TRADITERM®
Systems

Construction Solutions
for

EXTERNAL WALL THERMAL INSULATION (EWIS / ETICS)

grupopuma

Construction Solutions
for

EXTERNAL WALL THERMAL INSULATION EWIS/ETICS

Index

Construction Solutions for EXTERNAL WALL THERMAL INSULATION (EWIS/ETICS)

THERMAL INSULATION

THERMAL INSULATION

Approximately a third of world energy consumption is destined to private houses. Of this energy, more than 60% is used for the heating and refrigeration of buildings.

This high consumption generates high financial costs and this energy usage, as it is a fossil-based energy, in turn represents a significant environmental cost, in addition to the previously mentioned costs.

For these reasons, the reduction in energy consumption and the use of energy originating from renewable sources in the building sector, represent a series of political and regulatory objectives,which are gradually being introduced.

An example of these regulatory standards is the Spanish TECHNICAL BUILDING CODE, of which one of its basic comprising documents is "DB HE Energy Saving". An example of policies relating to the energy efficiency of buildings is the Directive 2010/31/CE.

The energy demand of buildings is limited in accordance with its thermal surround, which is why adequate thermal insulation can have a significant impact on energy savings.

TRADITERM®

In a sector that is evolving and introducing new construction regulations to improve energy efficiency in buildings, GRUPO PUMA in its commitment to society and the environment, offers Traditerm® Systems (EWIS/ETICS), thus making a firm commitment towards sustainable construction and energy efficiency.

Under the trademark Traditerm® it has defined a series of External Thermal Insulation Systems (EWIS) that offer both thermal comfort as well as energy savings, and therefore financial savings, both in new buildings (contributing towards obtaining better energy ratings) as well as in restoration projects,by notably improving the thermal performance of existing buildings.

Construction Solutions for EXTERNAL WALL THERMAL INSULATION (EWIS/ETICS)

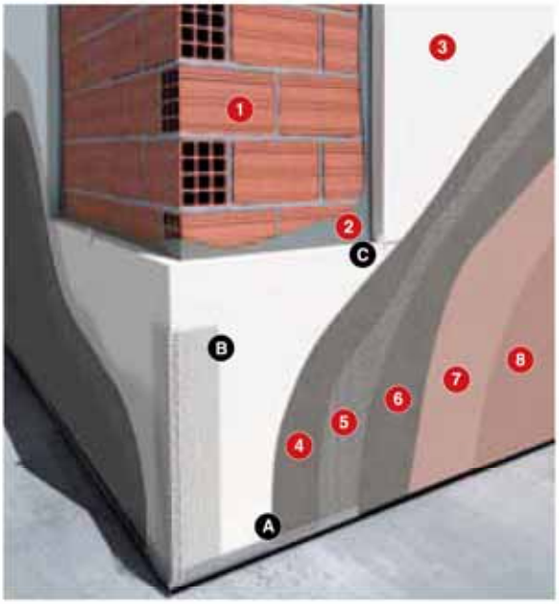
TRADITERM® SYSTEMS

TRADITERM® SYSTEMS

Grupo Puma, has developed a family of external thermal insulation systems, called **Traditerm® Systems.**

The **Traditerm® System** comes in the following configurations;

Traditerm® EPS System
Traditerm® EPS-G System
Traditerm® Mineral System
Traditerm® Nature System

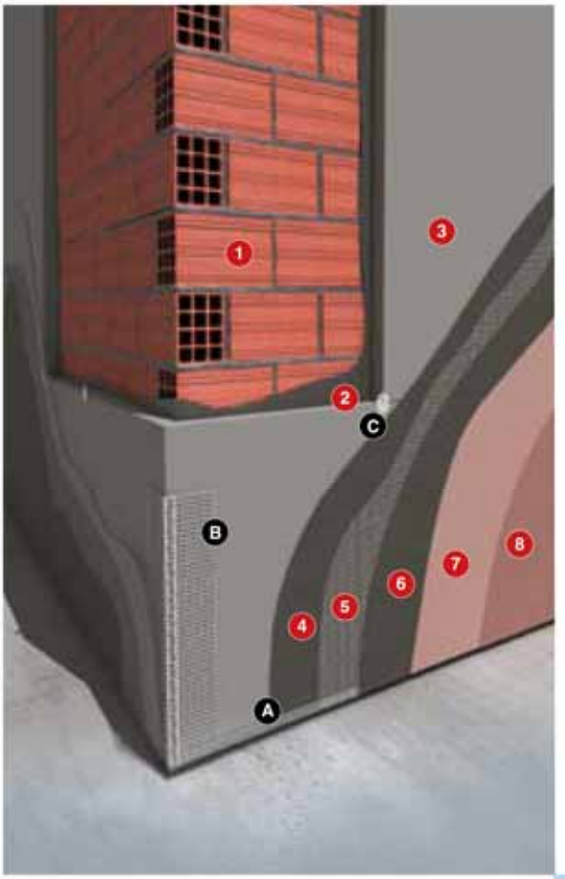


- **A** Traditerm® Perfil de arranque *(Traditerm® Start profile)*
- **B** Traditerm® Perfil ángulo PVC con malla *(Traditerm® PVC Profile angle with mesh)*
- **C** Traditerm® Taco de anclaje *(Traditerm® Fixing anchor)*
- **1** Soporte base *(Base support)*
- **2** Mortero Traditerm® *(Traditerm® Mortar)*
- **3** Traditerm® Panel EPS *(Traditerm® EPS Panel)*
- **4** Mortero Traditerm® *(Traditerm® Mortar)*
- **5** Malla Traditerm® *(Traditerm® Mesh)*
- **6** Mortero Traditerm® *(Traditerm® Mortar)*
- **7** Fondo Morcemcril® *(Morcemcril® Primer)*
- **8** Gama Morcemcril® *(Morcemcril® Range)*

Traditerm® EPS System

External thermal insulation system based on the insulating power of stabilised expanded polystyrene (EPS).

- Traditional EWIS/ETICS system.
- For use on new buildings and energy restoration of façades.
- Complies with the Spanish Technical Building Code (CTE).
- Provides both energy and financial savings.
- Resistant to rain water.
- Water vapour permeable.
- Economic and competitive.
- European Approval according to ETE 07/0054



Traditerm® EPS-G System

External thermal insulation system based on the insulating power of stabilised expanded polystyrene (EPS).

- EWIS/ETICS system with greater insulation capacity.
- For use on new builds and for energy restoration on façades.
- Provides both energy and financial savings.
- Greater insulation capacity with Traditerm ® EPS System.
- Complies with CTE (Technical Building Code) with less insulation panel thickness.
- Resistant to rain water.
- Water vapour permeable.
- European Approval according to ETE 07/0054.

A Traditerm® Perfil de arranque *(Traditerm® Start profile)*

B Traditerm® Perfil ángulo PVC con malla *(Traditerm® PVC Profile angle with mesh)*

C Traditerm® Taco de anclaje *(Traditerm® Fixing anchor)*

1 Soporte base *(Base support)*

2 Mortero Traditerm® *(Traditerm® Mortar)*

3 Traditerm® Panel EPS *(Traditerm® EPS-G Panel)*

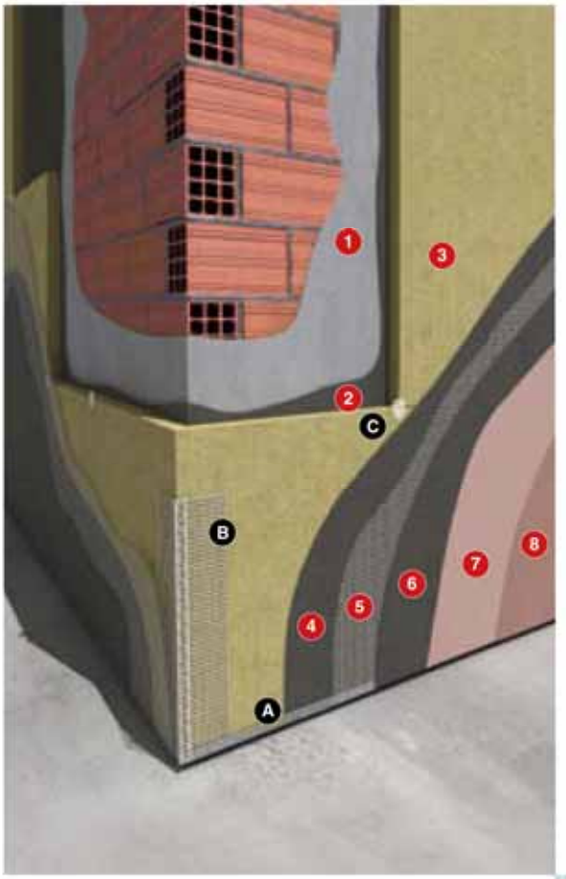
4 Mortero Traditerm® *(Traditerm® Mortar)*

5 Malla Traditerm® *(Traditerm® Mesh)*

6 Mortero Traditerm® *(Traditerm® Mortar)*

7 Fondo Morcemcril® *(Morcemcril® Primer)*

8 Gama Morcemcril® *(Morcemcril® Range)*



Traditerm® Mineral System

External thermal insulation system based on the insulation power of rock wool.

