

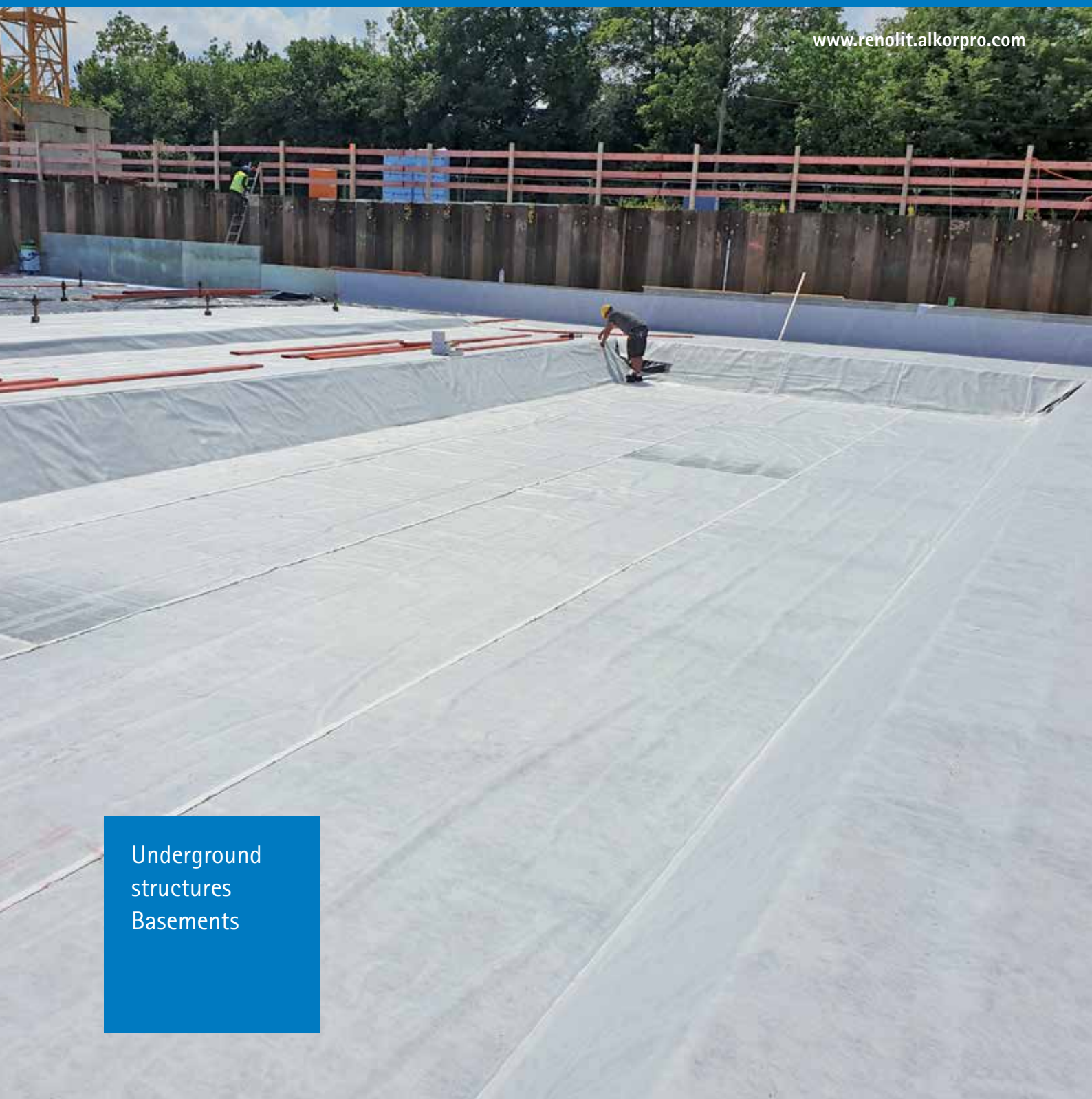


Rely on it.

