



Capa PROOF PU

Waterproofing membrane
made of single-component polyurethane

- Shelf life of 25 years with classification W3
- Suitable for green roofs
- Easy application with trowel/roller

DESCRIPTION

CAPAPROOF PU is a single-component, aromatic, solvent-based, moisturecuring polyurethane liquid that produces a continuous elastic membrane that adheres fully to the substrate without joints or overlaps and is 100% watertight and waterproof, with properties that make it excellent for application on all types of surfaces in newbuild and refurbishment projects alike. It may be applied manually with a short nap roller, brush or notched trowel, or using specific electrical equipment in some exceptional cases. It is CE marked on the basis of a Declaration of Performance (DoP) drawn up in accordance with EU Regulation 305/2011.

USE

Polyurethane membrane system for waterproofing and coating in the following situations:

- Flat weightbearing roofs, terraces, balconies and pitched roofs.
- Inverted roofs (with lower section insulation).
- Structural concrete slabs and floors, as well as foundations and walls.
- Swimming pools, ponds, aquariums and marine environments.
- Landscaped roofs (pursuant to current ETE).
- Inclined or flat roofs made of corrugated metal sheets, fibre cement, asbestos or similar (in combination with polyurethane foam).
- Protection of polyurethane foam thermal insulation systems.

NOTE: consult our technical department for application on other types of substrates or settings.

RECOMMENDED THICKNESS AND CONSUMPTION

A minimum total applied thickness of 1.5 mm is recommended ; applied in one or several coats according to the method. These data may vary according to weather and substrate conditions and use of the facility. For non-passable roofs consumption of 1.5 kg/m2 total.

PRESENTATION

Metal packaging in two different formats: 6 kg / 25 kg

EXPIRY

12 months at a temperature of 5 °C to 35 °C, always stored in dry places. If the container is opened it should be used immediately.

COLOURS

- White
- Grey
- Red

KEY DETAILS

	WITHOUT CAPAPROOF PLUS	WITH CAPAPROOF PLUS
Recommended minimum thickness	± 1.5 mm.	± 1.5 mm.
Mixing time	--	± 90 min.
Initial drying	± 5 - 6 hours	± 3 hours
Tensile strength	2 - 3 MPa	4 - 6 MPa
Elongation at break	400 %	600 %
Method of application	Roller / airless type equipment	Toothed trowel / rubber trowel / roller
Paving systems	Thin layers until the total recommended thickness is achieved	Single layer of the recommended thickness

Capa PROOF PU

GENERAL CHARACTERISTICS

- CAPAPROOF PU is a highly elastic and wear - resistant membrane which, once applied, offers high stability, durability and certified watertightness (pursuant to current ETE).
- The waterproofing system is EOTA certified according to guideline 005 for use in roof waterproofing pursuant to the current ETE, with a useful life of 25 years (W3), for a thickness of 1.2 mm, even on zero slopes.
- The versatility of CAPAPROOF PU gives it the possibility of adapting to a multitude of surfaces and different materials it is the ideal product to be applied in irregular areas with shapes of any nature, whether curved or squared.
- Surface reinforcement is not necessary except at singular points that meet other construction elements.
- As for application in landscaped areas, it has European rooting resistance certification according to EN 13948 (pursuant to current ETE).
- The traditional application is made by applying successive coats of a maximum thickness of 0.7 mm each . The drying time between coats is approximately 46 hours.
- The CAPAPROOF PU membrane can also be applied in a single layer of the desired thickness (minimum recommended 1.5 mm) by mixing it with CAPAPROOF PLUS, which increases its physical/mechanical characteristics, eliminates the appearance of internal bubbles, obtaining a completely solid sheet, reducing the drying time and increasing the speed of execution since it can be applied not only with a roller but also with metallic or rubber spatulas, reducing the direct costs of application. Do not use spraying equipment when doing this type of application.
- The system must be applied in conditions where there is no moisture in the substrate or water coming from the substrate or subfloor, either at the time of application or afterwards (water table pressure). In the case of existing dampness in the substrate at the time of application, consult the technical data sheets of our primers where the moisture resistance ranges are specified.
- It is an aromatic membrane and needs protection to maintain its physical and mechanical properties. This is why the system assessed by the various European evaluations (pursuant to current ETE) has an aliphatic polyurethane resin, CAPAPROOF COAT 2K, in cases where this protection does not exist with other physical elements. CAPAPROOF COAT 2K POOL or CAPAPROOF COAT 1K can also be applied.
- With the application of CAPAPROOF PU, savings are made on joints and any type of union as the finish is uniform and in one piece, providing a surface with optimum maintenance and cleanliness.
- The properties of the CAPAPROOF PU system allow it to adhere to any surface such as cement, concrete, polyurethane foam, butyl or asphalt sheeting, wood, metal, etc.
- Due to its resistance, it can be weight-bearing and antiskid by making a rough finish through the addition of solid particles (silica sand or CAPAPROOF PLASTIC).
- The polyurethane membrane CAPAPROOF PU is a membrane that requires additives for its application on vertical or sloping surfaces with slopes greater than 1.5%, mix CAPAPROOF TIX in a maximum proportion of 1 litre per 25 kg of CAPAPROOF PU. In this type of situation, without the addition of CAPAPROOF TIX, it can also be applied in thin layers to avoid sagging.
- Do not apply with "airless" equipment when carrying out applications with a mixture of CAPAPROOF TIX and CAPAPROOF PLUS.
- Ceramic paving can be laid on top. In this case, it is advisable to apply a thin layer of CAPAPROOF PRIMER PU (100 -120 g/m²) and, while it is not yet dry, spread a load of silica sand to improve mechanical anchoring
- Consult our technical department, the system Technical Guides or the Application Methodologies, the characteristics of the proposed system according to the use, situation or type of application.

