FIXCER

ADHESIVES AND CHEMICAL PRODUCTS
FOR CONSTRUCTION

LAMINA PROOF

THE MOST COMFORTABLE AND EFFICIENT WATERPROOFING SYSTEM

100%
WATERTIGHTNESS GUARANTEED

FIXCER PROJECTS MADE USING LAMINA PROOF

COMMUNAL POOL — ROGER DE FLOR STREET — GRANOLLERS

SWIMMING POOL IN THE ATTIC OF THE PALASIET HOTEL IN BENICÀSSIM

PRIVATE POOL — FORT CHAMBREY — GOZO ISLAND — MALTA

PRIVATE POOL — LA BAÑEZA — LEÓN

COMMUNAL POOL — EDEN APARTMENTS — CALONGE

PRIVATE POOL — BALATONFÜRED — HUNGARY

PRIVATE POOL — SANT ANTONI DE VILAMAJOR

INFINITY POOL IN AN ATTIC — COCENTAINA — ALICANTE

COMMUNAL POOL — HOSPITALET

COMMUNAL POOL — CORNELLÀ

PRIVATE POOL — BALAGUER

LUXURY POOLS IN CALDETES — MARESME

PRIVATE POOL — L'AMETLLA DEL VALLÈS

PRIVATE POOL — BARBERÀ

PRIVATE POOL — MATARÓ

SEVERAL POOLS — BARCELONA

WATERPROOFING 900 m^2. MUNICIPAL SPORTS CENTRE CAN CARALLEU — BARCELONA

PRIVATE POOL — TÀRREGA

VILADECANS HOSPITAL — 1000 m^2. WATERPROOFING — VILADECANS

WATERPROOFING ROOFTOP 600 m^2 — BARCELONA

WATERPROOFING 300 m^2 — MATARÓ

WATERPROOFING 900 m^2 — BARCELONA

FIXCER
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What is LAMINA PROOF?

It is a THREE-LAYER liner. It consists of a base layer of polypropylene, plus a layer of modified low-density polyethylene and a final layer of polypropylene.

Its configuration is so specific that it can be glued to the substrate by using cement glue and then have the ceramic tiles placed directly on top of it with the appropriate adhesive and without needing to use any other intermediate layer.

DELIVERED IN 30 ML LONG AND 01 ML WIDE ROLLS

How does LAMINA PROOF work?

100% watertight against fresh, chlorinated and salt water.

NO LEAKS!

Its THREE-LAYER system provides a tear resistance far superior to that of any other waterproofing system.

Due to its high elongation values, it is the perfect liner for bridging cracks in cracked or simply unstable substrates.

The polyethylene middle layer gives the film full chemical resistance to alkalis and very high resistance to diluted acids.

WHY IS LAMINA PROOF THE ULTIMATE WATERPROOFING SOLUTION?

THE IDEAL PRODUCT FOR EACH STAGE OF THE INSTALLATION

Our system is UNIQUE because it provides the IDEAL product for each stage of the installation process.

FIXCER guarantees that by following the LAMINA PROOF placement system step by step, you will achieve optimal waterproofing and complete watertightness for your pool, terrace, bathroom and changing room construction projects, as well as for construction elements such as expansion joints.

MORTARS

FIX-REVOCO or its projectable version **FIX-REVOCO PROYECTABLE**. And for the pool tank, the special thick-bed mortar **RECRECEM PRE-MIX**.

GRIP ADHESIVES FOR THE LINER

With our extensive range of adhesives and cementitious adhesives we guarantee the liner will stick to any substrate: mortar, concrete, steel or old ceramic.

ANTI-ACID AND WATERPROOF ADHESIVE

For bonding and sealing the **BANDA-SOLAPES:** use **EPOXICOL.**

SPECIAL ADHESIVE FOR CERAMIC TILES

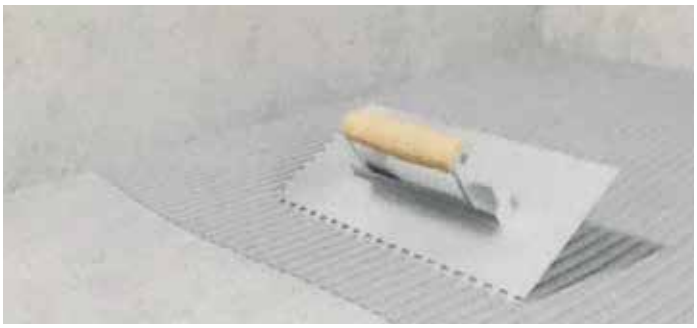
Ensures optimal adhesion when placing the ceramic tiles on top of **LAMINA PROOF: TECNOCOL GEL.**

GROUTING

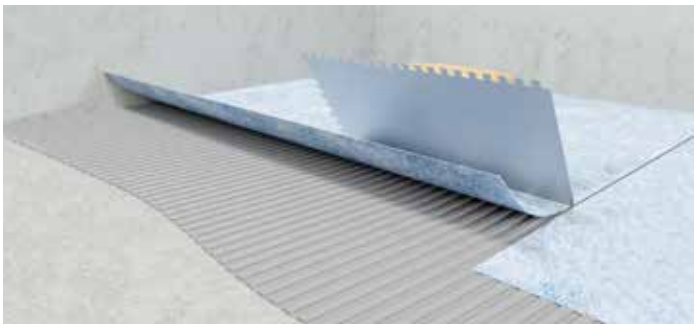
For traditional chlorination use **EUROCOLOR FLEX** and for salt chlorination, **CERPOXI** or **PROFESSIONAL PX.**

SEALING EXPANSION JOINTS

With chlorinated-water-resistant fillers: **SILICONA NEUTRA-FIXCER.**

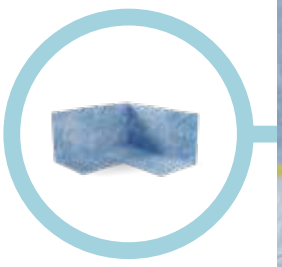


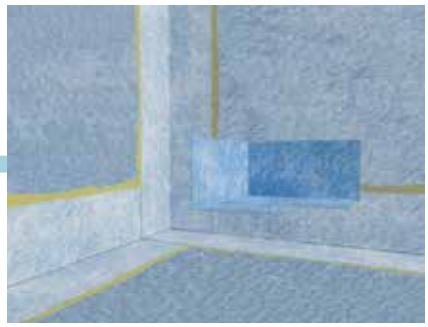
01 Spread the adhesive using a trowel with 6 mm teeth at most. Comb the adhesive in one direction only and in the direction of the shorter side of the liner.