RENOLIT ALKORPRO

The fully bonded system

www.renolit.alkorpro.com



Underground
structures
Basements

About us

For more than 35 years, **RENOLIT ALKORPLAN** has developed waterproofing solutions for all types of Civil Engineering works, pioneering some applications that are mainstream today, and positioning **RENOLIT ALKORPLAN** Geomembranes as a global reference in terms of quality and reliability.

Thanks to the synergies among the market units of the **RENOLIT** Group, the Sant Celoni factory integrates the most advanced and varied manufacturing technologies. This expertise leads to the ideal solution for each project. The production and managing skills, as well as the technical support, ensure the best satisfaction to customers and partners.



RENOLIT ALKORPLAN geomembranes expert teams focus on the customer's needs, offering complete support and technical assistance, from the concept until the realization.

RENOLIT Group is also a major player in the sustainable development of synthetic materials. Thanks to the "**RENOLIT** goes Circular" program, **RENOLIT** optimizes the recycling of pre-consumer materials coming from industrial wastes from the production sites within the **RENOLIT** Group.

In 2020 up to 8500 tons of pre-consumer materials have been recycled by **RENOLIT**.

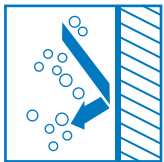
RENOLIT ALKORPRO

fully bonded system

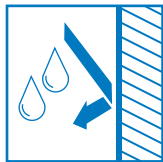
The use of PVC-P geomembranes as waterproofing solution is a sophisticated and safe technology to protect basements and underground structures. This technology has existed for over 40 years and is recognized for its durability.

RENOLIT ALKORPRO system is a technology using a new generation of fully bonded membranes that provide an outstanding sealing performance, recommended where concrete structures must be protected against groundwater, contaminants, and ground gases like radon.

RENOLIT ALKORPRO is an innovative solution designed to protect buried structure in all eventualities.



Barrier against ground humidity



Barrier against ground water infiltration

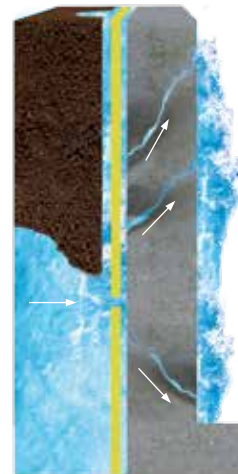


Barrier against Radon gases

It is suitable for waterproofing of foundations, basements, tunnels, underground parkings and all other concrete constructions below ground level.

When these membranes are used in combination with watertight concrete, a combined sealing system with high performance is formed.

