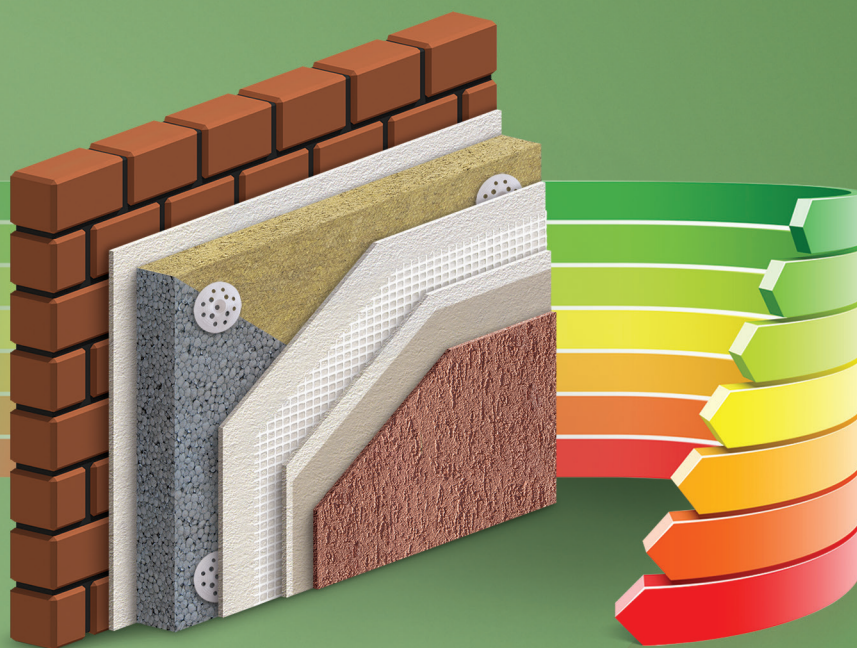




FINOMIX®
DRY MORTARS

**certified external thermal
insulation composite systems**



Systems certified by



Certification Nos: **ETA 15/0720**,
ETA 20/0174 & **ETA 20/0175**

energy efficiency: responsibility & investment

Finoclima® External Thermal Insulation Composite Systems (ETICS) provide integrated solutions for the external thermal insulation of buildings, capable of achieving energy savings of up to 30% by minimizing heat loss through the building envelope.

In the EU, buildings account for approximately 40-45% of total energy consumption, with 60% of that related to heating and cooling. Designing and constructing more energy-efficient buildings can therefore play a crucial role in reducing overall energy demand. In turn, this reduction in consumption can lead to a significant decrease in CO₂ emissions –by as much as 50%, actively contributing to climate change mitigation.

Finoclima® ETICS comply with the specifications set by EOTA (European Organization for Technical Assessment), have been tested and certified in accordance with the requirements of the European Directive ETAG 004 (European Technical Approval Guideline), and have received European Technical Approval (ETA) with certification numbers 20/0175 (**Finoclima**® EPS), 20/0174 (**Finoclima**® MW) and 15/0720 (**Finoclima**® MINERAL).

ETICS systems bearing the above European Technical Approval –when applied by certified professionals and in full accordance with manufacturer instructions and European Directives– ensure reliable performance for at least 20 years, offering **insulation, waterproofing, breathability, mechanical strength and fire protection**.

In conclusion, integrating External Thermal Insulation Systems into buildings leads to substantial energy savings, lower operational and maintenance costs, improved living conditions, and enhanced environmental sustainability.



10+1 advantages of Finoclima® ETIC systems

1

Energy savings in heating and cooling, as the systems minimize the exchange of heat between the interior and exterior environment, maintaining a stable indoor climate all year round, both in winter and summer.

2

Utilization of the thermal mass of the building's structural elements, which are located within the insulated envelope. The energy stored in these elements is gradually released, keeping the indoor temperature stable over time.

3

Effective reduction of thermal bridges, as all external structural elements of the building are uniformly covered. This results in energy savings of up to 30% compared to conventional insulation methods.

4

Prevention of moisture and mold formation, as the temperature of walls and other surfaces is maintained at higher levels.

5

Excellent breathability, which helps prevent the formation of condensation on structural elements of the building.

6

Protection of structural elements from stress caused by moisture and temperature fluctuations. In addition, the risk of carbonation of reinforced concrete elements due to CO₂ exposure is significantly reduced, which in turn minimizes the likelihood of reinforcement corrosion. As a result, the average service life of the structure is extended.