02 Place the **LAMINA PROOF** end to end with respect to the previous one. Press with the smooth side of the metal trowel to remove any trapped air.

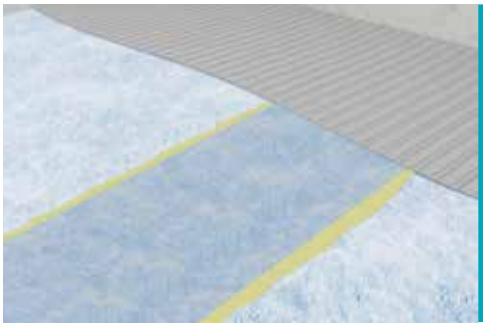
03 Once all the liners have been laid, seal all the joints between sheets of liner using the **BANDA-SOLAPES** glued with **EPOXICOL** watertight and anti-acid adhesive.





04 To finish, we will place a piece of the **BANDA-ESQUINAS** in every corner, also glued with **EPOXICOL** adhesive.

05 The drying time of the **EPOXICOL** adhesive is 18-24 hours depending on the ambient temperature. However, it is advisable to let it dry for at least 7-10 days before conducting a leak test.



WHAT SIZE OF TROWEL TO USE?

For a 31 x 62 cm piece, the right trowel measurement is 10 mm.

06 The last step is to securely adhere the ceramic. Use **TECNOCOL GEL**, a cementitious adhesive that is flexible, highly adhesive and specifically designed for swimming pools. Use a trowel with teeth that is suitable to the size of the ceramic.

Comb the tile adhesive in one direction only to allow the air to escape from under the ceramic tiles, and move the tiles with a back-and-forth motion to ensure 100% contact between the liner, adhesive and ceramic.

PHYSICAL PROPERTIES	REGULATION	RESULT
COLOUR	-	BLUE
TEMPERATURE RESISTANCE	-	-30°C / +90°C
THICKNESS	-	0,62 mm ± 0,1 mm
IMPACT RESISTANCE	DIN EN 12691	≥ 250 mm
RESISTANCE TO WATER PRESSURE	DIN EN 1928	≥ 1,5 BAR

TENSILE PROPERTIES	REGULATION	RESULT
LONGITUDINAL TEAR RESISTANCE	DIN EN 12310-2	≥ 70N
LATERAL TEAR RESISTANCE	DIN EN 12310-2	≥ 100N
LONGITUDINAL BREAKING LOAD	DIN EN 12311-2	≥ 300N / 50 mm
LATERAL BREAKING LOAD	DIN EN 12311-2	≥ 200N / 50 mm
SHEAR STRENGTH	DIN EN 12317-2	≥ 300N / 50 mm

CHEMICAL PROPERTIES	METHOD (1)	RESULT (2)
HYDROCHLORIC ACID 3%	INTERNAL	+
SULPHURIC ACID 35%		
CITRIC ACID 100 G/L		
LACTIC ACID 5%		
SODIUM HYPOCHLORITE 0.3 G/L		
SALT WATER 20 G/L		
POTASSIUM HYDROXIDE 20%		

(1) Resistance after storage for 7 days / 20°
(2) + = Resilient / = Weakened / - = Non-resilient

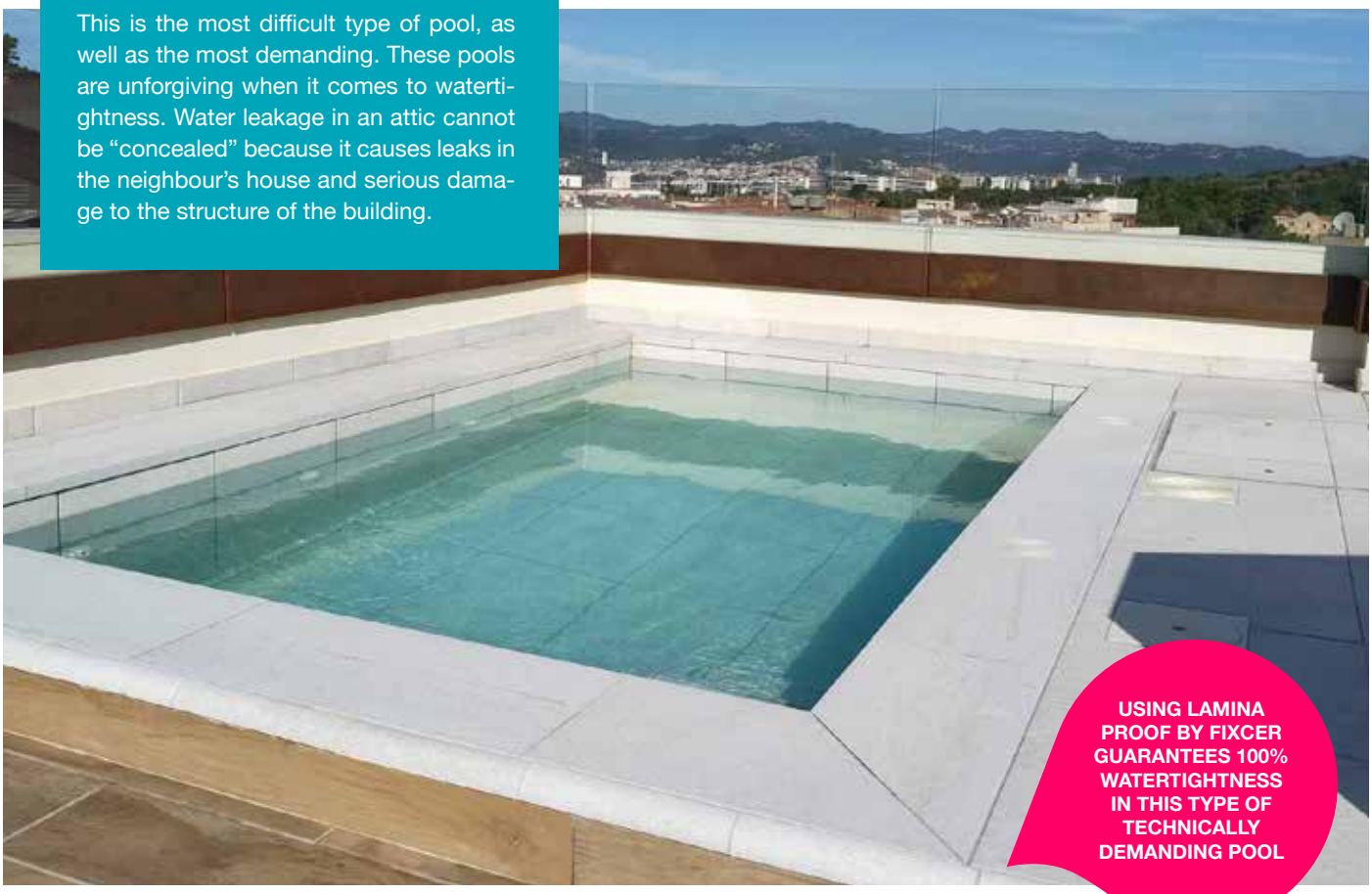
CERTIFICATIONS	REGULATION	MARKING
INTERNATIONAL HARMONISED STANDARD	EN 13956:2012	CE
CERTIFIED WATERPROOFING PRODUCTS	AbP	P-1201/152/16-MPA BS
FOR ETA CERTIFICATIONS	ETAG 022	COMPATIBLE

