and 1 st coat: approx. 5-6 h; - between two coats of Aquaflex Roof : approx. 8 h
Ready for use at +23°C and 50% R.H. (h):	approx. 48

MECHANICAL CHARACTERISTICS

Elongation at failure (ISO 37) (%):	300
Tensile strength (ISO 37) (N/mm²):	1.0

FINAL PERFORMANCE (thickness 1.0 mm)

Performance characteristics	Test method	Requirements according to EN 1504-2 coating (C) principles PI, MC and IR	Performance figures for Aquaflex Roof	
Adhesion to concrete - after 28 days at +20°C and 50% R.H. (N/mm²):	EN 1542	Flexible systems with no traffic: ≥ 8	1.3	
Thermal compatibility to freeze thaw cycles with de-icing salts, measured as adhesion (N/mm²):	EN 13687-1		≥ 1	
Thermal compatibility to thunder showers measured as adhesion (N/mm²):	EN 13687-2		≥ 1	
Static crack-bridging at +23°C expressed as maximum crack width (mm):	EN 1062-7	class A1 (0.1 mm) to class A5 (2.5 mm)	Class A4	
Static crack-bridging at 0°C expressed as maximum crack width (mm):		class B1 to class B4.2	Class A4	
Dynamic crack-bridging at 0°C expressed as resistance to cracking cycles:			Class B2	
Permeability to water vapour - equivalent air thickness S_D (m):	EN ISO 7783-1	class I: S _D < 5 m (permeable to vapour)	S _D = 1.45	Class I
Impermeability to water, expressed as capillary absorption (kg/m²·h^{0.5}):	EN 1062-3	< 0.1	0.04	
Permeability to carbon dioxide (CO₂) - diffusion in equivalent air layer thickness S_{DCO2} (m):	EN 1062-6	> 50	S _{DCO2} = 120	
Exposure to artificial weather conditions:	EN 1062-11	After 2000 hours of artificial inclement weather: - no swelling according to EN ISO 4628-2 - no cracking according to EN ISO 4628-4 - no flaking according to EN ISO 4628-5 slight colour variation, loss of brightness and crumbling may be accepted	No swelling, cracking or flaking. Slight colour variation	
Reaction to fire:	EN 13501-1	Euroclass	B-s1-d0	



Application of Aquaflex Roof with a long-haired roller



Paving slab waterproofed with Aquaflex Roof

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information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement

or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

All relevant references for the product are available upon request and from www.mapei.com