7

Aesthetic upgrade of building façades. Full preservation of the original architectural design is possible, even in restoration projects of historic buildings. The systems offer complete freedom in façade design.

8

Reduced building maintenance costs, provided that the Finoclima® systems application guidelines are properly followed.

9

Contribution to tackling climate change and protecting the environment. By reducing energy consumption, a Finoclima® external thermal insulation system can help cut CO₂ emissions by up to 50%.

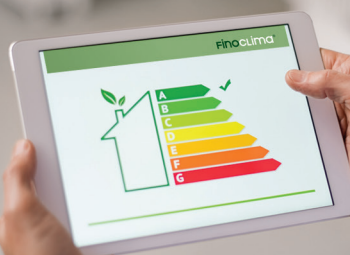
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Increase in the market value of your property. According to the latest Building Energy Performance Regulation, an energy performance certificate is required for any transaction involving a building, directly affecting its commercial value.

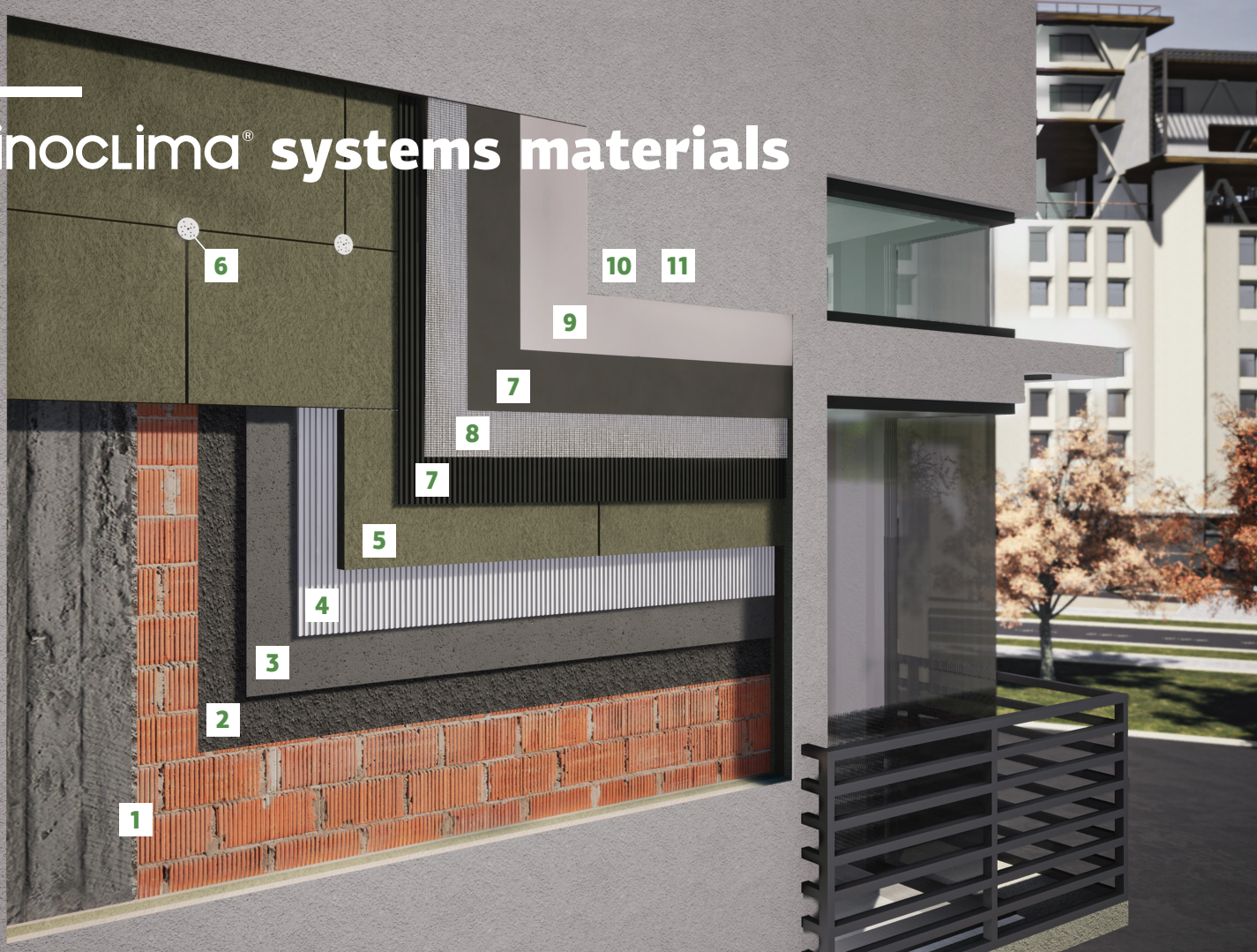
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All Finoclima® external thermal insulation systems are certified with European Technical Approval (ETA numbers 15/0720, 20/0174 & 20/0175) in accordance with ETAG 004 guidelines.