LÁMINA PROOF - USES - PUBLIC AND PRIVATE CONCRETE POOLS

Concrete pools are the most common type of pool on the market. Concrete guarantees a swimming pool that lasts a lifetime. Unlike other materials, concrete does not deteriorate over time. The ceramic finish also provides an unmistakable sign of warmth and safety. The concrete can be gunned (shotcrete) or done with formwork. The structural calculation, based on the type of terrain, pool dimensions, m^3 of water, etc., will determine the type of concrete to be used and the feasibility of one construction system over another. The concrete tank is ultimately responsible for a pool's watertightness and it is therefore essential to ensure its structural stability before proceeding with the waterproofing.

LAMINA PROOF BY FIXCER – USES – POOLS IN ATTICS

This is the most difficult type of pool, as well as the most demanding. These pools are unforgiving when it comes to watertightness. Water leakage in an attic cannot be "concealed" because it causes leaks in the neighbour's house and serious damage to the structure of the building.



USING LAMINA PROOF BY FIXCER GUARANTEES 100% WATERTIGHTNESS IN THIS TYPE OF TECHNICALLY DEMANDING POOL

A swimming pool refurbishment that also involves re-waterproofing can be an added difficulty to our project. Using **LAMINA PROOF** facilitates this work and offers four major advantages: **1)** it is easy to lay; **2)** it is not necessary to remove the old tiles; **3)** it is 100% watertight and safe; **4)** it is compatible with laying new tiles.

STEP-BY-STEP PLACEMENT

Clean the old ceramic tiles with the **FIX-SABÓ** alkaline detergent diluted in water at a ratio of 1:20. Then rinse with plenty of water.

Clean old ceramic tiles with the special **GRESNET** acid diluted in water at a ratio of 1:5.

El ácido **GRESNET** no ataca a los metales, ni a los lacados, ni a los cromados. **GRESNET** es un ácido respetuoso con el acero inoxidable de las escaleras y de los focos de la piscina.

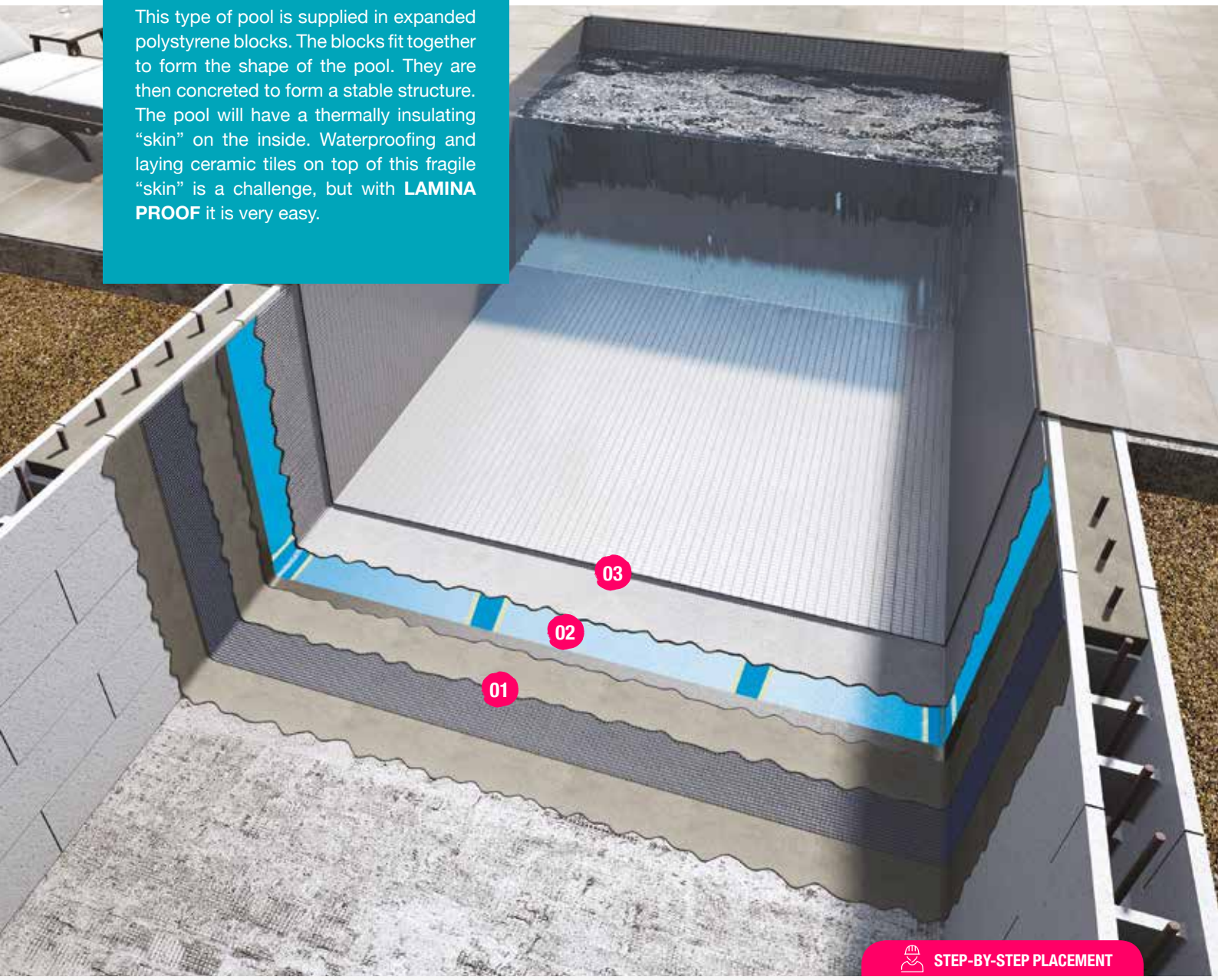
Aplicar el producto ya diluido. Frotar suavemente y enjuagar toda la piscina con abundante agua limpia. Dejar secar.