Capa PROOF PU

APPLICATION PROCEDURE

In general, the following factors should be taken into account prior to spraying:

- Repair of surfaces: filling of existing cracks in the concrete, elimination of irregularities, filling of cracks (in the case of concrete), removal of old existing waterproofing, opening of pores in floor covering ceramics.
- Cleaning of the substrate, removing dust, dirt, grease or existing efflorescence.
- The substrate upon which the product is to be applied must be firm and dry. Check the resident humidity level at the time of application, if any, and choose the most suitable prepriming resin.
- There must be no retained moisture in the interior or rising damp in the subsoil (phreatic pressure).

The substrates on which the system can be applied are manifold, depending on their nature or condition. Below, we define the application on some of the most common surfaces / substrates, although if you have different needs, please contact our technical department.

Consult the technical department to define the execution procedures in singular points, and in other situations not contemplated in this document.

Concrete substrate

Recommended type of application: single coat application (with the addition of CAPAPROOF PLUS).

- The concrete must be fully cured (the process takes 28 days); in any case it is necessary to check the maximum degree of permissibility of substrate moisture depending on the primer to be used.
- Slurry or release agents must be removed and therefore, an open pore and solid surface must be achieved by sanding, polishing, milling, surface shot blasting, to be decided according to the conditions of the substrate.
- Existing cracks or areas of missing material must be repaired using CAPAPROOF PRIMER EP.
- Small cracks or irregularities will be repaired by filling with CAPAPROOF MASTIC PU.
- Existing expansion joints: remove the existing joint material, clean thoroughly and fill with CAPAPROOF MASTIC PU.
- Make a perimeter halfround at the joints of the slabs with the vertical elements, applying a bead of CAPAPROOF MASTIC PU and reinforcing with CAPAPROOF MESH.
- Contaminants such as dust or solid particles should then be cleaned and removed from the entire surface, preferably by dry methods (dry vacuuming).
- Apply the primer under the conditions and within the parameters indicated in the data sheets of these products. In general, CAPAPROOF PRIMER EP primer should be used. Consult its technical data sheets beforehand for drying times and other characteristics of its application.
- Application of CAPAPROOF PU polyurethane membrane (single or layered application).
- Application of UV protection (CAPAPROOF COAT 1K / 2K coloured aliphatic resin, ceramic screed, garden soil, gravel, etc.) (pursuant to current ETE). CAPAPROOF COAT 1K / 2K can be applied by short nap roller, airless type equipment. Apply CAPAPROOF COAT 1K only on roofs without pedestrian use. (Consult the application conditions in the technical data sheet of the product).

Capa PROOF PU

APPLICATION TYPES

Once the substrate has been prepared and the primer has been applied, according to conditions, the polyurethane membrane will be applied according to the following methods:

Layered application (traditional or classic)

- Open the CAPAPROOF PU can and stir well until uniformly blended.
- Spread an initial layer approx. 0.7 mm thick with a shortnap roller. Apply the material as normal; no extra dilution is needed.
- Wait for total drying (which will depend on weather conditions) approximately 5 - 6 hours.
- Application of the following layer, with the same conditions as above.
- Repeat this process as many times as necessary to achieve the desired final thickness of the sheet.

Layered application with intermediate mesh (with the use of CAPAPROOF MESH)

To be used on ceramic substrates, asphalt sheets, or generally speaking on cracked substrates or those with contraction or expansion movements.

