Beyem Proof Flexible

Two-component, cement-based, polymer modified flexible membrane for concrete surface protection and waterproofing

CE CE

EN 14891 **EN 1504-2**





About this product

BEYEM PROOF FLEXIBLE is a two-component, cement based, polymer modified flexible membrane for concrete surface protection and waterproofing. Formulated with special cements, selected aggregates, organic additives and resins to improve adhesion and waterproofing. Specially suitable for containing water. Approved for potable water contact. Specially suitable for applications subject to small movements, when flexibility is a must and for use beneath ceramic tiling bonded with adhesives.

Benefits

- Modified polymer mortar (PCC).
- Excellent adhesion.
- High flexibility.
- Rapid drying.
- Waterproof up to 7,5 atm of pressure positive lift.
- Suitable for spray machines and manual applications (by brush or thin trowel)
- Waterproof and permeable to water vapour. Fast hardening without cracking.
- Both internal and external use.
- Weather resistant.
- High protection against the effects of de-icing salts and freeze-thaw attack.
- Resistant to chlorinated water.
- High crack-bridging ability at very low temperature (-20ºC).
- CM02P class according EN14891.

Use

Concrete surface protection according to the MC and RI principles: Moisture Control (MC) by surface coating and Increasing Resistivity (IR) by limiting moisture content.
Liquid applied water impermeable cement product (CM) for use beneath ceramic tiling bonded with adhesives with crack-bridging ability at very low temperature (02) and resistant to chlorinated water (P).
Waterproofing of foundations, basement walls, cellars, concrete slabs, walls, tanks, swimming pools, cellars, planters, lift pits, balconies, terraces, bathrooms, showers… Protection of buildings against water damage. Waterproofing of substrates that can undergo small movements or with little cracks (BEYEM PROOF FLEXIBLE absorbs micro-cracks).

Substrates

BEYEM PROOF FLEXIBLE is suitable for:

- Concrete
- Cement based substrates
- Rendering and plastering mortar
- BEYEM's concrete repair mortars.

Preparation of substrates

Substrates must be free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting by repair materials. Where necessary, concrete must be cleaned by sandblasting, high pressure water jetting or other approved mechanical methods that do not cause vibration or impact, to leave a clean and keyed surface. Absorbent substrates should be previously wetted until they are saturated, preventing waterlogging, and applying the mortar once the surface has a matt appearance. Smooth, slightly absorbent or very damaged substrates should be treated to obtain a surface with minimum guarantees of roughness and tensile strength. For more information regarding concrete substrate preparation, refer to the recommendations provided in EN 1504-10.

Instructions for use

BEYEM PROOF FLEXIBLE is presented in adequate proportions of its two components. Pour the component B (liquid) into a clean container and add the component A (powder) little by little. Mix until a homogeneous and lump-free paste is obtained. Let the mix stand for 5 minutes before application.
Apply a minimum of 2 layers by spray render or by hand (using a trowel o brush) pressing the material to ensure adhesion. The second layer (and successive ones) can be applied in the same way, once the first layer has dried (from 2 to 6 hours, depending on the environmental conditions). If the final thickness has to exceed 4 mm, 3 layers of product should be applied. It is advisable to apply the successive layers in perpendicular directions and avoid the accumulation of more material than is necessary in the corners or joints between vertical and horizontal elements.
It is recommended embedding BEYEM MALLA 160 gr alkali-resistant reinforcement mesh in the first coat of BEYEM PROOF FLEXIBLE while it is still wet. The mesh must also be used in areas with either small cracks or in areas which are under particular stress.