- EWIS/ETICS System with thermal and sound insulation capacity.
- For use on new builds and energy restoration on façades.
- Provides both energy and financial savings.
- Complies with Spanish Technical Building Code (CTE).
- High dimensional stability.
- Resistant to rain water.
- High water vapour permeability.
- Good fire resistance and protection.
- European Approval according to ETE 07/0054

A Traditerm® Perfil de arranque *(Traditerm® Start profile)*

B Traditerm® Perfil ángulo PVC con malla *(Traditerm® PVC Profile angle with mesh)*

C Traditerm® Taco de anclaje *(Traditerm® Fixing anchor)*

1 Soporte base enfoscado de mortero *(Base support rendering mortar)*

2 Mortero Traditerm® *(Traditerm® Mortar)*

3 Traditerm® Panel Lana Mineral *(Traditerm® Mineral Wool Panel)*

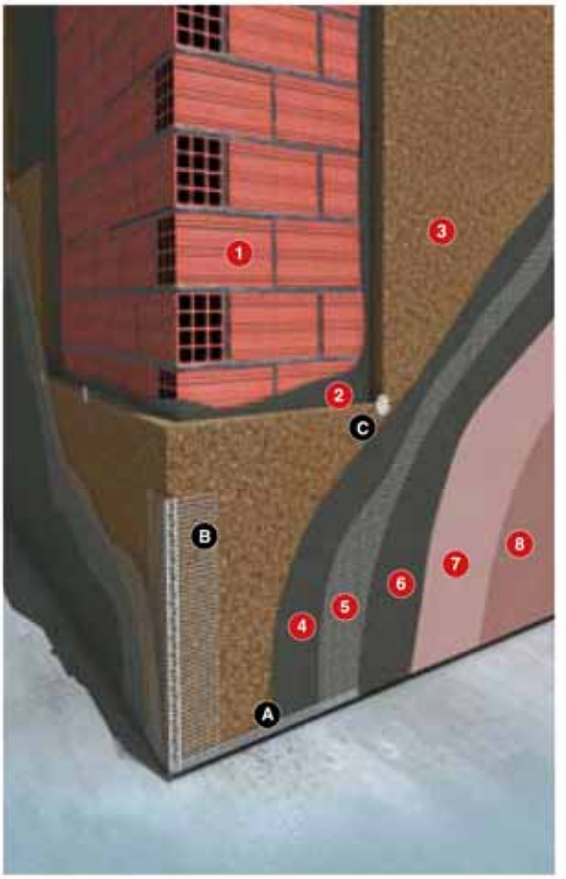
4 Mortero Traditerm® *(Traditerm® Mortar)*

5 Malla Traditerm® *(Traditerm® Mesh)*

6 Mortero Traditerm® *(Traditerm® Mortar)*

7 Fondo Morcemcril® *(Morcemcril® Primer)*

8 Gama Morcemcril® *(Morcemcril® Range)*



Traditerm® Nature System

External thermal insulation system based on the insulation power of natural cork.

- EWIS/ETICS System for BIO-CONSTRUCTION.
- Natural, recyclable insulation panel.
- Thermal and sound insulation capacity.
- For use on new builds and energy restoration on façades.
- Provides both energy and financial savings.
- Complies with Spanish Technical Building Code (CTE).
- Resistant to rain water.
- Water vapour permeable.

A Traditerm® Perfil de arranque *(Traditerm® Start profile)*

B Traditerm® Perfil ángulo PVC con malla *(Traditerm® PVC Profile angle with mesh)*

C Traditerm® Taco de anclaje *(Traditerm® Fixing anchor)*

1 Soporte base *(Base support)*

2 Mortero Traditerm® *(Traditerm® Mortar)*

3 Traditerm® Panel de corcho *(Traditerm® cork Panel)*

4 Mortero Traditerm® *(Traditerm® Mortar)*

5 Malla Traditerm® *(Traditerm® Mesh)*

6 Mortero Traditerm® *(Traditerm® Mortar)*

7 Fondo Morcemcril® *(Morcemcril® Primer)*

8 Gama Morcemcril® *(Morcemcril® Range)*

Construction Solutions for EXTERNAL WALL THERMAL INSULATION (EWIS/ETICS)

ADVANTAGES OF
TRADITERM® SYSTEMS

ADVANTAGES OF TRADITERM® SYSTEMS

Lowers risk of condensation.

All the Traditerm® Systems range of products are waterproof but do allow the entry of water vapour, facilitating the release of accumulated humidity inside, thus lowering the risk of water condensation.

Increase in internal thermal inertia

Thermal inertia is the capacity of a material to store energy, depending on its mass, density and specific heat.

Given that the majority of a wall's mass is protected by the thermal insulation layer, thermal energy conserves much better, reducing the need for air-conditioning.

Respect for the environment and energy saving

The energy used for manufacturing (organised energy) is recovered in six months by the energy saved in the buildings where it is installed.

During the useful life of the building, Traditerm® Systems reduces the air conditioning energy requirements, requiring less fossil fuel consumption, in turn generating a lower quantity of CO_2.

Increasing the protection of the façade against water

All the layers of Traditerm® Systems, from the insulation panel to the acrylic mortar Morcemcril Range, through to Traditerm® adhesive mortar, have waterproofing qualities that improve the performance of the façade against water.

Lowering pressure and increasing durability.

The materials comprising the building's structure, as well as the cladding, when covered with Traditerm® Systems, are not subjected to thermal expansion and contraction originating from temperature changes, which enhances its durability.

Quick and easy to install

The same installation company carries out the insulation on the façade, the waterproofing, and final decorative finishing.

Ideal for Thermal Restoration of façades

Traditerm® Systems, in any of its versions, do not affect the use of the building's as it is a system that is applied externally, and therefore does not cause a lack of useful space inside the building.

Creative Design

The Morcemcril range of acrylic mortars and colours, permits a multitude of combinations, achieving really attractive finishes of Traditerm® Systems.

Complete Systems

Grupo Puma offers a complete system of each of itsTraditerm solutions, using contrasting materials with renowned quality certificates, from the mortar to the finish, including the insulation panels, reinforcing mesh, profiles, mechanical anchors, etc. This guarantees not only the individual quality of each component, but also the compatibility between them.

Quality Guarantee

Traditerm® Systems are homologated at European level and hold ETE* certification, issued by the Eduardo Torroja Institute for Contruction Science. To obtain this certificate, all the elements of the Traditerm® Systems, both separately and as a whole system,must pass demanding tests after being subjected to ageing conditions that simulate the effects of the passing of time and atmospheric agents. (*) European Technical Approval document recognised by all European Community Member States.

Reaction to fire

Traditerm® Systems have a minimum fire reaction classification of B-s1, d0 according to standard UNE-EN13501:2007+A1:2010.

Test against fire behavior

Construction Solutions for EXTERNAL WALL THERMAL INSULATION (EWIS/ETICS)

COMPONENTS OF TRADITERM® SYSTEMS

MORTARS

MORTAR

MORTERO TRADITERM® (TRADITERM® MORTAR)

Mortar especially designed for fixing and cladding the insulation panels of Traditerm® Panel EPS (Traditerm® EPS Panel), Traditerm® Panel EPS-G (Traditerm® EPS-G Panel), Traditerm® Panel MW (Traditerm® MW Paneland) and Traditerm® MW Paneland Traditerm® Cork Panel on the Traditerm® Systems (EWIS/ETICS).

- Colour: Grey.
- High-bonding capacity.
- Deformable.
- Resistant to rain water.
- Water absorbency: W2.
- Water vapour permeability: $\mu < 15$.
- Easy to apply.
- Reaction to fire: A1 -Does not ignite (UNE-EN 13501-1).
- Performance (Adhesive + Covering): 7-10 kg/m².

MORCEMCRIL RANGE

The range of Morcemcril finishes are comprised of mineral synthetic coverings for waterproofing and decorating the façades and finishes of the Traditerm® External Insulation Systems (EWIS/ETICS).
We distinguish between the following types:

STANDARD

MORCEMCRIL ESTÁNDAR (MORCEMCRIL STANDARD)

Synthetic mineral covering for waterproofing and decorating façades.

- Decorative covering for TRADITERM Systems (EWIS/ETICS) and for waterproofing and decorating façades.
- Resistant to rain water.
- Water vapour permeable. Allows the substrate to breathe.
- Deformable.
- Range of colours.
- Resistant to ageing, city atmospheres and UV radiation.
- Anti-mould - Anti-slime.
- Washable.
- Manual or spray application.
- Performance: 2-3 kg/m².

SILOXANE

MORCEMCRIL SILOXANO (MORCEMCRIL SILOXANE)

Synthetic mineral covering for waterproofing façades and decorative finishing of Traditerm® Systems (EWIS/ETICS).

- Suitable for façades exposed to heavy rain and high levels of humidity.
- Recommendable for façades in mountainous or seaside areas.
- Decorative covering for the TRADITERM Systems (EWIS/ETICS).
- Hydro-repellent.
- High resistance to dirt.
- Water vapour permeable. Allows the substrate to breathe.
- Deformable.
- Range of colours.
- Resistant to ageing, city atmospheres and UV radiation.
- Anti-mould - Anti-slime.
- Washable.
- Manual or spray application.
- Performance: 2-3 kg/m²

FLEXIBLE

MORCEMCRIL FLEXIBLE

Mineral synthetic facing with flexible properties for waterproofing façades. Ideal for restoration of façades. Decorative finishing of Traditerm® Systems (EWIS/ETICS).

- Highly elastic.
- Highly deformable.
- Highly durable.
- Covers cracks up to 2 mm.
- Decorative covering for the TRADITERM Systems (EWIS/ETICS).
- Highly impermeable to rain water.
- Water vapour permeable. Allows the substrate to breathe.
- Range of colours.
- Resistant to ageing, city atmospheres and UV radiation.
- Anti-mould - Anti-slime.
- Washable.
- Manual or spray application.
- Performance: 2-3 kg/m².

MOSAIC

MORCEMCRIL® MOSAICO (MORCEMCRIL® MOSAIC)

Synthetic mineral covering for waterproofing and decorating all types of façades, and is especially designed for reinforcing skirting in the Traditerm® Systems (EWIS/ETICS).

- Natural Stone Finish.
- Provides a high level of resistance to punching and impacts.
- Resistant to rain water.
- Water vapour permeable. Allows the substrate to breathe.
- Range of colours.
- Resistant to ageing, city atmospheres and UV radiation.
- Anti-mould - Anti-slime.
- Washable.
- Performance: 3-4 kg/m².

COAT

FONDO MORCEMCRIL® (MORCEMCRIL® BASE COAT)

Priming of synthetic resins prior to decorative finish of Morcemcril Range, providing:

- A base or substrate with consistent absorption.
- Encourages coverage.
- Facilitates adhesion.
- Increases durability of the Morcemcril® finish.

INSULATION PANELS

EPS

TRADITERM® PANEL EPS (TRADITERM® EPS PANEL)

Expanded Polystyrene Panel used as insulation panels in the Traditerm® EPS System (EWIS/ETICS).

- Format: 1000 x 500 mm
- Thickness: 20, 30, 40, 50, 60, 70, 80, 100, 120, 140, 150, 160, 180, 200 mm.
- Stabilised.
- Thermal Conduction (λ): 0.036 - 0.038 W/mK.
- Reaction to fire: E - Self-extinguishing (UNE-EN 13501-1).

TRADITERM® PANEL EPS-G (TRADITERM® EPS-G PANEL)

Expanded Polystyrene Panel with graphite used as insulation panels in the Traditerm® System (EWIS/ETICS).

- Format 1000 x 500 mm.
- Thickness: 20, 30, 40, 50, 60, 70, 80, 100, 120, 140, 150, 160, 180, 200 mm.
- Stabilised.
- Thermal Conduction (λ): 0.032 W/mK.
- Reaction to fire: E - Self-extinguishing (UNE-EN 13501-1).