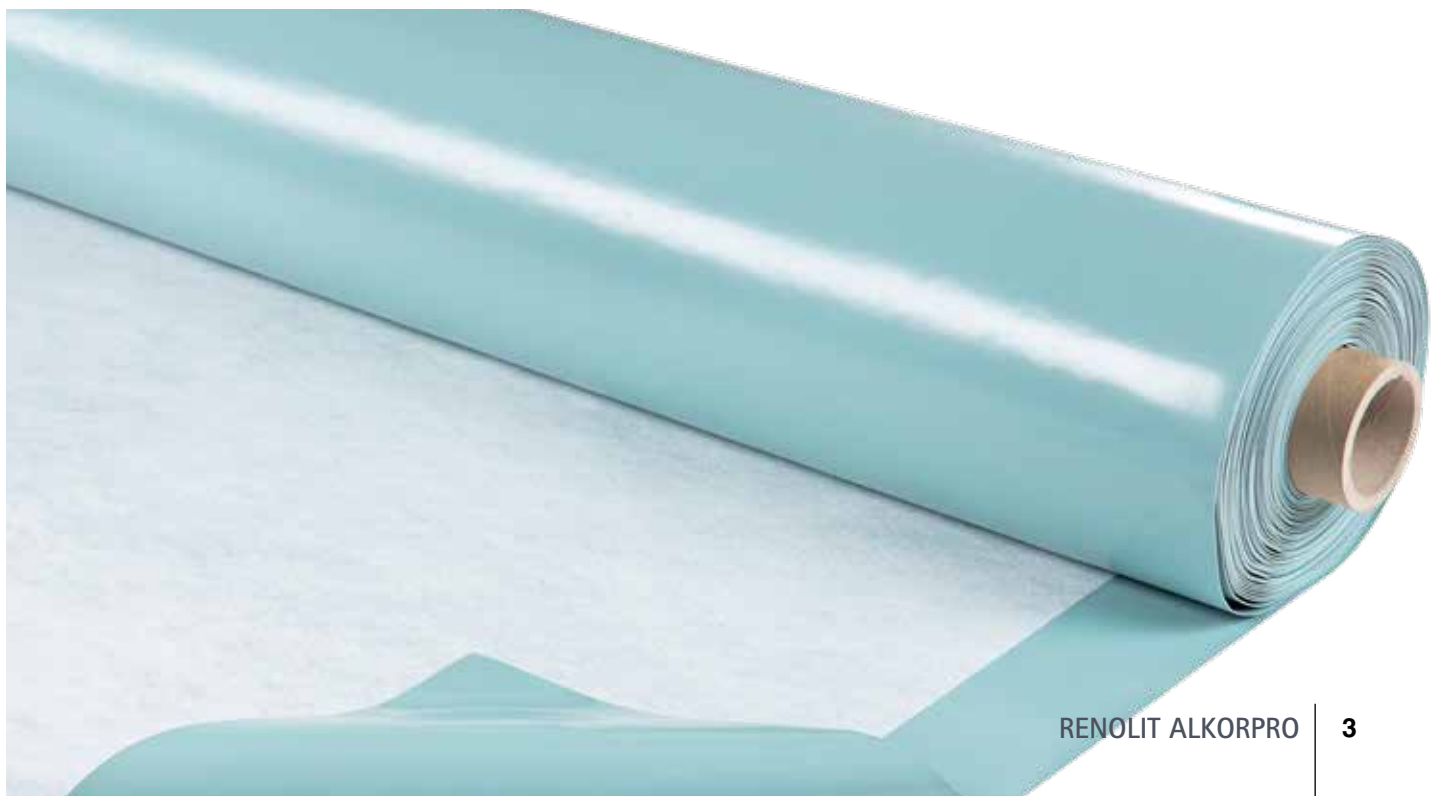
In this way, in the unlikely event of damage to the membrane during installation, the special anti-tracking fleece of **RENOLIT ALKORPRO** will prevent any lateral migration of water between the membrane and the concrete, thus not leading to the loss of the system's sealing function.



Loose laid system



RENOLIT ALKORPRO system





Self-compartmentation membrane

The membranes **RENOLIT ALKORPRO** are made of a highly flexible PVC-P layer, thermo-laminated to a special non-woven polypropylene fleece.

In the "pre-applied" application, the membrane is installed before concreting, its face provided with the non-woven fleece facing the concrete. During the pouring of concrete, its milt will penetrate deep into the thickness of the fleece and thus fix the membrane at all points to the structural concrete. Concrete is integral with the **RENOLIT ALKORPRO** membrane, which provides waterproofing on the underside and prevents any lateral migration of liquid between the membrane and the concrete (self-compartmentation property).

In the "post-applied" application, the membrane is installed after concreting, with its fleece facing the already poured concrete. The "post applied" fleece contains a Super Absorber Polymer (S.A.P) which makes it hydro-swelling. In the presence of water, the Super Absorber Polymer (S.A.P) included in the fleece swells and creates a very sticky gelatinous paste. In the space between the membrane and the concrete, the swelling pressure exerted by the S.A.P. in the presence of water, will oppose the hydrostatic pressure of the water trying to penetrate through the membrane. The S.A.P. resin thus blocks the penetration of water through an accidental perforation in the membrane (self-healing property) and also prevents any migration of water between the membrane and the concrete (self-compartmentation property).