Cautions and recommendations

- Do not apply below 8°C or above 30°C.
- Do not apply when there is risk of frost, rain, strong wind or direct sunlight.
- Do not vary the mixing ratio of the components.
- Critical areas as fillen joints between vertical and horizontal elements must be treated with a dry mortar to minimize the application angle of BEYEM PROOF FLEXIBLE.
- If the surfaces waterproofed with BEYEM PROOF FLEXIBLE can suffer strong mechanical aggression, they should be covered with some protective element such as ceramic tiles, etc.)
- Sealing of structural joints and joints subject to high dynamic stress may require special pieces.
- Apply preferably on the positive side, that is, on the one that receives the water pressure.
- Applied on negative side, there are risk of detachment if water pressure is higher than adhesion of material.
- Protect the mortar applied of early dehydration, using suitable curing methods. The curing operation in humid environment is essential for at least 24 hours after application.
- Do not apply on gypsum, metal or wood.
- Mix only sufficient material that can be applied using available labour and equipment.
- BEYEM PROOF FLEXIBLE must cure for a minimum of 3-7 days before receiving mechanical loads.
- Water pressure loadable after 7-14 days.

Technical data

Product identity. Properties of mixture and application data

Appearance and color	
Component A	Grey powder
Component B	White liquid
Grading	0-800 µm
Density of the mix	≈ 1660 Kg/m^3
Maximum application thickness	2-5 mm
Coverage	
2 mm thickness (without water pressure)	≈ 3 Kg/m^2
4 mm thickness (with water pressure)	≈ 6 Kg/m^2
Tariff code component A	3824.50.90.00
Tariff code component B	3209.10.00.00

Technical data

Final performances	
Type	Surface protection mortar for concrete EN 1504-2 CMO2P EN 14891
Bond strength	≥ 1,0 MPa
Capillary absorption and permeability to water	W < 0,1 kg/m^{2}h$^{1/2}$
Water vapour permeability	Class I: S_D < 5 m
Reaction to fire	Euroclass F
Initial tensile adhesion strength	≥ 0,5 MPa
Tensile adhesion strength after water immersion	≥ 0,5 MPa
Tensile adhesion strength after heat ageing	≥ 0,5 MPa
Tensile adhesion strength after freeze-thaw cycles	≥ 0,5 MPa
Tensile adhesion strength after limewater immersion	≥ 0,5 MPa
Tensile adhesion strength after chlorinated water immersion	≥ 0,5 MPa
Resistance to crack propagation	
-5ºC	≥ 0,75 mm
-20ºC	≥ 0,75 mm
Water tightness	No penetration

Packaging

BEYEM PROOF FLEXIBLE is packed in pre-measured batches of 32 kg (24 kg plastic lined paper bags – Component A- and 8,0 kg plastic bottle – Component B-). Boxes of three units of 5 Kg (Component A) and three plastic bottles of 1.7 l (Component B).
Storage: when stored unopened in a cool dry place, shelf life is 12 months from date of manufacture.

Cleaning tools

Tools can be cleaned easily with water before the product hardens. Hardened product can be removed only mechanically.

Project specification

Surface protection of concrete and waterproofing must be carried out with two-component, cement based, polymer modified flexible membrane compliant with EN 14891 and EN 1504-2 and according to Principle 2, method 2.3 and Principle 8, method 8.3 of EN 1504-9, such as Beyem Proof Flexible, manufactured by Rodacal Beyem Company. Coverage will be ≈ 1,5 kg / m² per mm of thickness.

Health and Safety

For further and complete information about the safe use of our product please refer to our latest version of the Safety Data Sheet, which is available upon request.
Disposal of the product and packaging must be in accordance with current legislation. This is responsibility of the final product user.

Certifications

AENOR ER Empresa Registrada UNE-EN ISO 9001 — ER-1089/1999

AENOR ER Gestión I+D+i UNE 166002 — IDI-0004/2012

CERTIFIED IQNet MANAGEMENT SYSTEM

Migration of salts certificate
nº MA10-04614

Contact

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Note

Product for professional use
The above guidelines and information is accurate to the best of our knowledge and is offered in good faith. This information is true and accurate, but as conditions of use and any labor involved are beyond our control, the end user must satisfy himself by prior testing that the product is suitable for his specific application, and no responsibility can be accepted, or any warranty given by our Representatives, Agents or Distributors.

End user should ensure that he has our latest literature, copy of which will be sent upon request.