TRADITERM® PANEL MW (TRADITERM® MW PANEL)

Volcanic rock wool panel designed for the Traditerm® Mineral System (EWI/ETICS).

- Format: 1200 x 600 mm.
- Thickness: 20, 30, 40, 50, 60, 80, 100, 120, 140, 150, 160, 180, 200 mm.
- Thermal Conduction (λ): 0.036 - 0.038 W/mK.
- Water vapour permeability: μ = 1.
- Reaction to fire: A1 -Does not ignite. (UNE-EN 13501-1).

TRADITERM® PANEL CORCHO (TRADITERM® CORK PANEL)

Expanded agglomerated cork designed for the Traditerm® System Nature (EWIS/ETICS).

- Format: 1000 x 500 mm.
- Thickness: 20, 30, 40, 50, 60, 80, 100, 120, 140, 150 mm.
- Thermal Conduction: 0.040 W/mK.
- Water vapour permeability: μ = 30.
- Reaction to fire: E - Self-extinguishing (UNE-EN 13501-1).

MESH

TRADITERM® MALLA (TRADITERM® MESH)

Fibreglass mesh with anti-alkaline treatment for reinforcing the Traditerm® mortar layer covering the insulation panel. Provides the Traditerm® System with surface resistance and avoids the appearance of cracks in the mortar layer covering the insulation panel.

- Composition of threads: 100% fibreglass.
- Mesh size: 5 x 4 mm (±10%)
- Total weight of the mesh: 160 g/m² (±10%)
- Resistance to traction: 36.6 N/mm (±5%)
- Stretching to break point: 2.9 % (±1%)
- Thickness: 0.6 mm
- Roll format: Width 1 m x Length 50 m

MESH

TRADITERM® MALLA REFUERZO
(TRADITERM® REINFORCING MESH)

Fibreglass mesh with anti-alkaline treatment for reinforcing the layer of Traditerm® mortar covering the insulation panel in areas susceptible to direct impact, for example skirting boards. This mesh should always be previously protected with Traditerm® Mesh.

- Composition of threads: 100% fibreglass.
- Mesh size: 6x6 mm (±5%).
- Total weight of the mesh: 330 g/m² (±5%).
- Resistance to traction: 61.3 N/mm (±3,2%).
- Stretching to break point: 3.2% (±0.1).
- Thickness of mesh: 0.9 mm.
- Roll format: Width 1 m x Length 25 m.

FIXING ANCHORS

ANCHORS

TRADITERM® TACO DE ANCLAJE
(TRADITERM® FIXING ANCHORS)

Fixing anchors for Traditerm® Systems.

- Composition: Polypropylene
- Impact anchor.
- Does not rust.
- Quick to install.
- Range of sizes according to thickness of insulation panel to be used.
- Holds European Technical Approval.

ANCHORS

TRADITERM® TACO DE ANCLAJE PLUS NTK
(TRADITERM® FIXING ANCHORS PLUS NTK)

Fixing anchors for Traditerm® Systems.

- Composition: The sleeve is polyethylene and the pin is polyamide.
- Impact anchor.
- Does not rust.
- Provides additional fixing to the insulation panel.
- Range of sizes according to thickness of insulation panel to be used.
- Holds European Technical Approval.

ANCHORS

TRADITERM® TACO DE ANCLAJE STR U 2G
(TRADITERM® FIXING ANCHORS STR U 2G)

Fixing anchors with threaded pin for fixing insulation panels in the Traditerm® Systems.

- Composition: The sleeve is polyethylene and the pin is steel.
- Excellent mechanical fixing.
- Possibility of concealed anchors in the system.
- Holds European Technical Approval.

There are other elements that complement the Traditerm® Fixing Anchor STR U 2G:

- Traditerm® Tapón STR *(Traditerm® STR Plug)*, improves thermal insulation and permits a levelled finish of the fixing.

- Traditerm® Kit Corona STR *(Traditerm® STR Capping Kit)*, is a tool that permits cutting the insulation panels and fastening the STR fixing anchor, positioning it inside the panel.

- Traditerm® Tapas Aislantes de EPS, EPS-G y Lana Mineral (Traditerm® EPS, EPS-G and Mineral Wool Insulation Plugs), are used as a filling for holes in the insulation panel when the STR fixing you want to install is embedded or countersunk inside the insulation panel.

PROFILES

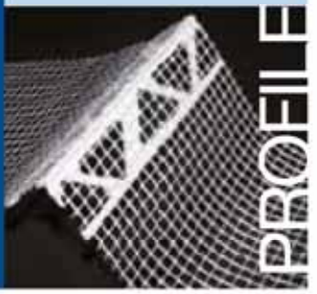
PROFILE

TRADITERM® PERFIL DE ARRANQUE
(TRADITERM® STARTING PROFILE)

Aluminium profile, especially designed for the starting and protection of the lower part of the Traditerm® Systems.

- Does not rust.
- Has an incorporated gutter.
- Range of thicknesses, according to thickness of insulation panel used.
- Format: 2.5 m/unit.

PROFILE



TRADITERM® PERFIL ÁNGULO PVC CON MALLA
(TRADITERM® PVC PROFILE ANGLE WITH MESH)

PVC profile fitted with mesh with anti-alkaline treatment, designed for reinforcing corners on the façade and gaps or hollows in the Traditerm® Systems.

- Does not rust.
- Format: 2.5 m/unit.

TRADITERM® PERFIL GOTERÓN PVC CON MALLA
(TRADITERM® PVC GUTTER PROFILE WITH MESH)

PVC profile fitted with mesh with anti-alkaline treatment, especially designed for forming gutters in the Traditerm® Systems.

- Does not rust.
- Format: 2.5 m/unit.

TRADITERM® PERFIL CIERRE LATERAL
(TRADITERM® SIDE CLOSING PROFILE)

Aluminium profile used as a reinforcement and closure for the side closings in the Traditerm® Systems.

- Does not rust.
- Range of thicknesses, according to thickness of insulation panel used.
- Format: 2.5 m/unit.

TRADITERM® PERFIL JUNTA DILATACIÓN
(TRADITERM® EXPANSION JOINT PROFILE)

PVC profile with fibreglass mesh and flexible band, designed for forming expansion joints in the Traditerm® Systems.

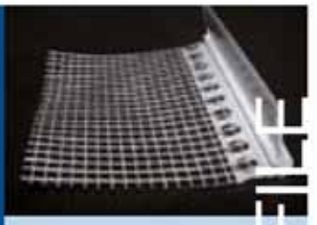
- Does not rust.
- Format: 2.5 m/unit.

TRADITERM® ROLLO PERFIL ÁNGULO CIRCULAR
(TRADITERM® PROFILE ROLL CIRCULAR ANGLE)

Element especially designed for reinforcing corners with an angle other than 90°, in the TRADITERM® Systems.

- Format: 25 m/box.

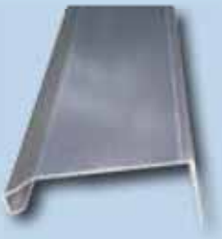
PROFILE



TRADITERM® PERFIL TERMINACIÓN VENTANA
(TRADITERM® PROFILE WINDOW FINISHING)

Connection profile between the Traditerm® System and woodwork on the façade.

- PVC profile fitted with Mesh with anti-alkaline treatment.
- Format: 2.4 m/unit.



TRADITERM® PERFIL CORONACIÓN
(TRADITERM® CROWN PROFILE)

Protection profile, positioned on the upper part of the Traditerm®Systems.

- Aluminium profile
- Range of thicknesses, according to thickness of insulation panel used.
- Format: 2.5 m/unit.

OTHER ELEMENTS

MOUNTING ANCHOR

TRADITERM® ANCLAJE ESPIRAL
(TRADITERM® SPIRAL ANCHOR)

Threaded anchor for fixing light elements, up to 5 kg on the Traditerm® Systems.

- Does not create thermal bridging.
- It is installed once the system has been finished.
- Use screw size Ø 4-5 mm to fix the part.
- Format: 10 units/bag.

TRADITERM® SOPORTE FIJACIÓN 300
(TRADITERM® MOUNTING 300)

Mounting without thermal bridges, for fixing heavy elements such as clothes lines, awnings, light canopies, exterior lamps, etc. to façades treated with Traditerm® Systems.

- Format: 238 x 138 x 60 mm
  238 x 138 x 80 mm
  238 x 138 x 100 mm

TRADITERM® KIT INSTALACIÓN PERFIL DE ARRANQUE
(TRADITERM® INSTALLATION KIT STARTING PROFILE)

Complete kit for installing starting profiles on Traditerm® Systems.

The kit consists of:

- 75 screws 6x60 mm
- Starting Profile connectors.
- 3 mm Starting Profile separators.

TRADITERM® SEPARADOR DE PERFIL
(TRADITERM® PROFILE SEPARATOR)

Correction element for light irregularities on the substrate, for installing starting profiles on Traditerm® Systems.

- Range of sizes: 3, 5, 8, 10, 15 mm

PUMALASTIC MS

MS-Polymer based sealer, designed for sealing the joints of the Traditerm® System, with other elements on the façade.

- Format: 290 ml/tub.

Construction Solutions for EXTERNAL WALL THERMAL INSULATION (EWIS/ETICS)

INSTALLING TRADITERM® SYSTEMS

INSTALLING TRADITERM® SYSTEMS

Traditerm® EPS System
Traditerm® EPS-G System
Traditerm® Mineral System
Traditerm® Nature System

1 General installation conditions

• Traditerm® Systems must be installed in temperatures between 5°C and 35°C.

• In the event of rain, installation should only be carried out if the work area is protected.

• Protect the upper part of the façade in a special way so that no water can leak through the substrate and insulation panel, during and after installation.

• Do not apply the system to horizontal or sloping surfaces with inclinations lower than 45°.

• Joints of the Traditerm® System between other elements on the façade, (window frames, rain guards, etc) should be sealed with Pumalastic MS sealer.

• The instructions given in the Installation section, are for the systems Traditerm® EPS, Traditerm® EPS-G,Traditerm® Mineral and Traditerm® Nature, unless otherwise indicated.

• Avoid direct sunlight when fixing and covering the Traditerm® EPS-G System panels, and when applying the different finishes for Traditerm® Systems.

2 Substrates

• The durability of an external insulation system (EWIS/ETICS), is directly related with the preparation of the substrate to be used.

The habitual substrates for a EWIS/ETICS system are:

• For new builds: ceramic bricks, thermal blocks, fabricated concrete blocks, cellular concrete and concrete.