Advantages

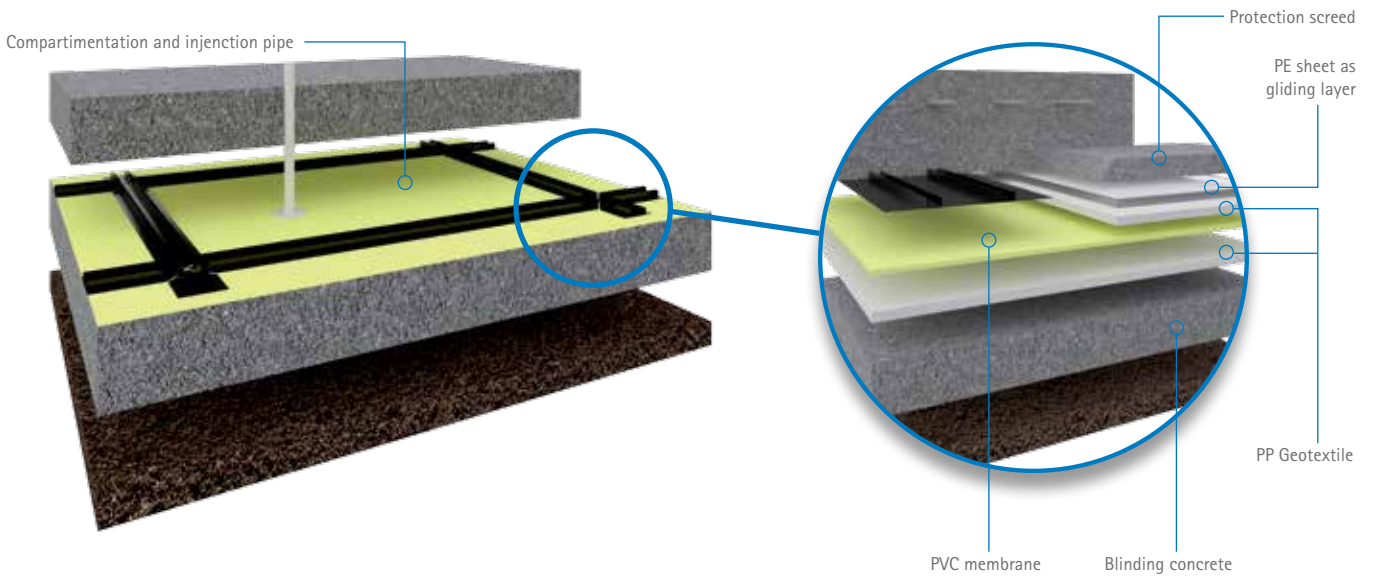
- Water pressure resistance**
 Tested up to 5 bars.
- Weather resistance**
 The membrane can be installed in any weather conditions (from -5°C to +60°C). Rainwater proof.
- Direct application**
 The membrane does not need a protection layer and can be installed directly to the stabilized and compacted soil..
- Three ways of doing the overlaps**
 Either by the **RENOLIT CEM 805** adhesive, by **RENOLIT ALKORPRO BAND** butyl tape strips or by thermal welding.
- Redundant sealing system**
 The membrane becomes one with watertight concrete. In case of a puncture in the membrane, the water will not spread below the concrete, thus does not enter the building.
- High flexibility**
 In case of a crack in the concrete, the membrane will not be affected and will stay watertight, thanks to its flexibility which is more than 200%.
- Self-compartmentation property**
 The water cannot move between the membrane and the watertight concrete or through cracks, because the lateral migration is blocked by the membrane.
- Easy installation**
 With just a minimal amount of accessories the installation is easy and quick.

