

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;
- domes and curved roofs.

Once the substrate has been duly prepared, **Aquaflex Roof** may be used on:

- ceramic and stone;
- cementitious screeds and screeds made from special binders (**Topcem** and **Topcem Pronto**);
- concrete;
- old bituminous membranes;
- wooden trimmings;
- galvanized sheet, copper, aluminium, steel and iron.

TECHNICAL CHARACTERISTICS

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

Thanks 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 the protection and repair of concrete structures: definitions, requirements, quality control and evaluation of conformity. General principles for the use of products and systems"*) and the requirements of EN 1504-2 coating (C) according to principles PI, MC and IR (*"Surface protection systems for concrete"*).

RECOMMENDATIONS

- Do not use **Aquaflex Roof** if the temperature is lower than +5°C or higher than +35°C, or if it is about to rain.
- Do not apply if there is dew on the substrate.
- Do not apply **Aquaflex Roof** on wet substrates 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.
- Do not apply **Aquaflex Roof** on painted metal surfaces.
- If it rains between one coat and another of **Aquaflex Roof**, wait at least 12 hours before applying the next coat, and always until there is no residual moisture; 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 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 affect adhesion.

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

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 butyl rubber tape, or by bonding **Mapetex 50** (h 20) 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, but mixing before use is recommended so that it is perfectly blended.

Application of the product

Aquaflex Roof must be applied with a long-piled roller, brush or by 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 crossways with respect 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 **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 **Aquaflex Roof** membrane from rain until it is completely dry.



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



Application of Aquaflex Roof with a long-piled roller



Paving slab waterproofed with Aquaflex Roof

CLEANING TOOLS

Tools must be cleaned with water immediately after use.

CONSUMPTION

Waterproof membrane: at least 2 kg/m².

Protective finish on bituminous 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

Aquaflex Roof is available in white, black and different shades of grey, red and green.

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

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.com

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

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

PRODUCT IDENTITY

Consistency:	paste
Colour:	according to the chosen colour
Density:	1.35 g/cm ³
Dry solids content:	64%
Brookfield viscosity:	36,000 mPa·s (# 6 - 10 rpm)

APPLICATION DATA

Application temperature:	from +5°C to +35°C
Waiting time at +23°C and 50% R.H.:	<ul style="list-style-type: none"> between Aquaflex Primer and 1st coat: approx. 5-6 h; between two coats of Aquaflex Roof: approx. 8 h
Ready for use at +23°C and 50% R.H.:	approx. 48 h

MECHANICAL CHARACTERISTICS

Elongation at failure (ISO 37):	300%
Tensile strength (ISO 37):	1.0 N/mm ²

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/mm ²):	EN 1542		1.3 N/mm ²
Thermal compatibility to freeze/thaw cycles with de-icing salts, measured as adhesion:	EN 13687-1	flexible systems with no traffic: ≥ 8	≥ 1 N/mm ²
Thermal compatibility to thunder showers measured as adhesion:	EN 13687-2		≥ 1 N/mm ²
Static crack-bridging at +23°C expressed as maximum crack width:		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):	EN 1062-7		Class A4
Dynamic crack-bridging at 0°C expressed as resistance to cracking cycles:		class B1 to class B4.2	Class B2
Permeability to water vapour – equivalent air thickness S _D :	EN ISO 7783-1	class I: S _D < 5 m (permeable to vapour)	S _D = 1.45 m Class I
Impermeability to water, expressed as capillary absorption:	EN 1062-3	< 0.1 kg/m ² ·h ^{0.5}	0.04 kg/m ² ·h ^{0.5}
Permeability to carbon dioxide (CO ₂) – diffusion in equivalent air layer thickness S _{DCO₂} :	EN 1062-6	> 50 m	S _{DCO₂} = 120 m

Exposure to artificial atmospheric agents:	EN 1062-11	After 2000 hours of artificial bad weather: <ul style="list-style-type: none"> 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
External fire exposure class:	EN 13501-5	-	Broof t1

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 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

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