

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 Pronto** and **Mapecem Pronto**);
 - concrete;
 - old bituminous membranes;
 - wooden trimmings;
 - galvanised sheet, copper, aluminium and iron.

TECHNICAL CHARACTERISTICS

Aquaflex Roof is a ready-to-use grey 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 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 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 **Planitop Fast 330** or **Adesilex P4**. 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 SA**, self-adhesive butyl rubber tape, or **Mapeband Easy**, rubber tape sandwiched between two layers of non-woven fabric. Structural joints must be waterproofed with **Mapeband TPE** bonded in place with **Adesilex PG4**.

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-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 (after approximately 8-12 hours under normal temperature and humidity conditions, according to the absorption of the substrate). 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**. Gently lay **Mapetex 50** on the first layer of **Aquaflex Roof** while it is still fresh and press it down with a flat trowel or spiked roller so that it makes perfect contact.

Spread on a second coat of **Aquaflex Roof** once the first coat is thoroughly dry to completely cover **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 drums.

COLOURS AVAILABLE

Grey.

STORAGE

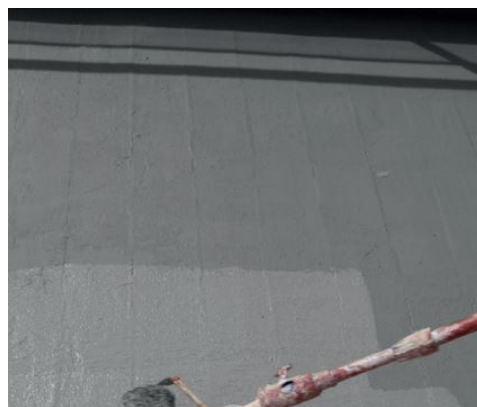
Aquaflex Roof may be stored for up to 24 months in its original packaging in a dry place. Protect from frost.



Cleaning a substrate before applying Aquaflex Roof



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



Application of Aquaflex Roof with a long-haired roller



Paving slab waterproofed with Aquaflex Roof

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: | grey |
| Density (g/cm ³): | 1.35 |
| Dry solids content (%): | 64 |
| Brookfield viscosity (mPa·s): | 36,000 (# 6 - 10 rpm) |

APPLICATION DATA

| | |
|--------------------------------------|---|
| Application temperature: | Application temperature: |
| Waiting time at +23°C and 50% R.H.: | - between Primer for Aquaflex 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) (N/mm ²): | 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/mm ²): | EN 1542 | Flexible systems with no traffic: ≥ 8 | 1.3 |
| Thermal compatibility to freeze thaw cycles with de-icing salts, measured as adhesion (N/mm ²): | EN 13687-1 | | ≥ 1 |
| Thermal compatibility to thunder showers measured as adhesion (N/mm ²): | 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 SD (m): | EN ISO 7783-1 | class I: SD < 5 m (permeable to vapour) | SD =1.45 | Class I |
| Impermeability to water, expressed as capillary absorption (kg/m ² ·h0.5): | EN 1062-3 | < 0.1 | 0.04 | |
| Permeability to carbon dioxide (CO ₂) – diffusion in equivalent air layer thickness SDCO ₂ (m): | EN 1062-6 | > 50 | SDCO ₂ = 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 flacking according to EN ISO 4628-5 slight colour variation, loss of brightness and crumbling may be accepted | No swelling, cracking or flacking. Slight colour variation | |
| Reaction to fire: | EN 13501-1 | Euroclass | B-s1-d0 | |

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

For further and complete information about the safe use of our product please refer to the latest version of our Safety Data Sheet available for download from our website at www.mapei.com.au.
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 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.au.

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