Apply a layer of **FIXMAX S2 GEL** tile adhesive on the walls and floors with a smooth metal trowel, inserting the **NET-MORTER-110** fibreglass mesh. The maximum thickness of this layer must be 1-2 mm. Allow to dry.

After 24 hours, glue the **LAMINA PROOF** using **TECNOCOL GEL** following the instructions described in the STEP BY STEP section on page 6.

Glue the new tiles with the special ceramic cement **TECNOCOL GEL** and grout with the **CERPOXI** anti-acid epoxy mortar or **PROFESSIONAL PX**. Both are available in 26 colours.

This type of pool is supplied in expanded polystyrene blocks. The blocks fit together to form the shape of the pool. They are then concreted to form a stable structure. The pool will have a thermally insulating "skin" on the inside. Waterproofing and laying ceramic tiles on top of this fragile "skin" is a challenge, but with **LAMINA PROOF** it is very easy.



STEP-BY-STEP PLACEMENT

01

Apply a layer of **FIXMAX S2 GEL** tile adhesive on the walls and floors with a smooth metal trowel, inserting the **NET-MORTER-110** fibreglass mesh. The maximum thickness of this layer must be 1-2 mm. Allow to dry.

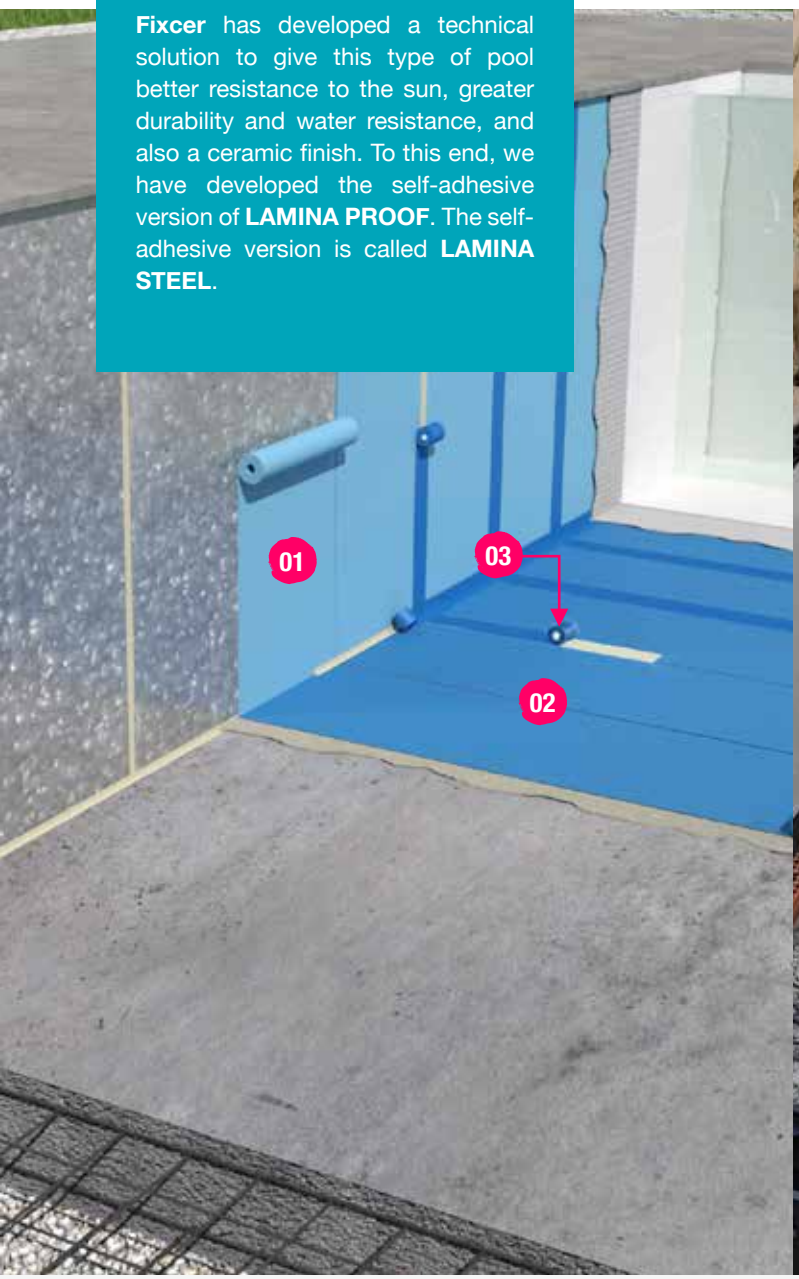
02

After 24 hours, glue the **LAMINA PROOF** using **TECNOCOL GEL** following the instructions described in the STEP BY STEP section on page 6.

03

Glue the new tiles with the special ceramic cement **TECNOCOL GEL** and grout with the **CERPOXI** anti-acid epoxy mortar or **PROFESSIONAL PX**. Both are available in 26 colours.

Fixcer has developed a technical solution to give this type of pool better resistance to the sun, greater durability and water resistance, and also a ceramic finish. To this end, we have developed the self-adhesive version of **LAMINA PROOF**. The self-adhesive version is called **LAMINA STEEL**.



STEP-BY-STEP PLACEMENT

01

The **LAMINA STEEL** is placed directly on top of the galvanised steel or polypropylene panels on all pool walls, which must have been previously cleaned with clear acetone.

02

Place **LAMINA PROOF** on the bottom of the pool using **TECNOCOL GEL** adhesive following the instructions described in the STEP BY STEP section on page 6.

03

All points of contact between LAMINA PROOF and **LAMINA PROOF** or **LAMINA PROOF** and **LAMINA STEEL** must be sealed using **BANDA-SOLAPES**.

BANDA-SOLAPES is made of the same material as the **STEEL** and **PROOF** sheets but is 14 cm wide to allow for a wide overlap between sheets. The **BANDA-SOLAPES** must be glued onto both sides of the **LAMINAS** using the 100% waterproof and anti-acid **EPOXICOL** adhesive.

There are two different ways to build the coping of a deck-level pool:

a.- With the prefabricated and made-to-measure S9 pieces by Rosa Gres.
b.- Making an on-site formwork and shaping the chosen overflow system.