Finoclima® ETIC systems fully comply with all the required specifications of programs for energy-saving interventions in residential buildings, ensuring the installation of external thermal insulation and achieving energy upgrades of up to 60%.



Finoclima® systems materials



1 substrate

Masonry/concrete

2 SP 20

Polymer-modified rough cast render

3 SB 30

Polymer-modified base-coat render

4 FC 1100

Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards
WHITE / GREY

FC 1100 thermo•fix

Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards
WHITE

5 clima•eps insulating boards

Certified expanded polystyrene boards, white (W) or graphite (G).

clima•mw insulating boards

Certified mineral wool boards.
Fire classification A1.

6 clima•fix anchors

Suitable for concrete, masonry and stone.
Available from 9cm to 16cm.
Certified according to ETAG 014.

7 FC 1100

Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards - WHITE / GREY

FC 1100 thermo•fix

Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards - WHITE

FC 1100 organic

Organic, fiber-reinforced, ready-to-use adhesive & reinforcement coating for thermal insulation boards
WHITE

8 clima•net fiberglass mesh

160gr/m², alkali resistant. Certified according to ETAG 004.

9 acrylic primer 1350

Adhesion primer for acrylic renders

silicone primer 1450

Adhesion primer for silicone renders

10 FC 1300•acryl

Ready-to-use acrylic render

FC 1300•silicone

Ready-to-use silicone render

FC 1300•siloxane

Ready-to-use acrylic render, siloxane improved

FC 1200

Polymer-modified fiber-reinforced final-coat render

11 FC 1300 flex•roll silicone

Ready-to-use flexible roller-applied silicone render

Finoclima® EPS with expanded polystyrene thermal insulation boards & organic renders



It is the most commonly used system and provides an efficient, safe, and consistently reliable solution for the thermal insulation of building facades. Expanded polystyrene is the most widespread thermal insulation material for external thermal insulation systems worldwide, and is characterized by its low weight, high breathability compared to other foam insulation materials, elasticity, and superior thermal insulation, especially in the case of graphite-expanded polystyrene EPS ($\lambda=0,031 \text{ W/m}\cdot\text{K}$).

Finoclima® MW with mineral wool thermal insulation boards & organic renders



It is used when there are special fire protection requirements for the building's facade. The high-density mineral wool boards specifically designed for ETICS, combined with high-quality organic and inorganic renders and **FINOMIX** adhesives, achieve a fire resistance class of A2, s1, d0, ensuring top-tier fire protection. In addition, the mineral wool thermal insulation boards offer high performance in thermal insulation ($\lambda=0.035 \text{ W/m}\cdot\text{K}$), soundproofing, and excellent breathability which facilitates the diffusion of water vapour inside the buildings, especially the ones with high demands, such as sports centers, restaurants, spas, etc.

Finoclima® MINERAL with expanded polystyrene thermal insulation boards & inorganic renders



It provides an economical and reliable solution for the thermal insulation of building facades. The inorganic renders of this system are characterized by excellent breathability, offering high impact strength and crack resistance, as well as remarkable durability in highly corrosive environments, such as coastal areas. The **Finoclima® MINERAL** system offers the benefits of external thermal insulation with expanded polystyrene, and combined with the inorganic **FINOMIX** renders, it provides a traditional aesthetic to building facades.

