MAPEI

CE
EN 13969

Mapethene EQ

Self-adhesive bituminous membrane for waterproofing structures below ground level

WHERE TO USE

Mapethene EQ is a self-adhesive bituminous membrane made from a mixture of bitumen and special polymers sandwiched to a film of high density polyethylene (HDPE).

Mapethene EQ is used to waterproof the outer surface of concrete, brick and block-built foundations, basements and underground garages.

ADVANTAGES

- **Mapethene EQ** is applied cold in complete safety without using flames.
- Highly flexible which makes it simple, quick and easy to apply.
- Adheres perfectly to substrates. Thanks to the use of **Mapethene Primer W** it may be applied at low temperatures and on slightly damp substrates.
- Good crack-bridging properties once applied.
- Impermeable up to a pressure of 4 bar.
- Preformed membrane: more control on its thickness during production and complete uniformity of the mix.

TECHNICAL CHARACTERISTICS

Mapethene EQ is a self-adhesive preformed bituminous waterproofing membrane made from a special mixture of bitumen admixed with polymers sandwiched to a film of HDPE, forming an impermeable sheet resistant to tearing.
Once applied **Mapethene EQ** is immediately resistant to water, including sudden rainfall.
Mapethene EQ does not contain solvents.
Mapethene EQ meets the requirements of EN 13969 (*"Bituminous membranes to prevent rising damp from the ground"*).

RECOMMENDATIONS

Do not use **Mapethene EQ** in the following cases:

- during rainy weather;
- on substrates with condensation or free-standing water on the surface;
- without a protective layer if exposed to direct mechanical loads.

Transport and store **Mapethene EQ** vertically.

APPLICATION PROCEDURE

Substrate preparation

Mapethene EQ may be applied on concrete, solid bricks and vibro-compressed concrete blocks.
Substrates must be flat, sound and clean. Remove cement laitance, loose and crumbling parts and traces of dust, grease and form release agents with a pressure washer and wait until all the water has dried off.
Remove all traces of old waterproofing material.
If the reinforced cement structure to be waterproofed

has gravel clusters or other irregularities, remove them with hand or power tools or by hydro-demolition. Carefully clean any exposed rebar, treat them with a coat of **Mapefer 1K** anti-corrosion cementitious mortar and then fill all the gaps and demolished areas with **Planitop Smooth & Repair R4** quick-setting, compensated-shrinkage, thixotropic cementitious structural mortar or a suitable product from the **Mapegrout** line of mortars.

When applying the product on bricks or blocks, on the other hand, completely remove all traces of mortar protruding from between the blocks, skim over any areas with defects and grout any gaps in the joints with **Mapegrout 430** fine-textured thixotropic mortar or **Mapewall Render & Strengthen** high strength, natural hydraulic lime-based rendering and masonry mortar.

Blend in all the corners between the foundations and walls and between adjacent vertical walls with the same products used to repair the surfaces and round off any sharp edges or corners.

Seal structural joints with **Mapeband TPE** tape bonded to the substrate with **Adesilex PG4** epoxy adhesive broadcast with **Quartz 0.5**.

After preparing the substrate as specified, apply a coat of **Mapethene Primer** one-component, solvent-free bitumen emulsion. As an alternative at low temperatures, it is possible to use **Mapethene Primer W** one-component, ready-mixed primer. The consumption rate for these types of primer varies depending on the absorbency of the substrate and is generally around 150-200 g/m^2.

Application

Seal any elements passing through horizontal and vertical surfaces with two pieces of **Mapethene EQ** cut to shape to form a collar between the object passing through the surface and the substrate, as shown in the figure below.

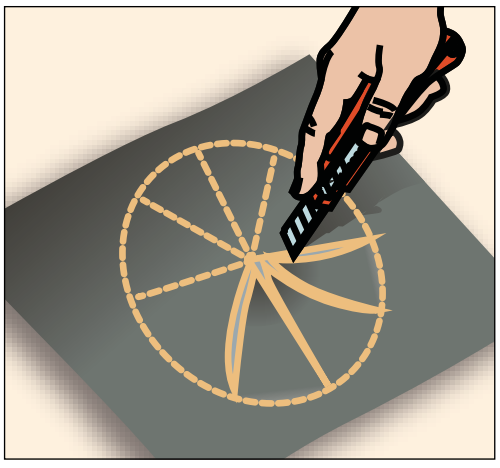

Figura 1 - First piece of Mapethene EQ to be cut to suit the diameter of the member passing through the surface