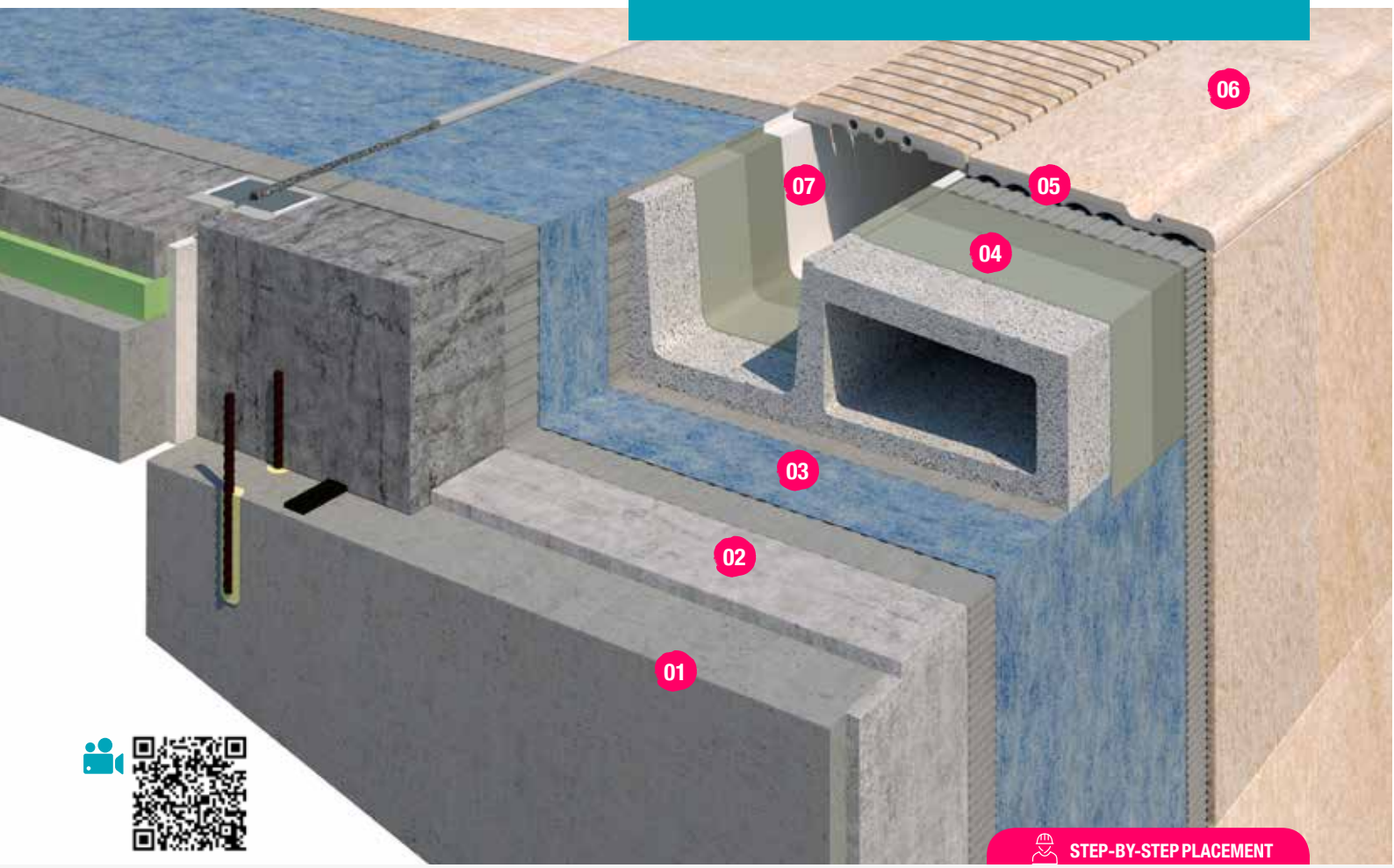
HOW TO WATERPROOF THE S9 PARTS WITH LAMINA PROOF?

Due to the versatility of the S9 parts, we can place the **LAMINA PROOF** underneath or on top of the S9 parts. Each option offers different advantages when making the coping.

OPTION 1
WATERPROOFING UNDERNEATH THE S9 BLOCKS

ADVANTAGES

It is the fastest system because **LAMINA PROOF** only has to be fitted to the horizontal and vertical plains of the bracket. We then get a double waterproofing of the coping: the **LAMINA PROOF** underneath and the **HIDROFIX** on top of the S9 pieces. The waterproofing of the wall is a perfect guide for the delivery of the vertical parts of the pool.



01

Previously regularised bracket.

02

Laying the **LAMINA PROOF** with **TECNOCOL GEL**.

03

Placing the S9 parts with **TECNOCOL GEL** cementitious adhesive.

04

Waterproofing the S9 parts using the **HIDROFIX** water-repellent mortar.

05

Laying the porcelain stoneware with **TECNOCOL GEL** tile adhesive.

06

Grouting the porcelain stoneware with **CERPOXI** or **PROFESSIONAL PX**.