• For restoration work: painted cement render, single-coat facing, brick-faced work, ceramic cladding.

• Generally, substrates must be dry, resistant and clean of any dust, remains of paint, grease and descaling products.

• It is essential to prepare the substrate correctly in order to guarantee the system's durability.

• On new build substrates, to install Traditerm® Systems, the age of the substrates must be at least:

One month for ceramic bricks and two months for concrete blocks.

• Existing expansion joints on the façade must be respected, and resolved by using a *Traditerm® Perfil Junta de Dilatación* (Traditerm® Expansion Joint Profile).

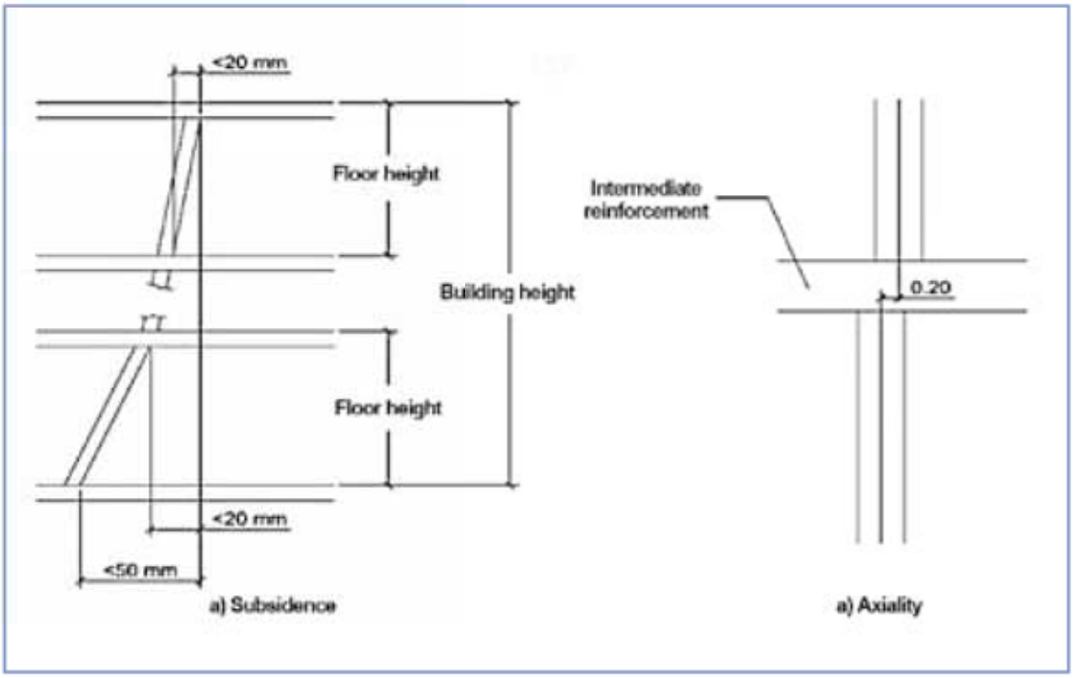
The following chart covers the determined treatments to be considered, according to the condition of the substrate:

CONDITION OF SUBSTRATE	TREATMENT
Inclinations > 10 mm	Level the substrate with mortar with strengths compatible with the cladding
Remains of grease and descaling agents	Clean with detergent
Pulverulent or disaggregated materials	Clean and apply *imprimación Fijamor* (Fijamor primer)
Presence of efflorescence	Brush and clean
Presence of mould, algae or lichens	Wash with bleach and then brush
Paint	Remove with chemical or mechanical stripper (high pressure sand jet)
Lack of mortar between exposed brick joints	Fill the perpend again with mortar such as *Morcem® Bloque* (Morcem® Block)
Ceramic	Remove any loose tiles and remove the surface varnish with high-pressure sand jet or chemical stripper (acid)
Smooth	Generate porosity mechanically
Degraded concrete	Repair any damaged parts with repair mortar (Morcemrest® EF 50, Morcemrest® EF 35 and Morcemrest® RF 15)
Degraded reinforced concrete and with oxidised rebars	Repair damaged parts with repair mortar (Morcemrest® EF 50, Morcemrest® EF 35 and Morcemrest® RF 15), and in the event of oxidised rebars, repair and passivatewith Implarest® products
Mortar coming unstuck from the cladding	Remove damaged facings and replace the with facingswith compatible resistances with cladding
Constant humidity	Eliminate the cause of the humidity and leave to dry

The durability of an EWIS/ETICS System is also given by the flatness of the substrate to which it is installed.

In compliance with Spanish Technical Building Code (CTE) in DB-SE-F "Structural Safety - Masonry Structures" in section 9.3 the admissible substrate tolerances are defined:

VARIABLE REFERENCE	SITUATION	TOLERANCE (mm)
SUBSIDENCE	Between floors	20
	Between total height of building	50
AXIALITY	Maximum horizontal distance between the axis of the upper or lower walls	20
FLATNESS (straight line that joins any two points of the masonry element)	In 1 metre	5
	In 10 metres	20



3
Traditerm® Systems Starter

The Traditerm® Systems start in the lower area of the façade to be treated by installing the Traditerm® starting profile followed by the insulation panels.

In the event of the Traditerm® System starting on the lower floor, it is necessary to correctly waterproof the substrate prior to installation from zero level up to >30 cm in height, to avoid humidity through leakage from the outside. This waterproofing can be done by using the product Morcem Dry F (see construction detail A).

Once the waterproofing has been carried out in the start area, the system's starting profiles are fixed into position on the different systems. For this a level line is traced, over which the profile is fixed. The minimum distance between the profile and the floor should be >15 cm.

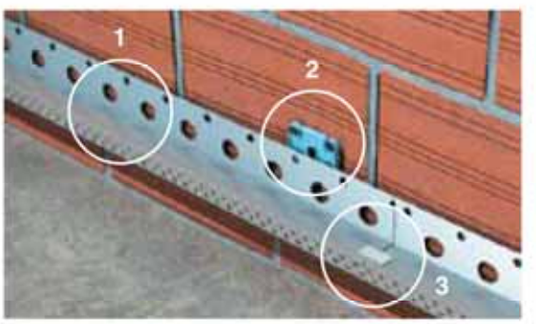
Traditerm® Perfil de Arranque (The Traditerm® Starting Profile) is fixed to the façade with the *Traditerm® Perfil de Arranque (*Traditerm® Starting Profile) Installation Kit is supplied by Grupo Puma. On this point,please note:

• The screws used to fix the starter profile to the substrate are fixed with a separation of 30 cm. The first screw must be fixed at a distance of 5 cm from the profile edge.

• The separators of the starter profile are fixed behind this profile, in case the surface they are sitting on is uneven. The base profile should belevelled with Traditerm® Separators.

• The starting profile connectors are fixed with a separation between the starter profile and the next one. There must always be a separation of between 2 and 3 mm (see construction detail C).

The joint between starting profiles should not coincide with the joint between insulation panels.Try to have at leave a minimum distance of at least 10 cm between joints.



1. Traditerm® Perfil de Arranque
(Traditerm® Starting Profile)
2. Separador de Traditerm® Perfil de Arranque
(Traditerm® Starting Profile Separator)
3. Conector de Traditerm® Perfil de Arranque
(Traditerm® Starting Profile Connector)

In the event of the Traditerm® System starting on the lower floor, first install an insulation panel such as Traditerm® XPS Panel, which is thinner than the lower thickness of the insulation panel in the system. This insulation panel should be embedded and must protrude by >15 cm above floor level.

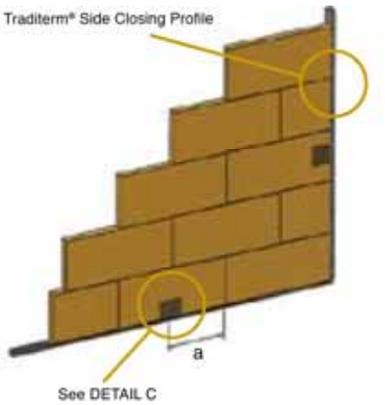
Above the Traditerm® XPS Panel that starts on the floor, a starting profile is fixed, leaving a separation joint between the starting profile and the Traditerm® XPS Panel of approximately 1 mm, which is then sealed with Pumalastic MS (see construction details B and C).

Traditerm® Perfil Cierre Lateral *(Traditerm® Side Closing Profile)*

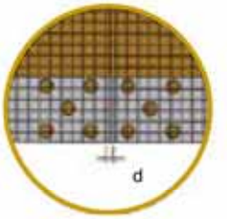
In the event of the sides of the Traditerm Systems needing to be protected with the *Traditerm® Perfil Cierre Lateral, (*Traditerm® Side Closing Profile), this shall be installed once the *Traditerm Perfil de Arranque (*Traditerm® Starting Profile) has been fixed in place.

For its installation simply fix it withs crews, taking into account:

The screws used to fix the side closing profile to the substrate are fixed with a 30 cm separation. The first screw must be fixed at a distance of 5 cm from the edge of the profile.



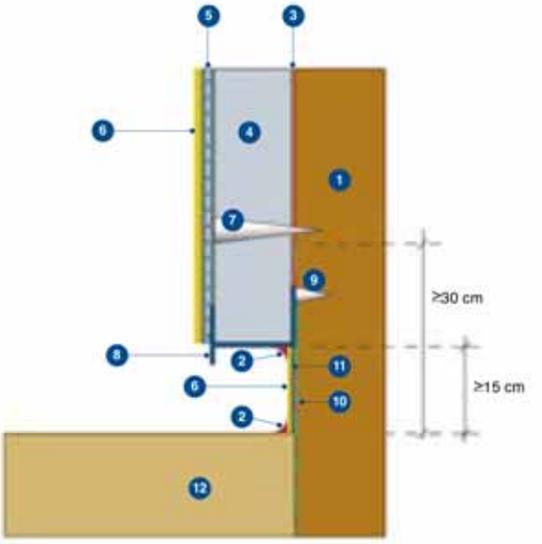
a ≥ 0,1 m
d = 2 a 3 mm



DETAIL C

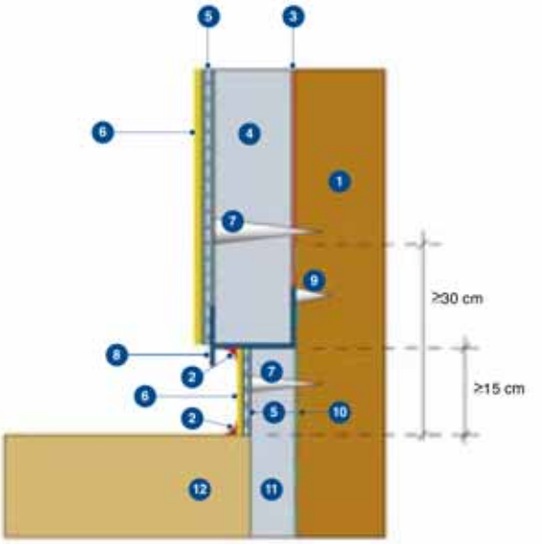
Detail A
System start

1- Substrate
2- Pumalastic MS Sealer
3- Traditerm® (adhesive)
4- Traditerm® Panel Aislante (Traditerm® Insulation Panel)
5- Traditerm® reinforced with Traditerm® Mesh (single or double mesh)
6- Morcemcril® Primer + Morcemcril® Range
7- Traditerm® Taco de Anclaje (Traditerm® Fixing Anchors)
8- Traditerm® Perfil de Arranque (Traditerm® Starting Profile)
9- Start profile Fixing Anchor
10- Morcem® Dry F
11- Rendering mortar
12- Floor