- Open the CAPAPROOF PU can and stir well until uniformly blended.
 - Spread an initial layer approx. 0.7 mm thick with a shortnap roller. (1.2 kg/m²). Apply the material as normal; no extra dilution is needed.
 - Spread the CAPAPROOF MESH over the previous layer while it is still wet. To do this, use a dry roller to apply pressure on the mesh so that it is embedded in the resin layer.
 - Application of the next coat of CAPAPROOF PU directly on top of the previous wet application.
- Consumption in this type of application may increase with respect to the theoretical consumption without the use of mesh.

Single coat application (with addition of CAPAPROOF PLUS)

- Pour CAPAPROOF PLUS into the CAPAPROOF PU drum, respecting the fixed proportion given by the manufacturer at all times.
- Continuous mixing with medium speed mechanical equipment (see "mixing time").
- Pour the formed material on the substrate and spread on the surface. This operation is carried out with the aid of a notched trowel or rubber lip (a roller can also be used).
- This is a unique process, through which the desired thickness is obtained in a single operation, eliminating intermediate waiting times, ensuring the formation of the membrane without internal bubbles, conferring greater tensile strength and reducing the final drying time.
- When adding CAPAPROOF PLUS, do not use mechanical application equipment (airless type).
- If it is necessary to add CAPAPROOF TIX due to the slope of the element to be waterproofed, add a maximum of 250 ml (on the 2.5 kg drum of CAPAPROOF PU).

Mechanical application (with "airless" type equipment)

- Add 5 - 10% of CAPAPROOF SOLVENT to the CAPAPROOF PU drum.
- Perform mixing with medium speed mechanical equipment.
- Apply by means of specific equipment in thin coats.
- Wait for it to dry completely.
- Repeat this operation until the desired final sheet thickness is achieved.

Notes:

- In all cases, please consult the waiting and drying times, the solution in specific points of the construction, the application conditions of all the products through the technical data sheets of each product, Technical Application Guides or consult our technical department.
- For other types of substrates, climatic conditions or the substrate to be applied, please consult the technical data sheets of these products, or our technical department.

REPAIR AND OVERLAPPING PROCEDURE

In those cases where it is necessary to repair the membrane due to an accident, or when the assembly of unforeseen installations requires perforations on the CAPAPROOF PU polyurethane membrane, please follow the procedure below:

Repairs

- Trimming, removal of the affected and/or damaged area.
- Surface sanding of the affected area, extending this area by 20-30 centimetres around the entire perimeter, as a safety overlap.
- Cleaning (vacuuming) of the residues generated (dust); if possible, do not use water, and if water is used, assess the humidity of the substrate; possibility of applying ketone based solvents for this type of surface cleaning.
- Thin film application ($\pm 100 - 150 \text{ g/m}^2$) of one of the following resins: CAPAPROOF PRIMER EP ALL.
- Lightly spread silica aggregate, while the primer resin is still wet. This action increases the adhesion of the repair layer.
- Wait until completely dry.
- Application of CAPAPROOF PU with addition of CAPAPROOF PLUS (always in the fixed proportion provided by the manufacturer).
- Application of the coloured CAPAPROOF COAT 1K / 2K POOL aliphatic polyurethane UV protection resin (pursuant to current ETE). You can also use CAPAPROOF COAT 1K on non-weight bearing or maintenance decks.

Work overlap

In cases where the recoating time (48-72 hours) has been exceeded, i.e. the waiting time between jobs has been extended, proceed as follows:

- Sanding of a longitudinal overlap strip approximately 20-30 cm wide.
- Cleaning (vacuuming) of the residues generated (dust); if possible, do not use water, and if water is used, assess the humidity of the substrate; possibility of applying ketone based solvents for this type of surface cleaning.
- Thin film application ($\pm 100 - 150 \text{ g/m}^2$) of one of the following resins: CAPAPROOF PRIMER EP ALL.
- Lightly spread silica aggregate, while the primer resin is still wet.
- Wait until completely dry.
- Application of CAPAPROOF PU with addition of CAPAPROOF PLUS (always in the fixed proportion provided by the manufacturer).
- Application of the coloured CAPAPROOF COAT 2K/2K POOL aliphatic polyurethane resin (pursuant to current ETE). You can also use CAPAPROOF COAT 1K on non-weight bearing or maintenance decks.

Capa PROOF PU

SAFETY AND HYGIENE

These safety recommendations during handling are necessary during the execution process, as well as in the processes before and after the execution in situations of exposure to machinery under load.