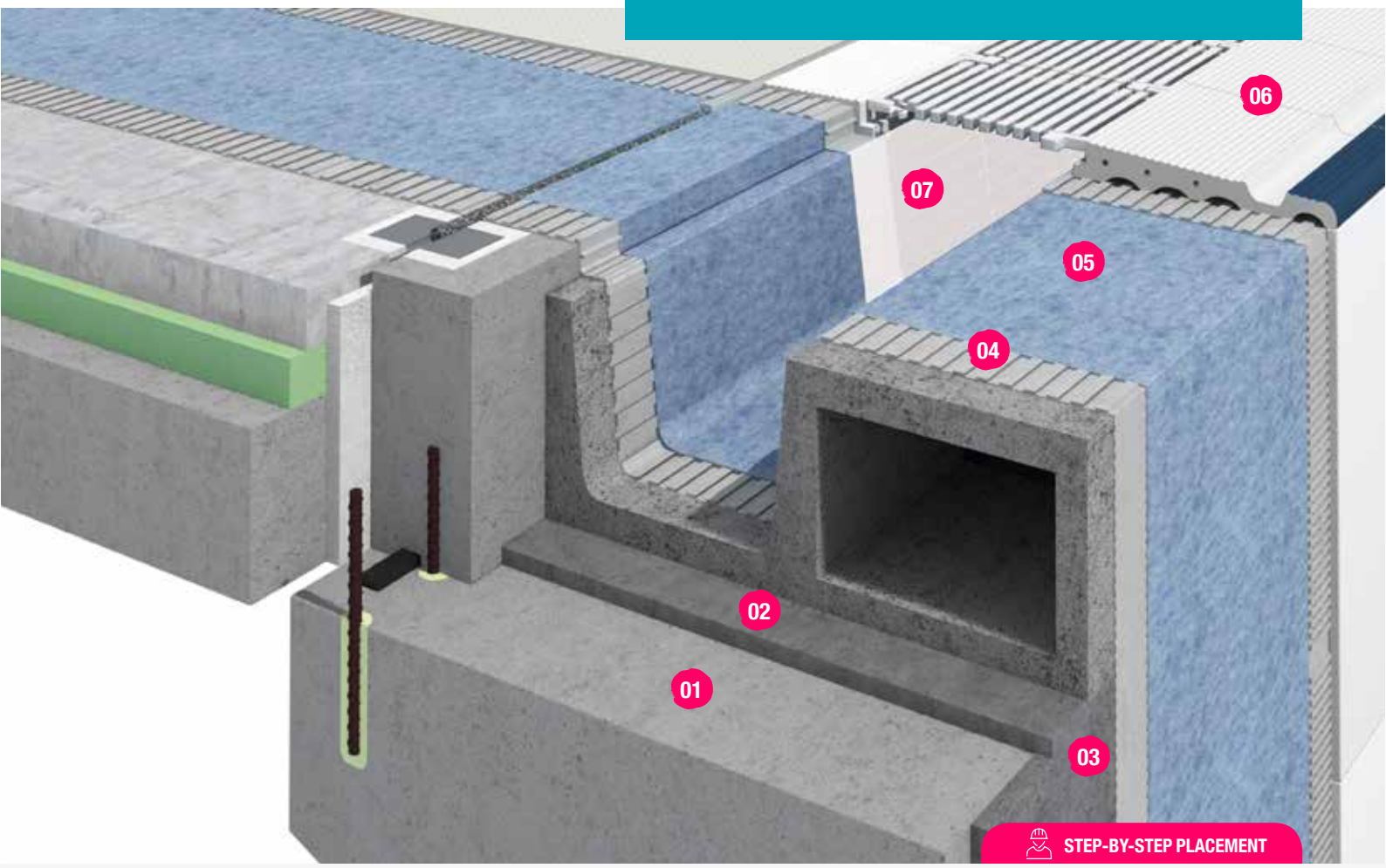
07

Anti-acid protection of the channel with **EPOXICOLOR** paint.

OPTION 2
WATERPROOFING ABOVE THE S9 BLOCKS

ADVANTAGES

The **LAMINA PROOF** waterproofs the entire structure and coping of the pool. The S9 piece marks the horizontal guideline for the screeding of the walls with **FIX-REVOCO** mortar. By waterproofing the entire structure and coping, no other products need to be applied to the overflow channel.



STEP-BY-STEP PLACEMENT

01

Previously regularised bracket.

02

Placing the S9 parts with **TECNOCOL GEL** cementitious adhesive.

03

Screeding the walls with the special mortar **FIX-REVOCO** or **FIX-REVOCO PROYECTABLE**.

04

Laying the **LAMINA PROOF** with **TECNOCOL GEL**.

05

Laying the porcelain stoneware with **TECNOCOL GEL** tile adhesive.

06

Grouting the porcelain stoneware with **CERPOXI** or **PROFESSIONAL PX**.

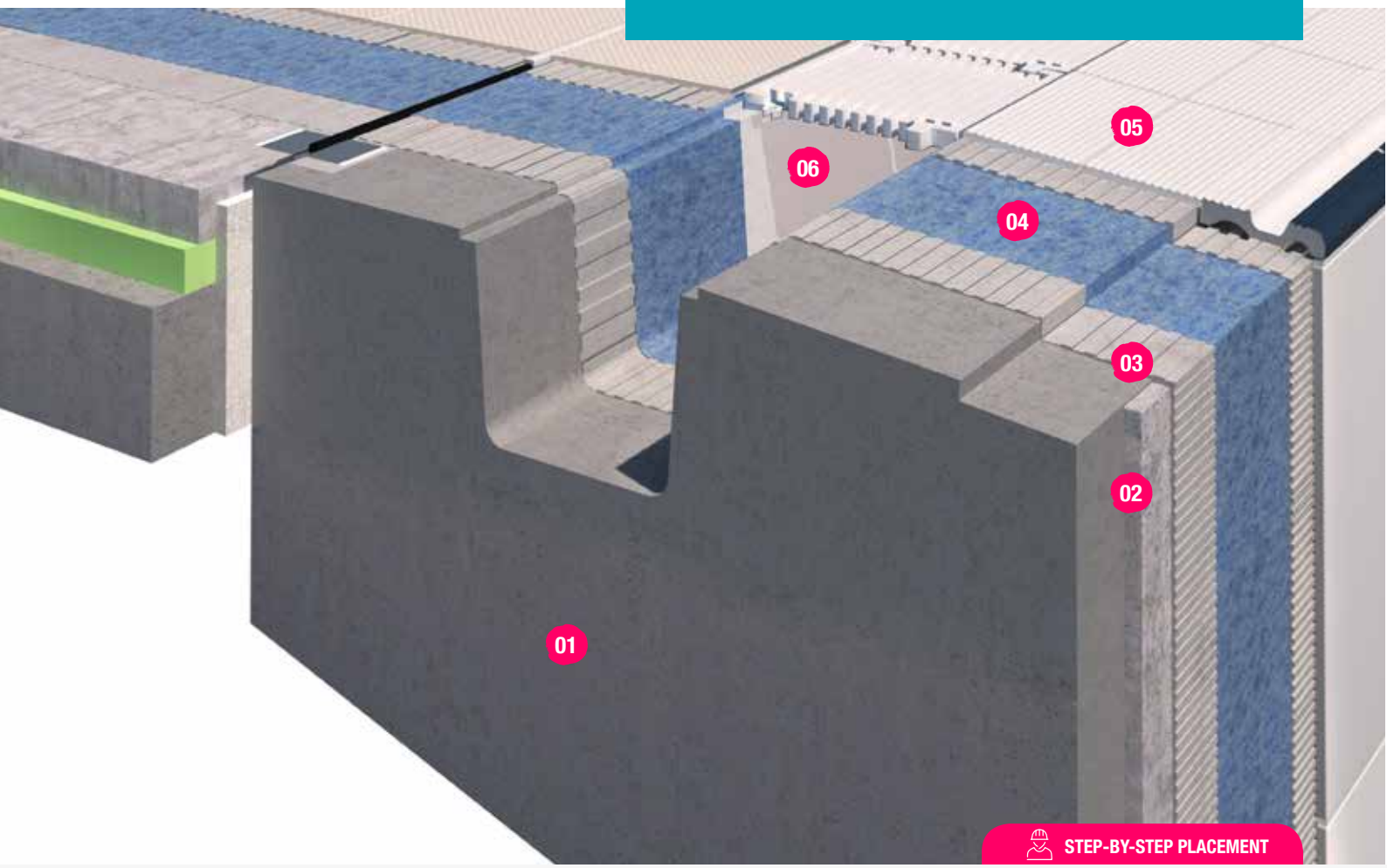
07

Anti-acid protection of the channel with **EPOXICOLOR** paint.