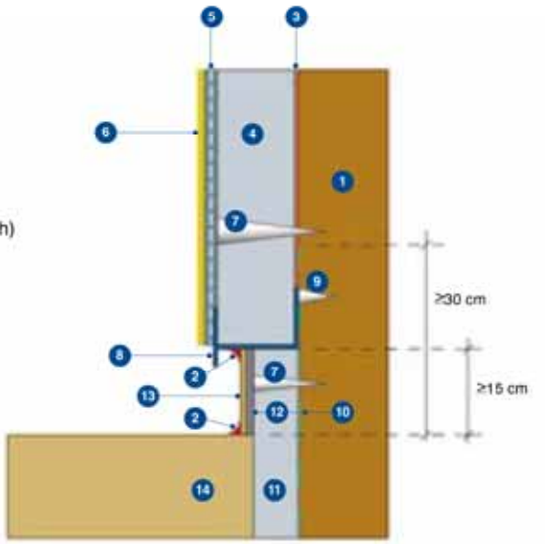
Detail B
System start Morcemcril® finish on skirting board

1- Substrate
2- Pumalastic MS Sealer
3- Traditerm® (adhesive)
4- Traditerm® Panel Aislante (Traditerm® Insulation Panel)
5- Traditerm® reinforced with Traditerm® Mesh (single or double mesh)
6- Morcemcril® Primer + Morcemcril® Range
7- Traditerm® Taco de Anclaje (Traditerm® Fixing Anchors)
8- Traditerm® Perfil de Arranque (Traditerm® Starting Profile)
9- Start profile Fixing Bolt
10- Morcem® Dry F
11- Traditerm® XPS Panel
12- Floor



Detail C
System start ceramic tiled skirting board

1- Substrate
2- Pumalastic MS Sealer
3- Traditerm® (adhesive)
4- Traditerm® Panel Aislante (Traditerm® Insulation Panel)
5- Traditerm® reinforced with Traditerm® Mesh (single or double mesh)
6- Morcemcril® Primer + Morcemcril® Range
7- Traditerm® Taco de Anclaje (Traditerm® Fixing Anchors)
8- Traditerm® Perfil de Arranque (Traditerm® Starting Profile)
9- Tornillo Fijación Perfil de Arranque (Start profile Fixing Bolt)
10- Morcem® Dry F
11- Traditerm® Panel XPS (Traditerm® XPS Panel)
12- Traditerm® Ceramic (adhesive)
13- Ceramic or natural stone facing
14- Floor



4
Fixing of the Insulation Panels with Traditerm® Mortar

The Traditerm® mortar is mixed with water until a uniform consistency has been obtained. Once the mortar has been prepared,it is applied directly to the insulation panel with two different techniques. The use of one technique or another will depend on the flatness of the substrate:

Notched Trowel Method

This technique is used when the flatness of the substrate is < 5 mm, measured with a 2 m rule.

The mortar is spread over the surface of the insulation panel and then combed with the aid of a notched trowel (size No. 10 at least).

Notched Trowel Method

Once the product has been combed, a border of approx.2 cm is removed around the edge of the panel, so that when pressure is applied no excess mortar protrudes from the edges, which can create thermal bridging between the insulation panels.

In the case of *Traditerm® Panel MW* (Traditerm® MW Panels), only the notched trowel method should be used for installation.

Beaded Method

This technique is used when the flatness of the substrate varies between 5 and 10 mm, measured with a 2 m rule.

Spread the Traditerm® mortar with a hand tool in a rectangular line, parallel to the side and 2 cm from the edge of the panel. Leave an opening, do not make a closed rectangle.

Inside the rectangle paste some "dots or beads" of mortar between 10-12 in diameter and 1 and 2 cm high. Remove any remaining mortar in a 2 cm border around the panel.

With this technique, we can guarantee that at least 60% of the panel's surface has been covered with Traditerm® mortar.

Beaded Method

When choosing the method of fixing the insulation panel with Traditerm® mortar it is important not only to consider the flatness of the substrate but also the thickness of the insulation panel. The following chart is based on both criteria:

INSULATION PANEL THICKNESS (mm)	FLATNESS (*) (mm)	FIXING METHOD
≥ 40 mm	< 5 mm	Notched trowel
≥ 40 mm	De 5 a 10 mm	Beaded mortar
< 40 mm	< 5 mm	Notched trowel
< 40 mm	De 5 a 10 mm	Notched trowel
Any thickness	> 10 mm	Level the substrate

(*) Deviation in mm measured with a 2 m rule.

5 Installing insulation panels

Once the Traditerm® mortar has been applied to the insulation panel,it is fixed to the façade, pressing to ensure good adherence to the substrate.

Check that the adhesive does not protrude from the edges and with the help of a level, verify the flatness of the panels to be installed (in the case of Traditerm MW Panels and Traditerm Cork Panels, verification of flatness is critical, as these types of panels do not permit posterior sanding to correct unevenness). The insulation panels in the first row are inserted into the starter profile that has already been installed.

The distribution of the panels on the façade is done in such a way that the joints between panels on different rows are interlocked with a minimum gap of 25 cm.

WRONG

RIGHT

The forming of corners in the façade is made by inter-crossing the panels, in accordance with the following picture:

With regard to the formation of openings, or recesses in the façade for doors and windows, etc, avoid aligning the joints of the insulation panels with the corners of the openings. This will avoid future cracking.

WRONG

RIGHT

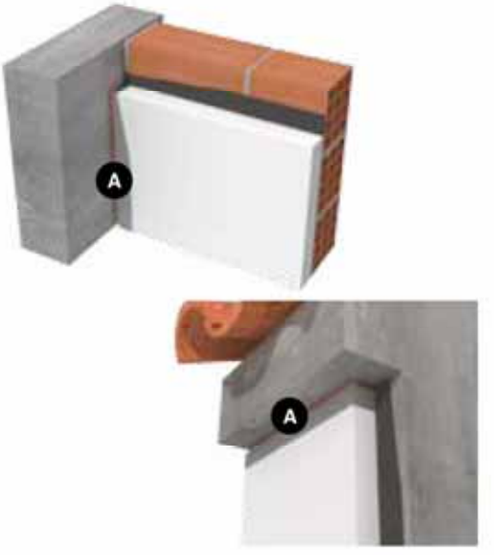
Often with refurbishments, door and window frames are narrower than the lowest thickness of the insulation panel to be fixed to the façade. In these situations, and as long as approved by the project supervisors, thermal bridging in the jambs and lintels can be resolved by using insulation panels of a smaller thickness than those fixed to the façade.

In the event of the substrate having expansion joints, these must be respected and should never be covered with insulation panels.

Expansion joints can be resolved by using *Traditerm® Perfil Junta de Dilatación* (a Traditerm® Expansion Joint Profile).

When joints between panels above 2 mm are generated, these should be filled with strips of the same insulation material.

In the joints between the system and other elements on the façade, a joint of approximately 5 mm should be left. Later the joint is sealed by applying a joint base and Pumalastic MS.



Details for applying joint base and Pumalastic® MS (A)

6
Sanding insulation panels.

After at least 24 hours after fixing the insulation panels with the Traditerm® mortar, smooth any unevenness out by sanding the panels.

If this correction is impossible to carry out on the mineral wool and natural cork, the fixing of these types of insulation requires great precision to achieve the correct flatness.

7
Mechanical fixing of insulation panels with Fixing Anchors

Once the panels have been sanded, the bonding of the insulation panels is complemented with fixing anchors.

The importance of the use of fixing anchors in an ETICS system lies in:

Avoiding, along with the Traditerm® mortar, the appearance of cracks in the façade caused by hygrothermal stress and the subsequent buckling of panels this causes.

Preventing an error in the substructure (above all with refurbishments), i.e., to fix the system directly to the original base substrate and that it does not just depend on the bonding of the existing facing.

The recommended fixing anchors for the Traditerm® Systems are:

- Traditerm® Taco de Anclaje. *Traditerm® Fixing Anchor.*
- Traditerm® Taco de Anclaje Plus NTK. *Traditerm® Fixing Anchor Plus NTK.*
- Traditerm® Taco de Anclaje STR U 2G. *Traditerm® Fixing Anchor STR U 2G.*

The following chart is based on the characteristics of each one of the recommended types of fixing anchors:

TYPE	REFERENCE	THICKNESS INSULATION (mm)	FIXINGS/m²	ETA
Traditerm® Taco de Anclaje (*Traditerm® Fixing Anchor*)	90	40	8	ETA-08/0172
	110	60-50		
	120	70		
	140	90-80		
	160	110-100		
	180	130-120		
	200	150-140		
Traditerm® Taco de Anclaje Plus NTK (*Traditerm® NTK Fixing Anchor Plus*)	90	40	6	ETA-07/0026
	110	60-50		
	130	80-70		
	150	100-90		
	170	120-110		
	190	140-130		
	210	160-150		
Traditerm® Taco STR U 2G (*Traditerm® STRU 2G Fixing*)	115	80	6	ETA-04/0023
	135	100-90		
	155	120-110		
	175	140-130		
	195	160-150		
	215	180-170		
	235	200-190		

In the event that the substrate is comprised of thermal blocks,the length of the fixing to be used *(Traditerm® Taco de Anclaje o Traditerm® Taco de Anclaje Plus NTK)* (Traditerm® Fixing Anchor or Traditerm® Fixing Anchor Plus NTK) must be at least 10 cm bigger than the thickness of the insulation panel.