Efficient system

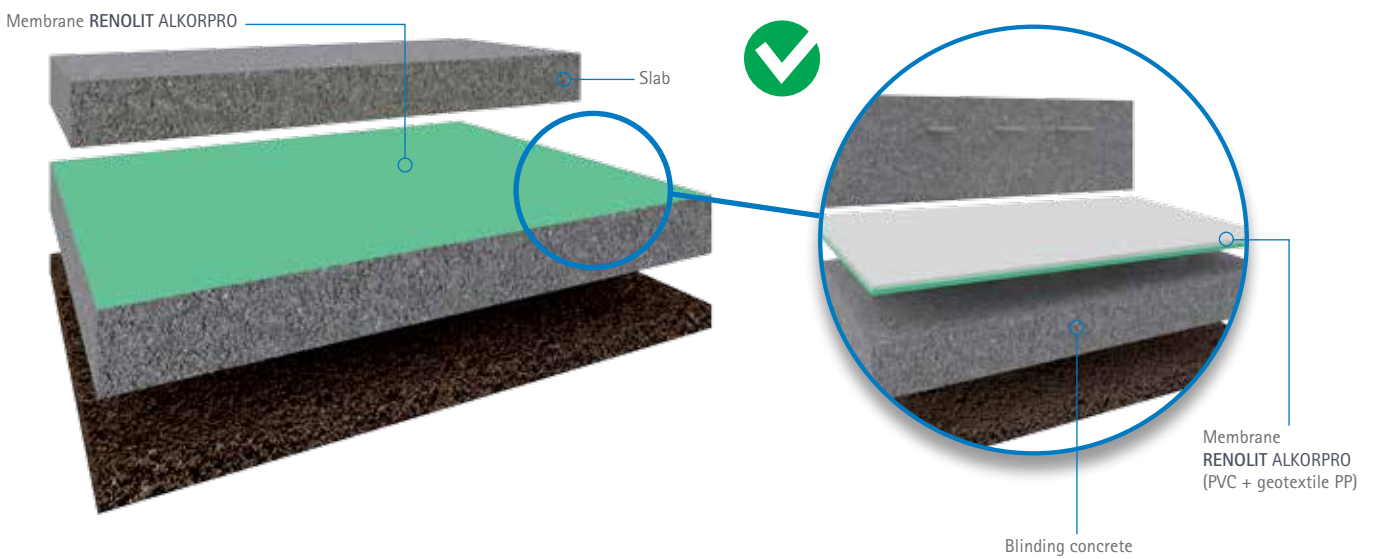
- No need of compartmentation joints.
- No need of injection pipe.

- No need of protection layers on top.

Loose laid system



RENOLIT ALKORPRO system



SELF-COMPARTIMENTATION PROPERTY:
The RENOLIT ALKORPRO system will block any migration between the membrane and the concrete.



Geomembrane versions

The **RENOLIT ALKORPRO** system offers four different membrane versions, all available in thicknesses between 1.2 mm and 2 mm.



COLOURED MEMBRANE -C

The mint green geomembrane is environmentally friendly and allows the incorporation of certain amounts of reworked material.

TRANSLUCENT MEMBRANE -T

The translucency of the membrane improves the quality control of the installation by allowing a visual control of the overlaps.

Pre-applied

To be installed before the concrete pouring of the ground slabs and walls, so that the fleece fibres get embedded in the fresh concrete.

RENOLIT ALKORPRO C

RENOLIT ALKORPRO T

Post-applied *

Can be also installed on the walls or ceiling after the concrete pouring thanks to the SAP included in the fleece.

RENOLIT ALKORPRO CS

RENOLIT ALKORPRO TS

* Post applied membranes can also be used as pre-applied for their self healing properties.



Easy to seal

The **RENOLIT ALKORPRO** membrane can be sealed very easily by mastic glue, by thermal welding or by using a **RENOLIT ALKORPRO BAND** (butyl tape).