HOW TO WATERPROOF A FORMWORK COPING WITH LAMINA PROOF?

In this case, the **LAMINA PROOF** can only be placed on top of the overflow channel.

ADVANTAGES
The **LAMINA PROOF** waterproofs the entire structure and coping of the pool. By waterproofing the entire structure and coping, no other products need to be applied to the overflow channel.



STEP-BY-STEP PLACEMENT

01

Structure and overflow channel done on site.

02

Screeding the walls with the special mortar **FIX-REVOCO** or **FIX-REVOCO PROYECTABLE**.

03

Laying the **LAMINA PROOF** with **TECNOCOL GEL** adhesive.

04

Laying the porcelain stoneware with **TECNOCOL GEL**.

05

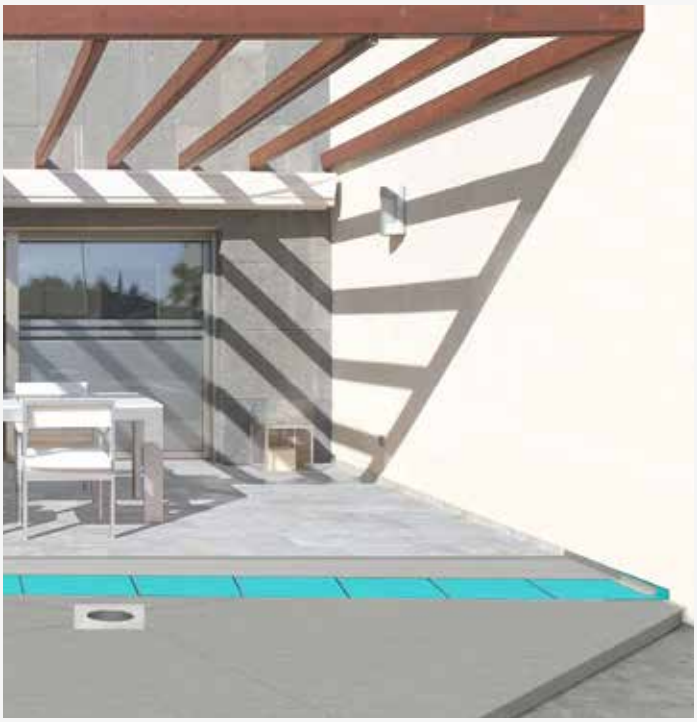
Grouting the porcelain stoneware with **CERPOXI** or **PROFESSIONAL PX**.

06

Anti-acid protection of the channel with **EPOXICOLOR** paint.

Thanks to its mechanical resistance and waterproofing properties, **LAMINA PROOF** is also ideal for the safe and durable waterproofing of balconies, terraces, pool decks, changing rooms, bathrooms, showers, roof terraces and public squares. In these cases, the application process is slightly different from those described above.

STEP-BY-STEP PLACEMENT



01 CLEANING

Remove all traces of deteriorated, disjointed, unsound or crumbling concrete; dust, paints, waxes and release agents.

02

Apply a C2S1 cementitious adhesive, such as **TECNOCOL GEL**, on the mortar substrate on the mortar or concrete substrate using a trowel with a maximum tooth size of 4x4 mm. Immediately place the **LAMINA PROOF**. Press with the smooth side of the trowel to eliminate air pockets and to ensure that it sticks perfectly to the tile adhesive on the geotextile side.

03

Then lay the next roll of **LAMINA PROOF** with a minimum overlap of 5 cm over the previous one. Glue the overlap with the same adhesive. In these cases, it will not be necessary to use **BANDA-SOLAPES** as the rolls of **LAMINA PROOF** overlap each other.

04

Glue the ceramic tile directly onto the **LAMINA** with a cementitious adhesive like **TECNOCOL GEL.**

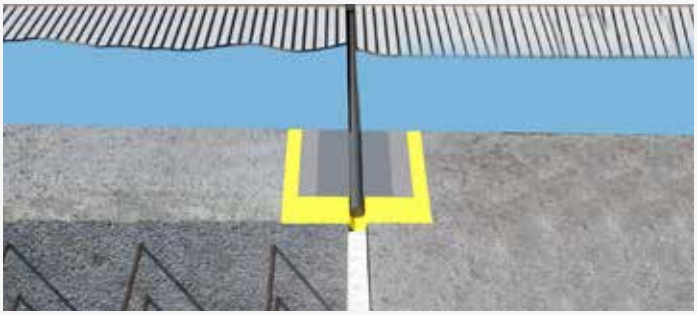
05 GROUTING

TERRACES AND CHANGING ROOMS

Use **EUROCOLOR FLEX**, the coloured mortar available in 8 colours, or the water-repellent coloured mortar **IDEAL COLOR** available in 34 pre-dosed colours.

BATHROOMS AND SHOWERS

Choose the anti-acid epoxy mortars **CERPOXI** or **PROFESSIONAL PX** available in 26 colours.



06

Lastly, the expansion joints should be made according to the instructions on page 19.

90% OF POOLS THAT LOSE WATER DO SO THROUGH THE JUNCTION OF THE CONCRETE WITH A PVC PIPE, A SPOTLIGHT, SKIMMER OR DRAIN. IT IS VERY IMPORTANT TO PROPERLY SEAL THE POOL'S SINGULAR POINTS. USING LAMINA PROOF MAKES IT VERY EASY TO SEALS THESE POINTS.

LEAK-FREE POOL

CORRECT SEALING OF PVC PIPES PREVENTS WATER LEAKS IN THE POOL

STEP-BY-STEP PLACEMENT

01 BEFORE PLACING THE LAMINA PROOF, SEAL THE JOINT BETWEEN THE CONCRETE AND THE PLASTIC ELEMENT.

A Using a hammer and chisel, make a V-shaped hole around the plastic element 25 mm wide and 25 mm deep. Clean the plastic element to be sealed with **sandpaper**. The surface must be clean, dry and free of grease and oil.

B Prime the concrete and the plastic element with **IMPRIMACIÓN SELLADOR S10**. Allow to dry for at least 1 hour and a maximum of 4 hours before carrying out the next step. C Apply the **SELLADOR S10** using the specific gun for this purpose. The filler must penetrate deeply and be in contact with both surfaces: the concrete and the plastic.