7.1
Installation of Fixing Anchors Standard/Plus NTK

24 hours after fixing the insulation panels to the façade with the Traditerm® mortar, make a hole in the substrate with a drill, penetrating the insulation panel.

The diameter of the drill bit must correspond with the diameter of the fixing anchor. Consult technical data sheet.

To make a hole with the drill, use it in rotary mode with the rotary attachment, except when the substrate is concrete or solid brick, in this case use it in hammer mode.

Position the fixing anchor in the hole until it is supported on the insulation panel. Hit the fixing with a hammer, until it penetrates the hole by 1-2 mm through the surface of the panel.

Next the depression made on the surface of the insulation panel is levelled with Traditerm® mortar.

7.2
Installation of Fixing Anchors STR U 2G

24 hours after fixing the insulation panels to the façade with the Traditerm® adhesive, drill a hole in the substrate, going through the insulation panel.

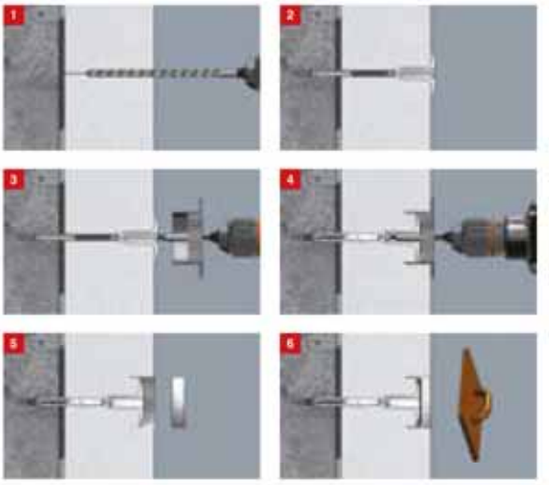
The diameter of the drill bit must correspond with the diameter of the fixing anchor. Consult technical datasheet.

Use the drill in rotary mode to make the hole, except when the substrate is concrete or solid brick, in which case use it in hammer mode.

There are two methods of installing Traditerm® *Taco de Anclaje STR U 2G* (Traditerm® Fixing Anchor STR U 2G):

A- Interior Insulation Method

Position the fixing anchor over the drilled hole and screw inwards with the air of the *Traditerm® Kit Corona STR* (Traditerm® STR Capping Kit).



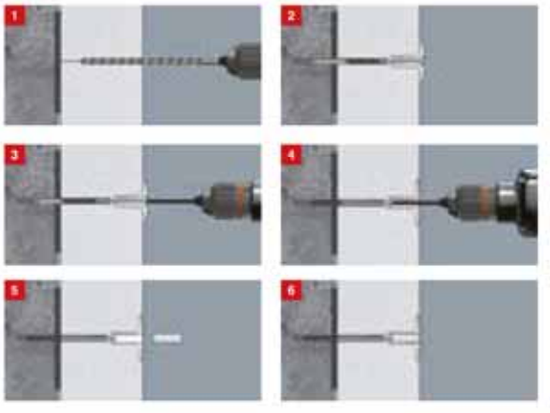
Interior Insulation Method

Once the fixing has been inserted into the insulation, position the corresponding *Traditerm® Tapa Aislante* (Traditerm® Insulation Fixing according to insulation type).

B- Surface Method

Position the fixing anchor over the drilled hole and screw until it penetrates the hole in the panel surface by 1-2 mm.

Next, position the *Traditerm® Tapón STR* (Traditerm® STR Plug) and level the surface with Traditerm® mortar.



Surface Method

7.3
Distribution of Fixing Anchors

According to the number of fixing anchors indicated, the distribution made with Traditerm® Systems are the following:

6 fixing /m²

8 fixing /m²

8
Installing with Reinforcement Profiles

The corners of the Traditerm® Systems, as well as the edges must be protected and reinforced with reinforcement profiles. The installation of the reinforcement profiles should be carried out after a minimum of 24 hours after fixing the insulation panels.

The most common types of reinforcements are:

8.1
Traditerm® PVC Angle with mesh.

This type of profile acts a support to the existing openings in the façades. The way to install them is:

- Apply a layer of Traditerm® mortar over the two surfaces comprising the corner of the opening, covering the profile and mesh and comb with a notched trowel.
- Next position the profile over the mortar and press gently.
- Level the profile with a leveller.
- With the Traditerm® mortar that protrudes from the base when the profile is pressed, cover the mesh and profile. Even though the mesh is covered by the mortar, the mesh squares must be visible (see surface detail *Traditerm® Malla* Traditerm® Mesh).

Detail *Traditerm® Malla* (Traditerm® Mesh)

- Always leave a separation of between 1 and 2 mm between profiles.
- The joint between profiles should never coincide with the joints between insulation panels.

Traditerm® Perfil Ángulo PVC con Malla
(Traditerm® PVC Angle with mesh)

8.2
Traditerm® PVC Gutter Profile

This type of profile is used in the event of a hollow with an angle other than 90°. The way to install it is identical to that of *Traditerm® Perfil ángulo PVC con Malla* Traditerm® PVC Profile Angle with Mesh.

Traditerm® Perfil Ángulo Circular
(Traditerm® Circular Angle Profile)

8.3
Traditerm® Perfil Goterón PVC con Malla *(Traditerm® Capping Profile with Mesh)*

Used for forming gutters on windows, eaves and cantilevers, to avoid rainwater running down the façade.

The method of installation is identical to that of the Traditerm® Perfil Ángulo PVC con Malla (Traditerm®PVC Angle Profile with Mesh).

Traditerm® Capping Profile with Mesh

8.4
Traditerm® Perfil Coronación *(Traditerm® Capping Profile)*

Used as a protector for the upper part of the system.

The upper part of the meeting between this profile and the substrate it is fixed to must always be protected (by the actual eave of the façade or one coming out of it, by another profile,)

For its installation simply fix it with screws taking into account:

• It must be installed before fixing the last top row of insulation panels.

• The screws used to fix the side closing profile to the substrate are fixed with a 30 cm separation. The first screw must be fixed at a distance of 5 cm from the edge of the profile.

Traditerm® Capping Profile

8.5
Traditerm® Perfil Junta Dilatación *(Traditerm® Expansion Joint Profile)*

Existing expansion joints on the façade must be respected and never covered with any of the Traditerm® Systems.

To resolve this, use Traditerm® Perfil Junta de Dilatación (the Traditerm® Expansion Joint Profile). The method of installation is identical to that of the Traditerm® Perfil Ángulo PVC con Malla (Traditerm® PVC Angle Profile with Mesh), only now with a double hollow. The strip that contains the profile is inserted into the expansion joint.

Traditerm® Expansion Joint Profile

8.6
Fixing elements to the façade

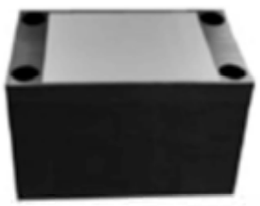
For fixing lines, awnings and outdoor lights, on the Traditerm® System, use the **Traditerm® Soporte Fijación 300 (Traditerm® Fixing Support 300).**

This element presents:

• Maximum tensile strength of 300 kg.

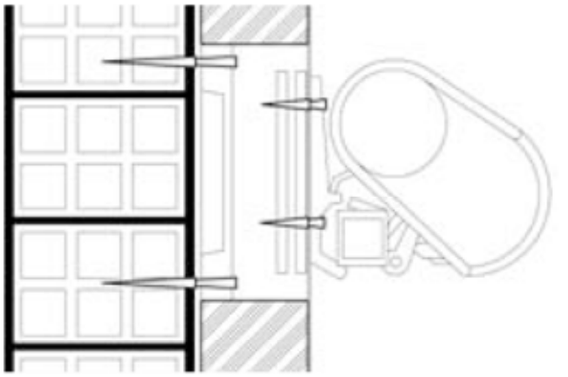
• 238 x 138 mm format on thicknesses of 60, 80 and 100 mm.

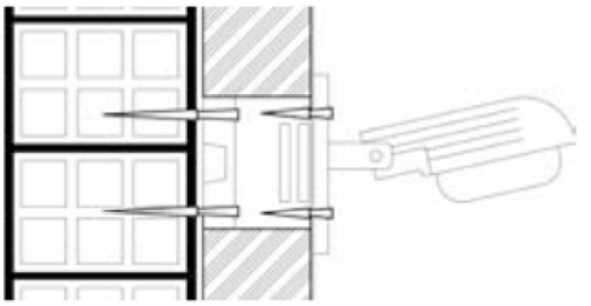
• Prevents thermal bridging – high-density polyurethane body.



Fixing Support 300

Installation of fixing elements to façade





9
Reinforcing with *Malla Traditerm®* (Traditerm® Mesh)

A series of singular spots must be reinforced with Traditerm® fibre glass mesh.

The installation of Malla Traditerm® (Mesh Traditerm®) Mesh reinforcements is done at least 24 hours after fixing the insulation panels. The singular spots to reinforce are:

9.1
Reinforced with *Malla Traditerm®* (Traditerm® Mesh) in corners of recesses in the façade, (windows, doors, etc).

Cut mesh strips of 20x40 cm and fix them with Traditerm® mortar at all corner points of the recess.

Even though it is covered with mortar, the squares of the mesh must be visible.

Detail of the condition of the surface of the mesh strip after fixing with Traditerm® mortar

9.2
Reinforced with *Mallas Traditerm®* (Traditerm® Mesh) in areas of the façade for eseeably exposed to direct impact (skirting boards, etc).

This reinforcement can be done in two different ways,according to the degree of resistance you wish to reach:

With Traditerm® Mesh

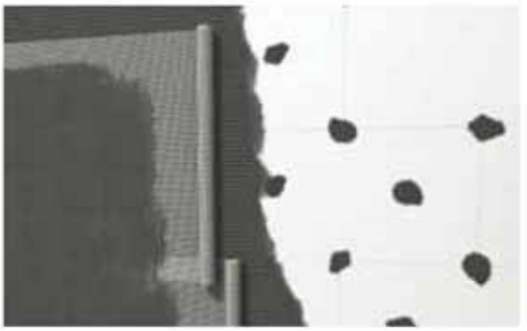
In the area to be reinforced, spread a layer of Traditerm® mortar over the insulation panel and then comb with a notched trowel (No. 6).

Spread the *Malla Traditerm®* (Traditerm® Mesh), unfolding the roll horizontally over the combed surface and then apply pressure to the grooves with a trowel. Cover the mesh with the Traditerm® mortar that protrudes. The mesh already covered must be showing the squares of the mesh.The thickness of this layer should be between 1.5-2 mm.

