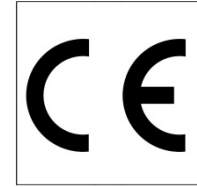
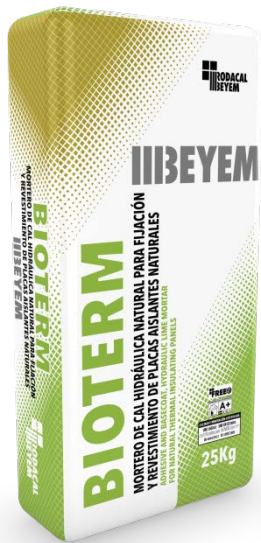


Beyem Bioterm

Adhesive and basecoat, hydraulic lime mortar for natural thermal insulating panels in ETICS



EN 998-1



About this product

BEYEM BIOTERM is a polymer-modified and shrinkage compensated, adhesive and basecoat, natural hydraulic lime (NHL) mortar for fixing and rendering natural thermal insulating panels (cork, wood fibre, mineral wool, etc.) in ETICS. Formulated with natural hydraulic lime (NHL), natural pozzolan, selected aggregates and organic additives. Natural composition. Free of Portland cement. Indoor environment quality. Classified as A+ class according to Décret n°. 2011-321 (France). Free of radionuclides.

Benefits

- Suitable for spray render and pump machines or manual applications.
- High water vapour permeability. Allows the wall to breathe.
- High deformability.
- Excellent impact resistance.
- High bond strength on ICB, WF and MW panels.
- Compatible with old masonry brickworks/walls.
- Great plasticity. Excellent adhesion.
- Rainwater- proof. Weather resistant.
- Free of chlorides.
- Suitable for internal or external walls.
- New construction and building rehabilitation.
- Natural bacteriostatic and natural fungistatic.
- Very low VOCs emissions.
- Radiation-free certificate. **FREE**☼
- Mineral product. **Eco**

Use

Bonding and levelling of natural thermal insulation boards (expanded or agglomerated cork –ICB-, wood fibre –WF- and mineral wood –MW -) in ETICS. Bedding coat for meshcloth insulation systems. Specially suitable for rendering walls in rehabilitation works (old buildings) and for the treatment of cracks in facades with hydraulic lime based system.

Substrates

BEYEM BIOTERM is suitable for:

Bonding of natural thermal insulation panels:

- New construction and rehabilitation brickwork. Ceramic bricks. Traditional plastering /rendering mortars. Stonework.
- Bricks, cement based substrates and concrete blocks.

Levelling thermal insulation panels:

- Expanded or agglomerated cork board, wood fibre and mineral wood panels.

Anti-cracking system :

- BEYEM NEOCAL MURO

In cases not described, contact Technical Support.

Preparation of substrates

Substrates must be clean, compact and free of substances that reduce adhesion such as dust, oil, grease and with no loose material. Substrates must submit an adequate porosity and surface roughness. Uneven areas must be corrected. Dampen substrates with water to cool down and wait until the thin layer of water disappears. This operation is essential to avoid rapid drying and depends on the degree of porosity and surface absorption. Do not apply on gypsum-based plasters, paint, metal surfaces, plastic, surface waterproofing products or materials with low mechanical properties.

Instructions for use

Mix manually of mechanically BEYEM BIOTERM with 6,0-7,0 l per bag of clean water until a homogeneous, creamy and lump-free paste is obtained. Let the mix stand for 5 minutes before application.

As adhesive: Apply BEYEM BIOTERM directly on the edges of the panel in perimeter strips (4-8 cm width and 2-4 cm thickness) and several 8-10 cm Ø spots in the centre of the boards, depending of the size of the panel. The minimum bonded surface area must be at least 80%. Alternatively, use the notched trowel method for planimetrically correct substrates, spreading the product over the whole surface of the board.

As basecoat: 24-72h after installing the panels, fix corners profiles and reinforcement mesh in gaps. Insert fasteners and regularize any existing irregularities with the same BEYEM BIOTERM mortar. Treat conveniently the singular points. Spread a layer of mortar directly onto the insulation panel and then regularise the level with a notched trowel.

Unfold the reinforcement mesh of 160 gr/ m² from top to bottom and press the mortar grooves until they are completely embedded in them. Joints of reinforcement mesh must be overlapped by at least 10 cm. This layer should be at least 2 mm thick and the squares of the embedded mesh should be visible through the surface. Once this layer has hardened, a second layer of BEYEM BIOTERM is applied (1-3 mm) to finish the covered surface. The finishing coat can be applied at least 48-72 hours after last application of base coat.

Cautions and recommendations

- The boards should never overlay the expansion joints of the building.
- Do not apply on plastic, metal or wood.
- Do not apply below 5°C or above 30°C.
- Do not apply when there is risk of frost, rain, strong wind or direct sunlight.
- Do not apply to areas where there is a possibility of stagnant water.
- It is mandatory to use ancillary elements: base profiles, corner profiles, etc.
- The minimum number of fasteners per square metres is 6 for ICB/WF/MW and 8 fasteners for building higher than 25m.
- Reinforce the critical points of facade before first layer of basecoat using reinforcement mesh of 160 gr/ m² and fixing it with BEYEM BIOTERM.
- Do not finish the insulation system with conventional renders.
- Contact areas with base/top profiles will be sealed with elastic joint sealant.
- Anti-cracking system in combination with BEYEM NEOCAL MURO and natural mesh. Do not use as a plaster directly on the wall.
- Lime mortars have a slower setting, so the hardening time increases.

Technical data

Product identity. Properties of mixture and application data

Appearance	Powder
Color	Beige
Bulk density	≈ 1100 Kg/m ³
Density of the mix	≈ 1530 Kg/m ³
Grading	0-600 μm
Mixing water,%	± 26%
Minimum thickness application as adhesive	≈ 2 cm
Maximum thickness application as adhesive	≈ 5 cm
Minimum thickness application as basecoat	≈ 3 mm
Maximum thickness application as basecoat	≈ 5 mm
Coverage	≈ 1,25-1,750 Kg/m ² per mm of thickness
Tariff code	3824.50.90.00

Final performances	
Classification	GP CSIV W _c 2
Adhesion	≥ 0,30 MPa
Bond strength onto insulation board	≥ internal cohesion of the board or ≥ 0,15 MPa
Compressive strength	≥ 6,0 MPa
Flexural strength	≥ 2,0 MPa
Thermal conductivity	0,53 W/m·K
Reaction to fire	Euroclass F
Total VOCs (28 days)	≤ 500 µg/m ³
Radioactivity index (U, Ra, Pb, Th, others)	I = 0,197

Packaging

BEYEM BIOTERM is packed 25 kg plastic lined paper bags.

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

Bonding and leveling of ICB, WF and MW panels for External Thermal Insulation Composite System (ETICS), must be carried out with polymer-modified, shrinkage compensated adhesive and basecoat, natural hydraulic lime mortar compliant with EN 998-1 –Class GP CSIV W_c2, such as Beyem Bioterm manufactured by Rodacal Beyem company. Coverage will be ≈ 1,25-1,75 kg/m² per mm of thickness. The substrate must be clean, sound, compact and dimensionally stable. Expansion joints must be respected.

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



ER-1089/1999



IDI-0004/2012



Indoor Environment Quality

Certificate nº LQAI.MC.43/19
EN 16000-09



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 labour 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.