	Finoclima® EPS	Finoclima® MW	Finoclima® MINERAL
Adhesive	FC 1100 Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards Consumption: 4-5 kg/m ²	FC 1100 Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards Consumption: 4-5 kg/m ²	FC 1100 Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards Consumption: 4-5 kg/m ²
Insulating material	<ul style="list-style-type: none"> ■ CLIMA•EPS 80 W expanded polystyrene boards ($\lambda=0,036 \text{ W/m}\cdot\text{K}$) ■ CLIMA•EPS 80 G graphite expanded polystyrene boards ($\lambda=0,031 \text{ W/m}\cdot\text{K}$) 	CLIMA•MW mineral wool boards ($\lambda=0,035 \text{ W/m}\cdot\text{K}$)	<ul style="list-style-type: none"> ■ CLIMA•EPS 80 W expanded polystyrene boards ($\lambda=0,036 \text{ W/m}\cdot\text{K}$) ■ CLIMA•EPS 80 G graphite expanded polystyrene boards ($\lambda=0,031 \text{ W/m}\cdot\text{K}$)
Mechanical fastening	CLIMA•FIX anchors certified according to ETAG 014 Consumption: 4-5 pcs/m ²	CLIMA•FIX anchors certified according to ETAG 014 Consumption: 4-6 pcs/m ²	CLIMA•FIX anchors certified according to ETAG 014 Consumption: 4-5 pcs/m ²
Reinforcing mortar	FC 1100 Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards Consumption: 4-5 kg/m ²	FC 1100 Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards Consumption: 4-5 kg/m ²	FC 1100 Polymer-modified fiber-reinforced adhesive & reinforcing mortar for thermal insulation boards Consumption: 4-5 kg/m ²
Reinforcing mesh	CLIMA•NET white fiberglass mesh certified according to ETAG 004 Mesh square opening: 4x4mm, weight: 160g/m ²	CLIMA•NET white fiberglass mesh certified according to ETAG 004 Mesh square opening: 4x4mm, weight: 160g/m ²	CLIMA•NET white fiberglass mesh certified according to ETAG 004 Mesh square opening: 4x4mm, weight: 160g/m ²
Primer	<ul style="list-style-type: none"> ■ acrylic primer 1350 Adhesion primer for acrylic renders ■ silicone primer 1450 Adhesion primer for silicone renders Consumption: 0,25-0,30 kg/m² 	<ul style="list-style-type: none"> ■ acrylic primer 1350 Adhesion primer for acrylic renders ■ silicone primer 1450 Adhesion primer for silicone renders Consumption: 0,25-0,30 kg/m² 	Not required. Optionally: fino•contact Adhesion promoting primer with quartz aggregates Consumption: 0,30-0,40 kg/m ²
Final-coat render	<ul style="list-style-type: none"> ■ FC 1300•acryl Ready-to-use acrylic render ■ FC 1300•silicone Ready-to-use silicone render ■ FC 1300•siloxane Ready-to-use acrylic render, siloxane improved Consumption: 1,8-3,2 kg/m² depending on the grain size 	<ul style="list-style-type: none"> ■ FC 1300•acryl Ready-to-use acrylic render ■ FC 1300•silicone Ready-to-use silicone render ■ FC 1300•siloxane Ready-to-use acrylic render, siloxane improved Consumption: 1,8-3,2 kg/m² depending on the grain size 	FC 1200 Polymer-modified fiber-reinforced final-coat render Consumption: 6-7 kg/m ² depending on the grain size

the installation of ETIC systems in 5 steps

1. Preparation and substrate

The substrate must be clean, relatively smooth, and capable of bearing loads. For brick masonry, it is recommended to seal any potential holes in the bricks (e.g. with grout), ensuring that concrete surfaces and renders have adequately dried.

In all cases (new or existing constructions), it is advisable to check the flatness of the substrate, as it significantly affects the quality of the final result.

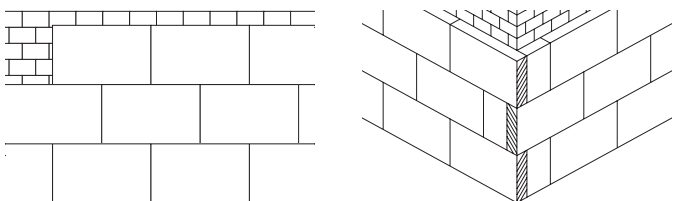
In new constructions, electrical and plumbing installations must be completed, casings installed, and all surfaces specified in the design sealed. Scaffolding should be covered with burlap or other protective sheets to shield system components from sunlight and rain for the necessary duration until the work is completed.

The temperature during the application of the system must be between 5°C and 35°C.

2. Installation of thermal insulation boards

Before installing the insulation boards, the surfaces are leveled, guide lines are set up, and the starter profile is installed using specialized anchors and spacers.