02

Once the **LAMINA PROOF** is in place all over the pool, terrace or bathroom, we will reinforce the singular points in the following way:

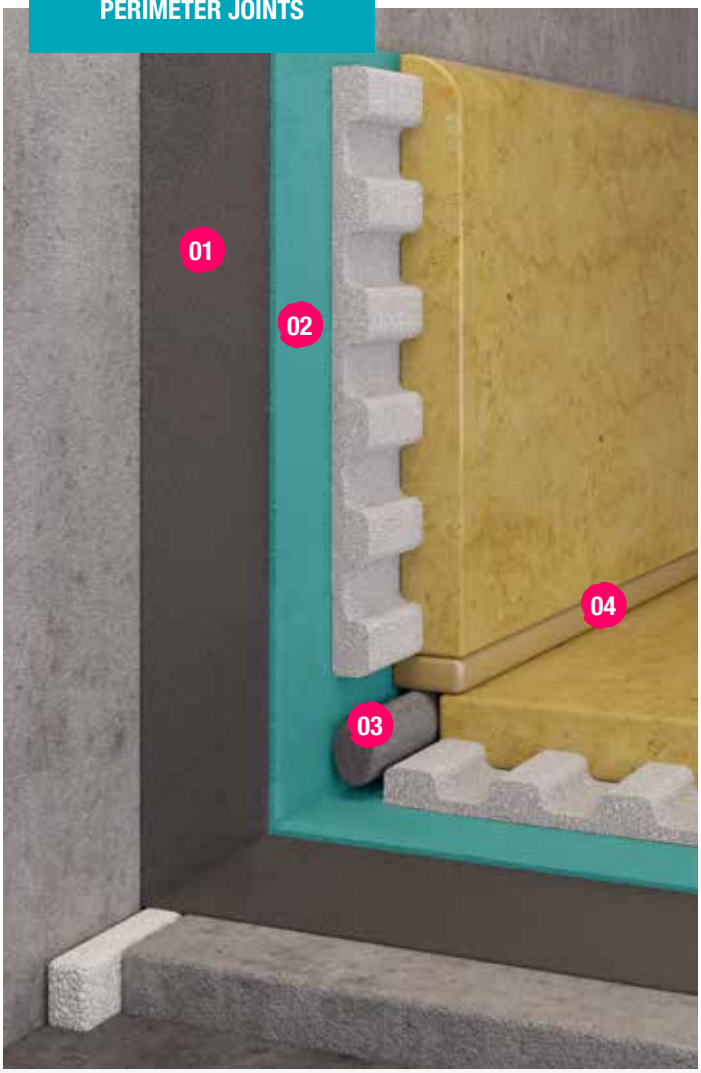
1) Cut a piece of the **LAMINA** to the same size as the plastic element to be sealed. If it is a tube, make a circle in the centre as well. If it is a skimmer, cut out a rectangle the same size as the skimmer.

2) Glue the cut-to-size element using the 100% waterproof epoxy mortar **EPOXICOL.**

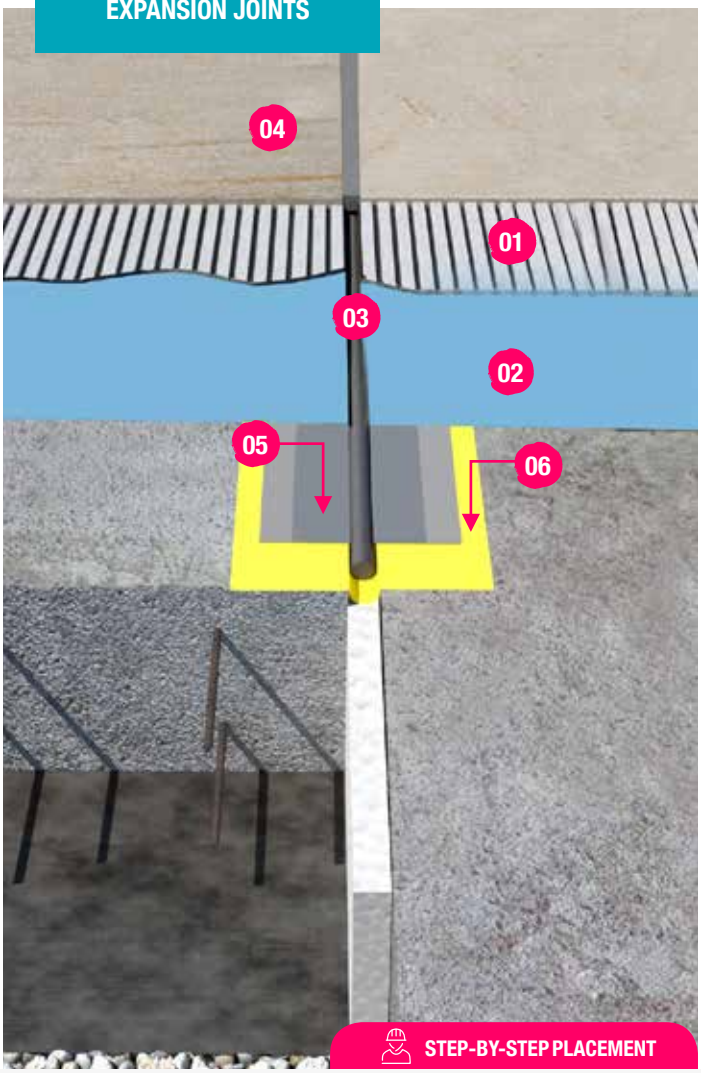
Uncomplicated, no need for endless special parts, no size or shape restrictions… **Cutting out parts of the LAMINA itself is the safest and most affordable way to seal singular points on the market.**

We will make the **PERIMETER JOINTS** and **EXPANSION JOINTS** following the UNE 138002 standard where the recommended measurements are established based on the type of application, destination and use of the flooring. Please consult our technical department to jointly define the location and size of these joints. The **PERIMETER JOINTS** and **EXPANSION JOINTS** shall be made using the following diagrams and recommended products.

PERIMETER JOINTS



EXPANSION JOINTS



STEP-BY-STEP PLACEMENT

01

TECNOCOL GEL

02

LAMINA PROOF

03

SELLALASTIC FOAM

04

SELLALASTIC

05

FIX-TAPE 170 mm

06

EPOXICOL

LAMINA PROOF

THE MOST COMFORTABLE AND EFFICIENT WATERPROOFING SYSTEM

100% WATERTIGHTNESS GUARANTEED

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