- Skin Protection: Wear rubber gloves. Remove immediately after contamination. Wear clean clothes that cover the whole body. Wash thoroughly with soap and water after work and before eating, drinking or smoking. Contaminated clothing should be washed and/or dry-cleaned.
- Eye/face protection: Safety glasses must be worn to avoid splashes.
- Waste: Waste generation must be avoided or minimised. Incinerate under controlled conditions in accordance with local and national laws and regulations.

In any case, consult the existing safety data sheets for the product, which are publicly available.

ACCESSORIES

In the application of this system/product, the following products can be applied as complements to its use. They may thereby be protected and their physical/mechanical characteristics improved depending on their exposure, the desired finish or external conditioning factors.

- CAPAPROOF PRIMER EP: for prelevelling of the substrate, when applying a single self-levelling layer. Epoxy resin with fillers included.
- CAPAPROOF PRIMER EP ALL: primers for pre-application on substrates to improve adhesion and regularise the flatness of the substrate. Likewise, these applications regulate the degree of humidity in the substrate (consult the degrees of permissibility in their technical data sheets).
- CAPAPROOF COAT 2K: dual component, coloured, aliphatic polyurethane resin for UV protection in situations involving roofs or floor coverings without additional protection, for pedestrian or vehicular use.
- CAPAPROOF COAT 2K POOL: dual component coloured aliphatic polyurethane resin for protection against UV rays and chlorinated agents for waterproofing swimming pools and ponds. Water migration test according to EN ISO 12873-2:2005.
- CAPAPROOF COAT 1K: single component aliphatic resin for UV protection on roofs, terraces, structural slabs or floors without additional protection, for non-weight bearing use or maintenance.
- CAPAPROOF PLASTIC: plastic particles which, once mixed with the CAPAPROOF COAT range of resins, form a rough surface, in accordance with CTE DB SUA1 (Slipperiness of floors), up to a CLASS 3 classification (Rd>45) ENV 12633:2003, depending on their dosage (consult our technical department).
- CAPAPROOF TIX: thixotropic additive specially designed to be mixed with CAPAPROOF PU, conferring thixotropic properties for its application on vertical or inclined surfaces.
- CAPAPROOF BAND: deformable cold adhesive band, composed of an upper layer of non-woven mesh and a viscoelastic self-adhesive lower layer. Suitable for use in expansion joints, flooring cuts and overlaps between metallic materials.
- CAPAPROOF MESH: fibre mesh for application on non-resistant or non-cohesive substrates, expansion or working joints and vertical perimeters.
- CAPAPROOF MASTIC PU: polyurethane joint and crack filler (use in conjunction with CAPAPROOF MESH where necessary).

PROPERTIES OF THE MEMBRANE

PROPERTIES	RESULT
Density ISO 1675	1.45 ± 5 g/cm ³
Viscosity ISO 2555	2,500 - 6,000 cps
Dry extract at 105 °C % wt EN 1768	85± 5 g/cm ³
Flash Point ASTM D93, closed cup	42°C
Ash at 450 °C % wt EN 1879	42 - 47 %
Solids content ISO 1768	80 - 90 %
VOC	210 - 270 g/l
Estimated useful life (EOTA)	W3 25 years for a minimum thickness of 1.2 mm.
Covered slope	S1~S4 (zero slope)
Fire performance	Euroclass E
Exterior fire performance	BR00F (t1)+(t4)
Resistance to wind	SUITABLE >50KPa
Anti-rooting certificate EN 13948	SUITABLE
Ambient temperature range	5°C - 35 °C
Bearing temperature range	5°C - 30 °C
Surface hardness Shore A/D DIN 53.505	>85 / >35

PROPERTIES	RESULT
Tearing (longitudinal) according to trouser, angle and crescent test pieces ISO 341-2011	±24 kN/m
Tensile strength without CAPAPROOF PLUS/ /with CAPAPROOF PLUS ISO 527 -3	2-3 MPa / 4-6 MPa
Elongation without CAPAPROOF PLUS/ with CAPAPROOF PLUS ISO 527 -3	400% / 600%
Drying time without CAPAPROOF PLUS/with CAPAPROOF PLUS	±5-6 hours / ±3 hours
Recoat range without CAPAPROOF PLUS / with CAPAPROOF PLUS	5-48 hours / 3-24 hours
Resistance to water vapour diffusion EN1931	μ=2,500
Permeability to water vapour transmission EN1931	14 g/m ² /day
Adhesion to concrete	>2 MPa

NOTE

The recommendations for use are based on our knowledge and experience. The technical data have been obtained under normal laboratory conditions and may vary depending on the conditions of installation. As the conditions of application are beyond our control, the information in this sheet does not imply any liability on the part of the company.



CAPA

WATERPROOFING