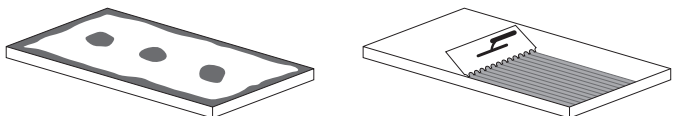
The boards must be installed in a crosswise pattern, similar to brickwork, including at the building's corners and openings. Care should be taken to avoid gaps between the boards or deviations from the flatness of the surface.



The insulation boards are installed using the specialized adhesive mortar FC 1100, typically applied around the perimeter and at the center of the board to accommodate substrate irregularities.

If the substrate is sufficiently flat, the adhesive mortar is combed across the entire surface of the board using a notched trowel, ensuring full coverage and reducing material consumption.

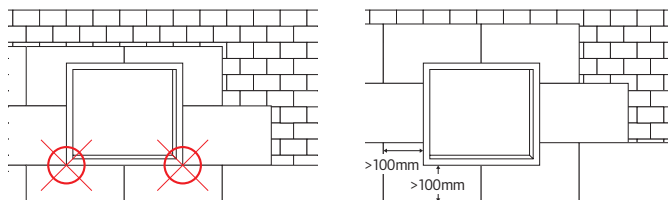
Special attention must be given to the working times of the mixtures to ensure optimal adhesion of the boards.



Any gaps or joints must be filled either with pieces of insulation material or with special low-expansion polyurethane foam. After the installation of the insulation boards is complete, the surface is smoothed using a specialized sanding tool to ensure a perfectly even and flat finish.

Special care is required when placing the boards around

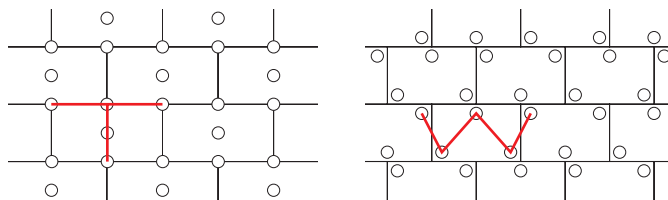
openings (e.g. doors and windows) to avoid the formation of horizontal and vertical joints.



3. Mechanical fastening of insulating boards

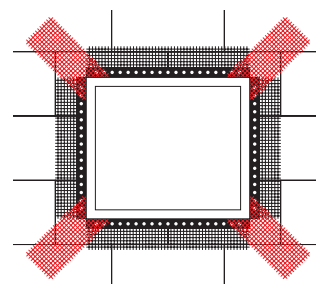
The mechanical anchoring of ETIC systems provides additional support when applied to multi-story buildings due to wind pressures, when adhesion is performed on weak substrates (e.g. old plasters), and in areas of high seismic activity.

Mechanical anchoring is especially necessary for systems using mineral wool due to the increased weight of the system (approximately 18 kg/m² for a thickness of 5cm). 4-6 anchors per m² are installed, with an anchoring depth of at least 4cm, depending on the type of substrate.



4. Installation of special components and reinforcing mesh

Special components such as corner beads, profiles with drip edges, and expansion joint profiles are installed where necessary using the adhesive mortar FC 1100. Particular attention should be given to reinforcing the edges of openings with special fiberglass mesh strips 30x40cm.



Additionally, adhesive mortar FC 1100 is used for the leveling and reinforcement layer over the insulation boards. It acts as a reinforcement layer for the surface, while also embedding the special alkali-resistant fiberglass mesh (160g/m²). The fiberglass mesh layers must overlap by at least 10cm at the sides and edges to ensure stress distribution across the insulation boards and maintain the continuity of the system's protective barrier. The reinforcement mortar can be applied using either a spray machine or a trowel.

As an alternative reinforcement layer for the insulation boards, the organic fiber-reinforced coating FC 1100 ORGANIC can be used, applied in a 2-3mm thick layer. This material offers increased flexibility and crack resistance for the ETIC system. The use of the ready-to-use organic coating FC 1100 ORGANIC simplifies and accelerates this stage

due to its enhanced workability and pre-mixed nature. ETIC systems with mineral wool insulation require higher quantities of reinforcement material because the boards cannot be processed to ensure flatness after installation.

5. Application of decorative final-coat renders

The application of the final decorative coating is carried out after approximately 7 days, choosing from a wide range of final-coat renders of the **Finoclima**® ETIC systems, either organic (FC 1300) or inorganic-based (FC 1200).