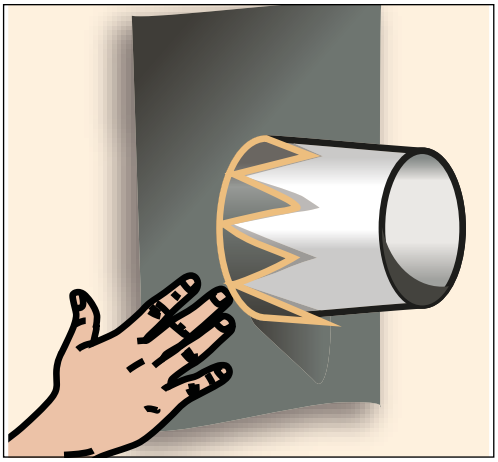

Figura 2 - Placing the first piece around the member

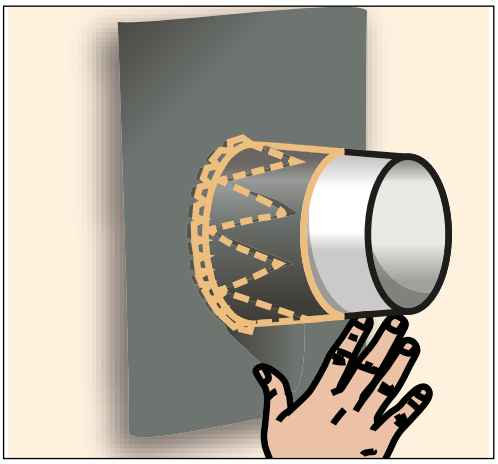

Figura 3 - Placing a second piece of Mapethene EQ to form a collar around the member

When applying the membrane on horizontal surfaces, remove the first 20 cm of silicone film, line up the roll in the direction it is to be applied and unroll the **Mapethene EQ**. Remove the film as you unroll the membrane so that it adheres evenly to the substrate. Overlaps between adjacent rolls of membrane must be at least 5 cm wide. Line up the membrane on the HDPE film of the roll of membrane already applied and bond the next roll of membrane. Make sure the joints between the pieces of membrane are staggered and then go over the overlaps carefully with a rubber roller.
When applying the membrane on vertical surfaces, we recommend cutting **Mapethene EQ** according to the height of the surface to be waterproofed. Remove around 30 cm of silicone film, line up the sheet according to the direction it is to be applied and bond it to the substrate starting from the highest point. Then apply the **Mapethene EQ**, making sure there is an overlap at least 5 cm wide, as described in the procedure for applying on horizontal surfaces.

To prevent damaging the upper edge of the membrane, we suggest applying **Mapeband SA** self-adhesive butyl tape with alkali-resistant, non-woven fabric backing, between the **Mapethene EQ** and the substrate.

Mapethene EQ: ***flexible bituminous waterproofing membrane in compliance with EN 13969 standard***

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Width (mm):	1,000
Thickness (mm):	1.2
Weight (kg/m2):	1.2
APPLICATION DATA	
Application temperature:	-5°C to +30°C
FINAL PERFORMANCE	
Impermeable to water (bar):	4

Performance characteristic	Reference method	Requirements according to EN 13969	Performance figures for Mapethene EQ
Tensile strength (N/50 mm):	EN 12311-1	value declared by manufacturer	140 ± 90
Longitudinal elongation at failure (%):	EN 12311-1		500 ± 300
Transversal elongation at failure (%):	EN 12311-1		50 ± 45
Permeability to water vapour S_D (m):	EN 1931		320
Impact resistance:	EN 12691		passa, method A ≤ 100
Flexibility at low temperatures (°C):	EN 1109		- 5
Resistance to static loads:	EN 12730		pass, method B ≤ 5
Resistance to tearing (nail method) (N):	EN 12310-1		110 ± 30
Durability, expressed as watertightness after artificial ageing:	EN 1296, test in compliance with EN 1928	impermeability at 60 kPa	pass
Durability, expressed as watertightness after exposure to chemicals:	EN 1847, test in compliance with EN 1928	impermeability at 60 kPa	pass
Reaction to fire (Euroclass):	EN 13501-1	Euroclass	E

Mapethene EQ

Carry out localised repairs to areas that have been accidentally damaged with pieces of **Mapethene EQ** cut to suit from the roll of membrane.

Protecting the waterproofing layer
Within 48 hours of applying **Mapethene EQ**, protect all waterproofed surfaces with a protective drainage membrane, such as **Polyfond Kit Drain** made by Polyglass S.p.A., which protects the **Mapethene EQ** when holes and trenches are filled in.

Cleaning
Clean hands with lukewarm water and tools with water or thinners.

PACKAGING
Supplied in 20 m^2 rolls (width 1 m) packed in a cardboard box.

STORAGE
Mapethene EQ may be stored for 12 months in its original packaging. Protect from freezing weather.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Mapethene EQ is an article that, according to current European norms and regulations (Reg. 1906/2007/CE - REACH), does not require a Material Safety Data Sheet. When using this product we recommend wearing gloves and safety goggles and to adhere to the safety guidelines for the area in which work is carried out.
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 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

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

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