The overlay between meshing should be at least 10 cm wide.

When the rest of the façade is covered with mortar and Traditerm® Mortar (see section 10, application), another layer of Traditerm® mortar is spread and combed over the surface reinforced with mesh to receive a further *Malla Traditerm®* (Traditerm® Mesh) (main mesh) layer, this time laid vertically, from top to bottom, which is left covered with the square of the mesh still visible.

The thickness of this layer should be between 2 mm.



With Traditerm® Malla de Refuerzo (With Traditerm® Reinforcement Mesh)

To achieve greater impact resistance in the systems than the one obtained with the previous reinforcing, it is necessary to use Malla de Refuerzo Traditerm®, (Traditerm® Reinforcement Mesh).

The process is similar to installing Traditerm® Mesh:

In the area to be reinforced, spread a layer of Traditerm® mortar over the insulation panel and then comb with a notched trowel (No. 6).

Spread the *Traditerm® Malla de Refuerzo* (Traditerm® Reinforcement Mesh), unfolding the roll horizontally over the combed surface and apply pressure to the grooves with a trowel. Cover the mesh with the Traditerm® mortar that protrudes. Even though the mortar covers the mesh, the mesh squares must be visible. The thickness of this layer should be between 1.5-2 mm.

Do not overlap the *Traditerm® Malla de Refuerzo* (Traditerm® Reinforcement Mesh) in the joints between meshing.

Next, continue in the same way as described in the instructions for installing *Malla Traditerm®* (Traditerm® Mesh)(previous section).

10 Installing the Principal Mesh

Wait at least 24 hours after installing the reinforcement profiles and reinforcement mesh (previous section), before fixing the Principal Mesh.

In the Traditerm® Systems, the Principal Mesh is differentiated from the *Malla Traditerm®* (Traditerm® Mesh), as the mesh used for covering the surface of the different systems and there fore covers all the different reinforcement meshes that have been previously installed.

For installation:

Wait at least 24 hours after applying the reinforcement mesh before installing the Principal Mesh.

Spread a layer of Traditerm® mortar directly over the insulation panel (or previously reinforced surface).

Previously level the thickness with a not ched trowel (No. 6).

Unfold the Traditerm® Mesh from top to bottom, overlapping them by 10 cm.

Press the Traditerm® Mesh over the grooves of the Traditerm® mortar with a trowel until completely embedded in it. Even though the mortar covers the mesh, the mesh squares must be visible. The thickness of this layer should be at least 2 mm.

Once this layer has reached a certain resistance, normally after 24 hours, a second layer of Traditerm mortar is applied, (2 mm, flat but not trowelled) to finish the covered surface.

This process is done in the same way, in the case of the surface to cover being reinforced with a reinforcement mesh.

11
Traditerm® System Decorative Finish

To apply a decorative finish, the following must be taken into consideration:

• Do not apply the decorative finish in temperatures lower than 5°C or above 30°C.

• Do not apply in direct sun, rain or if there is a risk of frost.

• Do not apply the system to horizontal or sloping surfaces with inclinations lower than 45°.

• To ensure the uniformity of colour, it is advisable to order the total amount of product necessary in one single order. Otherwise, do not mix or alternate different manufacturing batches on one surface.

• To make the cuts it is advisable to use adhesive tape.

• When applying with a sprayer, maintain the pressure and the same spraying angle, as well as the separation distance with respect to the substrate, to avoid changes in the appearance of the product.

• Protect the surroundings of the surface to apply and clean any splashes with water without letting the product to dry or harden.

• Once the decorative finish has been applied, the acceptable flatness of the façade for the final facing should not be above 7 mm, measured with a 2 m rule

The decorative finish consists of two types of products:

• Priming:
***Fondo Morcemcril®* (Morcemcril® Primer)**

• Decorative facing:
Morcemcril® Range

11.1 Fondo Morcemcril® *(Morcemcril® Primer)*

The product *Fondo Morcemcril®* (Morcemcril® Primer), is an acrylic pigmented primer that:

• Homogenises the absorption of the substrate.

• Facilitates the covering of the decorative Morcemcril® Range of products.

• Facilitates the bonding of the decorative Morcemcril® Range of products.

• Increases the durability of the decorative finish in the Traditerm® Systems.

• Resistant to rain water.

• Water vapour permeable.

The application is done at least 48 hours after applying the last coat of *Fondo Morcemcril®* (Morcemcril® Primer), with a roller. The substrate must be dry before applying.

On areas where the *Fondo Morcemcril®* (Morcemcril® Primer) is exposed (working joints with adhesive tape), in this area apply at least 3 coats of *Fondo Morcemcril®* (Morcemcril® Primer).

11.2 Morcemcril® Range

Range of acrylic facings called Morcemcril® for decorating and waterproofing façades, as well as for decorative finishes on the different Traditerm® Systems. The most important features of the products in the Morcemcril® Range are:

• Product Certified in accordance with ETAG 004-DITE No.07/0054.

• Resistant to rain water.

• Water vapour permeable.

• Range of Colours and Textures.

• Anti-mould - Anti-slime.

• Resistant to atmospheric ageing and UV rays.

• Washable.

PROPERTY PRODUCT	MORCEMCRIL® STANDARD	MORCEMCRIL® SILOXANO	MORCEMCRIL® FLEXIBLE	MORCEMCRIL® MOSAICO
IMPERMEABILITY	+++	++++	+++++	+++
DIRT RESIST.	+++	++++	+++++	+++
VAPOUR PERMEAB.	+++	+++	++++	+++++
DEFORMABILITY	+++	+++	+++++	+++
SUBSTRATE ADHER.	+++++	+++++	+++++	+++++
ANTI-MOULD	ok	ok	ok	ok
ANTI-SLIME	ok	ok	ok	ok
STONE FINISH	.....	.....	.....	ok

List of products in the MORCEMCRIL® Range and their most important features

Range of colours

Fondo Morcemcril® · Morcemcril® Standard · Morcemcril® Flexible · Morcemcril® Siloxano

Blanco 100

Nácar 055

Marfil 015

Marfil 130

Tostado 023

Marfil Medio 017

Tierra 031


Gamuza 425


Albero 175


Coral Suave 035


Ladrillo Especial 151


Rosa 275


Tierra 115

Tierra 060


Arena 146


Piedra 229


Beige 212


Roble 101

Verde 350


Perla 302


Gris 300

Morcemcril® Mosaico


Blanco 000


Marfil 010


Amarillo 015


Rosa 030


Rojo 040


Madera 050


Verde 060


Gris 070


Nevada 085

The colours shown are only for guidance purposes.

Application
Morcemcril® Standard
Morcemcril® Siloxano
Morcemcril® Flexible

• Apply the Morcemcril® facing (Standard, Siloxano, Flexible), at least 24 hours after applying Fondo Morcemcril® (Morcemcril® Primer).

• Before applying, shake the product in the container until a uniform mixture has been obtained.

• The product is supplied ready to use and can be applied with a trowel or with a spray gun.

• If applying by hand, the consistency and workability can be regularised by adding water up to a maximum of 250 ml per 25 kg container.

If applying by spray gun, water may be added up to of 1 litre per 25 kg container. This adjustment will depend on the pump to be used. Stir well immediately before use.

• Once the product has been spread to the substrate and it has lost it stickiness on the trowel, proceed with trowelling the material with the Morcemcril® Llana (Morcemcril® Trowel).

• Working joints can be made with adhesive tape,which will later contribute to the aesthetic appearance of the façade.

• Work tools should be cleaned with abundant water immediately after using.

Clean any dry remains with paint thinner.

Morcemcril® Mosaico
(Morcemcril® Mosaic)

• Shake until the mixture is uniform.

• The product is supplied ready to use and is applied with a stainless steel trowel.

• Once the product has been spread to the substrate pass the trowel over the surface straight away, always in the same direction, removing areas of accumulated product and burrs in order to achieve a flat surface, completely covered with *Morcemcril® Mosaico* (Morcemcril® Mosaic).

• Work tools should be cleaned with abundant water immediately after using.

Clean any dry remains with paint thinner.

• Differences in the final finish may occur given the mixture of natural stones it comprises. To minimise this effect, it is recommended to request the total amount of product in one single order. In any case, do not mix or alternate different manufacturing batches.

• A low temperature and high humidity considerably extend the drying time of *Morcemcril® Mosaico* (Morcemcril® Mosaic).

12 Installation of light loads on Traditerm® Systems

Installing light loads on the systems, is done with Traditerm® Anclaje Espiral (Traditerm® Spiral Anchor), at least 24 hours after applying the coat of Morcemcril® finish.

Mark the point on the surface where it will be installed. The anchor is fixed to this point as shown in the figure.

Finally, insert the anchor into the system without needing to predrill.

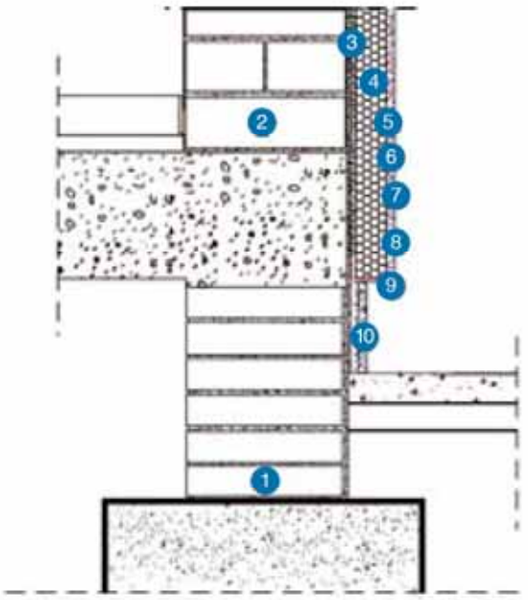
Use outdoor screws to fix the different elements size Ø 4-5 mm.

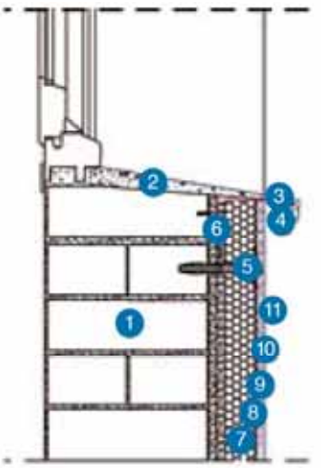
Maximum load 5 kg.