FC 1300 organic renders

The organic renders of the **Finoclima**® ETIC systems, depending on their composition, are categorized into acrylic-based (FC 1300 ACRYL & FC 1300 SILOXANE) or silicone-based (FC 1300 SILICONE). They are ready-to-use in paste form and are applied with a trowel or suitable spraying machine. Their application takes place after the surface has been prepared with the appropriate primers, **ACRYLIC PRIMER 1350** and **SILICONE PRIMER 1450**.

Both primers and organic final-coat renders can be tinted to the desired shade according to the 260-colour **Finoclima**® COLOUR PALETTE colour system, which includes shades based on inorganic pigments that offer maximum resistance to UV solar radiation.

The organic renders are characterized by excellent resistance to environmental conditions and particularly high elasticity compared to inorganic renders. Their layer thickness is thin and depends on the grain size of the aggregates they contain.

The final aesthetic result is directly linked to the grain size, which ranges from 1.0mm to 2.4mm, producing a smoother or more textured surface. Additionally, a decorative 'graffiato' type finish can be achieved. Consumption depends on the grain size, approximately 1.8-3.2 kg/m².

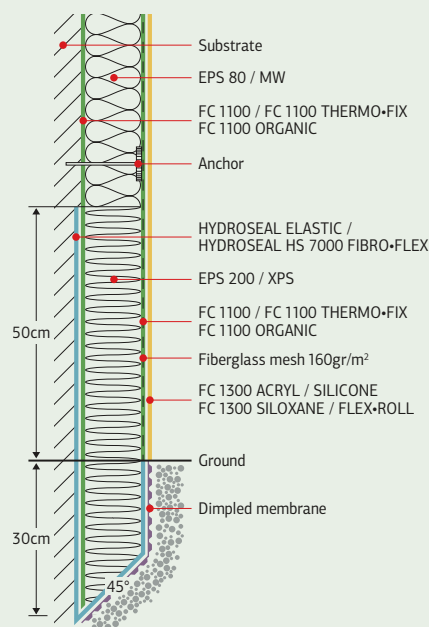
FC 1200 inorganic renders

The inorganic renders of **Finoclima**® ETICS are lime-cement mortars, highly enriched with polymer resins and hydrophobic additives. They are available in dry form, packaged in bags, and can be applied either using specialized mixing-spraying machines or manually, like traditional final-coat render. Surface preparation with a specific primer is not required for their application; however, the quartz-based adhesion promoting primer **FINO•CONTACT** can be optionally used.

They can be tinted to the desired shade using the **NATURAL COLOUR CREATIONS** colour chart or any other shade by combining **NATURAL COLOURS** natural pigments in powder form. The natural inorganic composition of both the renders and the **NATURAL COLOURS** pigments ensures that the resulting final shades are entirely stable under UV solar radiation. The shades of inorganic renders exhibit surface irregularities, delivering a more traditional architectural style. These renders are distinguished by excellent breathability and exceptional durability, even in highly corrosive conditions such as coastal environments.

They are available in two grain sizes (1.0mm for a smooth finish and 3.5mm for a decorative 'graffiato' type finish), applied in thicker layers (approximately 5-6mm), with a consumption rate of around 6-7 kg/m².

The Importance of High Waterproofing Zone



The reliable long-term performance of an ETIC system largely depends on how well the insulation boards are protected from moisture. For this reason, it is crucial to define the perimeter of the building that must be shielded against rising damp. The High Waterproofing Zone is created around the building with a minimum height of 50cm above ground level, including balconies and pavements. In the case of landscaped areas, the waterproofing zone should extend into the soil as well.

A specialized elastic waterproofing material, such as **HYDROSEAL ELASTIC** or **HS 7000 FIBRO-FLEX**, is applied in two layers. In this zone, high-density EPS insulation boards (EPS 200) or extruded polystyrene (XPS) boards are used.

For areas with planted soil, the insulation board within the soil and up to 5-10cm above it must also be waterproofed on its surface for additional protection against moisture. Above the waterproofing layer, the placement of a dimpled drainage membrane is recommended.

Repair and Renovation of ETIC Systems

The repair or aesthetic renovation of ETICS facades is necessary in cases where the system may develop hairline cracks or when the colour of the final coating deteriorates due to increased stress from environmental or human-related factors. The appearance of hairline (or larger) cracks on the surface of an ETIC system can result from failure to adhere to the required application standards, the use of a non-certified system, or insufficient assessment of the building's condition prior to application.