Construction Solutions for EXTERNAL WALL THERMAL INSULATION (EWIS/ETICS)

CONSTRUCTION DETAILS

CONSTRUCTION DETAILS





Detail A

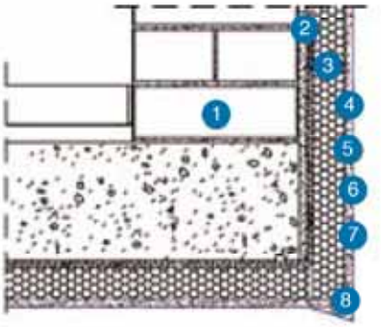
Vertical section of start

1. Wall
2. Substrate
3. Traditerm® Mortar (adhesive)
4. Traditerm® Panel Aislante Traditerm® Insulation Panel
5. Traditerm® Mortar (facing)
6. Traditerm® Malla Traditerm® Mesh
7. Traditerm® Mortar (facing)
8. Fondo Morcemcril®+Gama Morcemcril®
   Morcemcril® Primer + Morcemcril® Range
9. Traditerm® Perfil de Arranque (Traditerm® Starting Profile)
10. Skirting board

Detail B

Vertical section of window

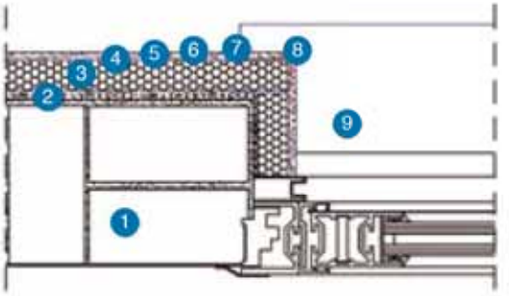
1. Substrate
2. Mortar
3. Rainguards
4. Profile
5. Traditerm® Taco de Anclaje (Traditerm® Fixing Anchors)
6. Mortero Traditerm® (adhesive)
7. Traditerm® Panel Aislante (Traditerm® Insulation Panel)
8. Traditerm® Mortar (facing)
9. Traditerm® Malla (Traditerm® Mesh)
10. Traditerm® Mortar (facing)
11. Fondo Morcemcril®+Gama Morcemcril®
    Morcemcril® Primer + Morcemcril® Range



Detail C

Vertical section of cantilevers

1. Substrate
2. Traditerm® Mortar (adhesive)
3. Traditerm® Panel Aislante (Traditerm® Insulation Panel)
4. Traditerm® Mortar (facing)
5. Traditerm® Mesh (*Traditerm® Malla)*
6. Traditerm® Mortar (facing)
7. Fondo Morcemcril®+Gama Morcemcril® *Morcemcril® Primer + Morcemcril® Range*
8. Traditerm® Perfil Goterón PVC con Malla (*Traditerm® PVC Gutter Profile with Mesh)*



Detail D

Horizontal section of window

1. Substrate
2. Traditerm® Mortar (adhesive)
3. Traditerm® Panel Aislante (Traditerm® Insulation Panel)
4. Traditerm® Mortar (facing)
5. Traditerm® Mesh (Traditerm® Malla)
6. Traditerm® Mortar (facing)
7. Fondo Morcemcril®+Gama Morcemcril® Morcemcril® Primer + Morcemcril® Range
8. Traditerm® Perfil Goterón PVC con Malla (Traditerm® PVC Gutter Profile with Mesh)
9. Rainguards

Construction Solutions for EXTERNAL WALL THERMAL INSULATION (EWIS/ETICS)

COMMON PROBLEMS

PROBLEM	CAUSE OF PROBLEM
Low mechanical resistance of Traditerm® Mortar	Applying coat of facing with temperature > 30ºC with frequent wind.
Crack	Incorrect preparation of substrate.
	Incorrect fixing of insulation panel to substrate.
	Using unstable insulation panels (EPS/EPS-G).
	Fixing insulation panels with thickness <40 mm with beaded mortar method.
	There is no joint gap in insulation panels between panels.
	Fixing insulation panels to expansion joint.
	Coincidence of joints between panels with openings.
	Contact between reinforcement profiles.
	Existence of Traditerm® mortar between insulation panels.
	Thickness of layer of Traditerm® + Mesh (layer of insulation panel reinforced facing) < 3 mm or > 5 mm.
	Lack of overlap between meshing or overlap < 10 mm.
	Placement of the mesh directly over the insulation panel.
	Lack of reinforcement mesh in the vertices of gaps.
Aesthetic defect by fixing anchors marking	The fixing anchor has not been inserted 1 - 2 mm inside the insulation panel.

PROBLEM	CAUSE OF PROBLEM
Aesthetic defect by marking of the seals between the panels	Incorrect flatness of substrate. Lack of flatness when installing the insulation panels. In the case of EPS/EPS-G, joints not sanded between panels.
General detachment of the system	Weak substrate. Incorrect preparation of substrate. Lack of fixing anchor.
Detachment or sagging of the decorative finishing	No primer. Default in inured times of the reinforced base coat and of the primer. Facing of EPS/EPS-G panels deteriorated by UV radiation.
Humidity leakage	Incorrect sealing of joints between the system and the façade: window marks, façade crowning, etc.
Variation in appearance of decorative finish	The application of product in different weather conditions causes a difference in the sealing of product and in turn in its colour tone. Varying thicknesses of decorative finish and different methods of trowelling the product, generates different textures and in turn different colour tones. The product is being applied or has recently been applied and it is raining.

International Service

+34 957 76 40 40

gpx@grupopuma.com
www.grupopuma.com

We collaborate with

Arquitectos Sin Fronteras

GRUPO PUMA SPAIN

ALBACETE
Pol. Ind. "B" Garysol, C/ Chopo - parcela 26
02110 LA GINETA (ALBACETE)
T. +34 967 27 54 58 - F. +34 967 27 54 58

ALICANTE
Pol. Ind. Tres Hermanas, C/ Canteros - parcelas 3 y 5
03680 ASPE (ALICANTE)
T. +34 965 49 56 31 - F. +34 965 49 56 30

ALMERÍA
Ctra. Viator km. 1,5
04120 LA CAÑADA (ALMERÍA)
T. +34 950 29 09 12 - F. +34 950 29 09 13

ASTURIAS
C/ Chopera, 15
33920 RIAÑO I-LANGREO (ASTURIAS)
T. +34 98 567 37 11 - F. +34 98 568 39 13

BARCELONA
Pol. Ind. Domenys II, C/ Enología, 15
08720 VILAFRANCA DEL PENEDÈS (BARCELONA)
T. +34 93 890 41 88 - F. +34 93 817 16 61

BIZKAIA
Polig. Ind. Neinver (Ugaldeguren), Iturritxualde Kalea 4
48160 DERIO (BIZKAIA)
T. 673 00 37 69 - F. +34 946 05 33 47

CÁDIZ
Pol. Ind. Zabal, C/ Velero, s/n
11300 LA LÍNEA DE LA CONCEPCIÓN (CÁDIZ)
T. +34 956 64 51 58 - F. +34 956 64 51 62

CÓRDOBA
Avda. Agrupación Córdoba, 17
14014 CÓRDOBA
T. +34 957 26 62 01 - F. +34 957 26 48 07

GRAN CANARIA
Pol. Ind. Arinaga, C/ Las Mimosas, 128
35119 AGÜIMES (GRAN CANARIA)
T. +34 928 18 81 49 - F. +34 928 18 82 14

GRANADA
Pol. Ind. El Juncaril, C/ Monachil, parcelas 74-75
18120 PELIGROS (GRANADA)
T. +34 958 46 77 68 - F. +34 958 08 72 10

MADRID
Pol. Ind. El Guijar, Avda. El Guijar, 37
28500 ARGANDA DEL REY (MADRID)
T. +34 91 870 47 81 - F.+34 91 871 15 27

MÁLAGA
Pol. Ind. Trévenez, C/ Conrado del Campo, 2
29590 CAMPANILLAS (MÁLAGA)
T. +34 952 35 47 00 - F. +34 952 34 43 91

MALLORCA
Pol. Ind. Son Llaüt. Vía Central, parcela 65
07320 SANTA MARIA DEL CAMÍ (MALLORCA)
T. +34 971 62 06 32 - F. +34 971 14 11 59

MÉRIDA
Pol. Ind. El Prado - parcela 5, nave 8
06800 MÉRIDA (BADAJOZ)
T. +34 924 37 85 62 - F. +34 924 37 85 62

MURCIA
Pol. Ind. Base 2000. Avda. nº 3 manzana 13
Apartado 448. 30584 LORQUI, MURCIA
T. +34 968 67 63 70 - F. +34 968 67 63 51

PONTEVEDRA
Ctra. Caldas-Villagarcía, km 2,2
36650 CALDAS DE REIS (PONTEVEDRA)
T. +34 986 53 03 67 - F. +34 986 53 01 27

SEVILLA
Pol. Ind. La Palmera, C/ La Palma, 20
41700 DOS HERMANAS (SEVILLA)
T. +34 954 69 13 51 - F. +34 954 69 29 02

TENERIFE
Pol. Ind. San Isidro, C/ Juan de la Cierva, 8
38109 EL ROSARIO (TENERIFE)
T. +34 922 62 47 51 - F. +34 922 62 49 80

VALENCIA
Pol. Ind. La Pahilla, C/ Peñas Albas, parcela 49
46370 CHIVA (VALENCIA)
T. +34 96 252 41 31 - F. +34 96 252 41 01

VALLADOLID
Pol. Ind. La Mora, C/ Las Acacias, parcelas 13-4
47193 LA CISTERNIGA (VALLADOLID)
T. +34 983 40 22 79 - F. +34 983 40 32 00

ZARAGOZA
Pol. Ind. Los Leones, C/ Principal, parcela K-2
50298 PINSEQUE (ZARAGOZA)
T. +34 976 65 68 30 - F. +34 976 65 68 31

GRUPO PUMA FRANCE

Zone Aéropole
Rue Edmond Aldosa
30128 GARONS
T. +33 (0) 8 11 14 14 18
F. +33 (0) 4 66 38 15 49

GRUPO PUMA PORTUGAL

LISBOA
Fornos de Cima - Calhandriz 2615
641 ALVERCA (LISBOA)
T. +35 121 958 73 60 - F. +35 121 958 73 69

PORTO
Lote 2a - Lot. Ind. Mun. Fontiscos
Ap. 79. 4784-909 SANTO TIRSO (PORTO)
T. +35 125 283 37 50 - F. +35 125 285 00 80

GRUPO PUMA ALGERIA

Direction Générale
B.P. 828 Zone Industrielle
SIDI BEL ABBES - 22000
T. +213 (0) 48 70 34 34 / +213 (0) 48 70 35 35
F. +213 (0) 48 70 35 55

Rev. 01/15