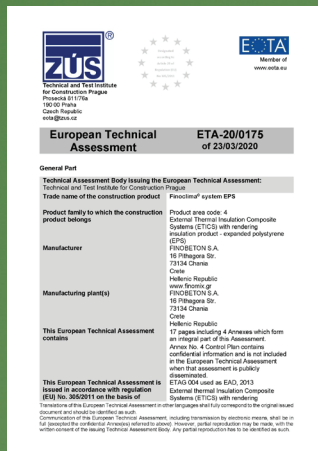
In any case, restoring the final appearance of an ETIC system can be easily achieved by using the flexible silicone-based roller-applied render **FC 1300 FLEX-ROLL SILICONE**. This fine-grained render offers enhanced coverage, elasticity, strong hydrophobic properties, and the ability to bridge hairline cracks.

FC 1300 FLEX-ROLL SILICONE can be tinted according to the **Finoclima**® COLOUR PALETTE colour system. Application is performed using a roller in two layers, with a total consumption of approximately 1.5 kg/m².

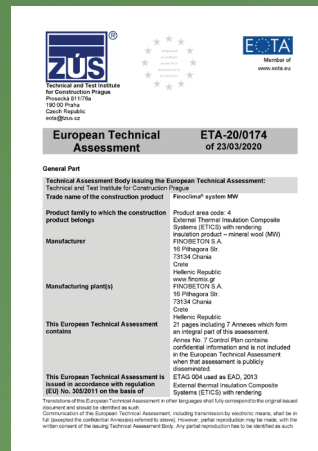
Finoclima® systems are certified by



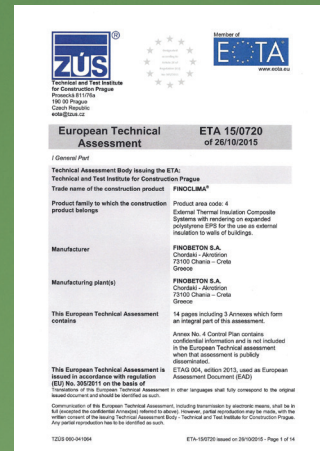
EUROPEAN ORGANIZATION FOR TECHNICAL APPROVALS



Finoclima® EPS
ETA 20/0175



Finoclima® MW
ETA 20/0174



Finoclima® MINERAL
ETA 15/0720

Finoclima® COLOUR PALETTE
colouring system for primers
& organic decorative renders



For more information:

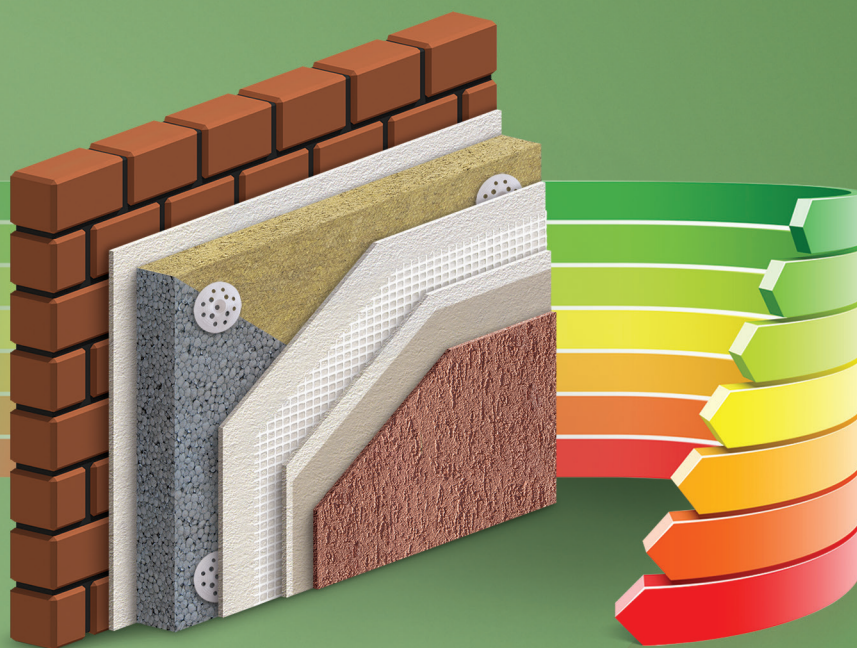


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