Sealing by mastic glue
RENOLIT CEM 805



Thermal welding



Sealing by butyl tape
RENOLIT ALKORPRO BAND

Installation principles

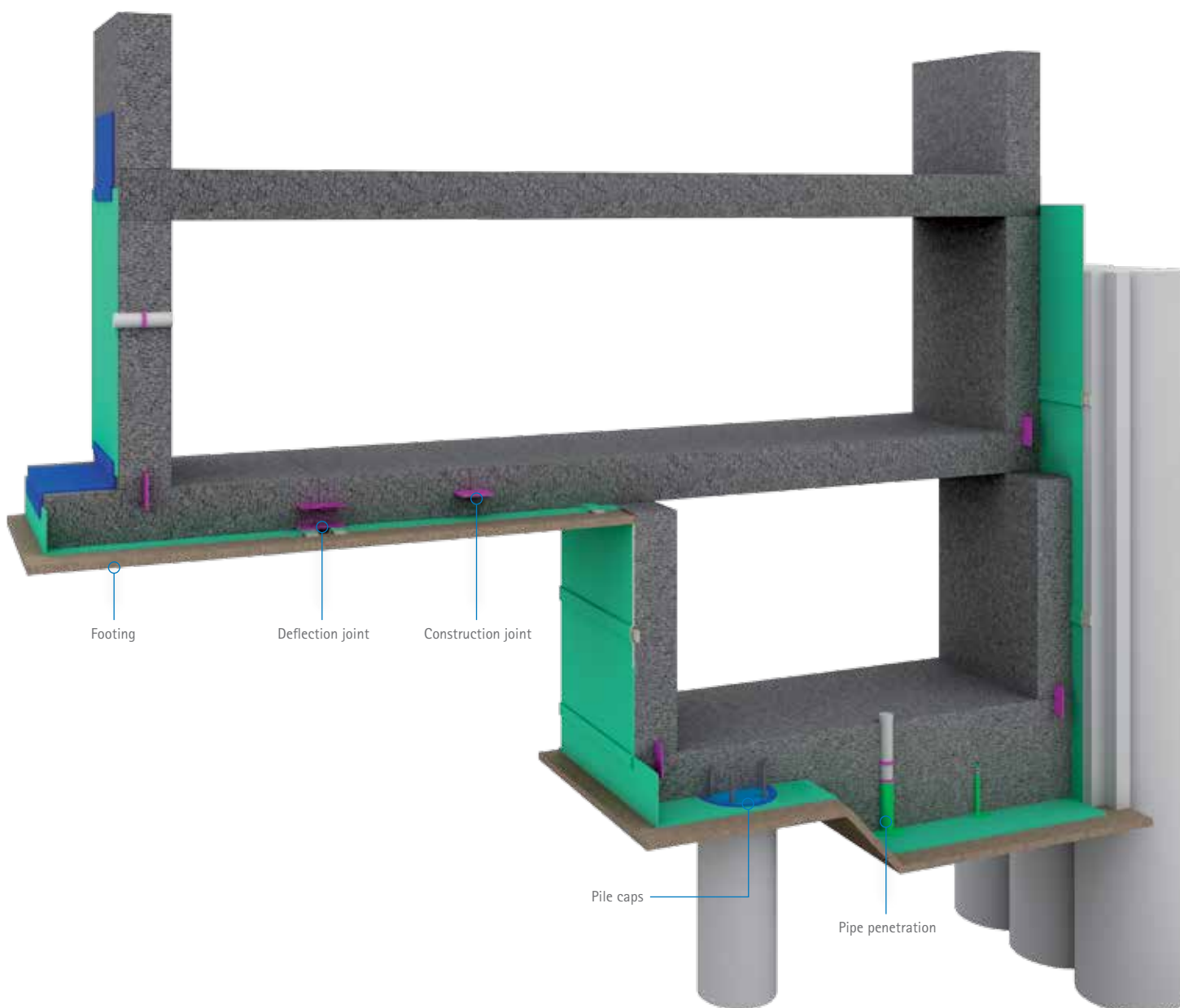
The combination of the different **RENOLIT ALKORPRO** variants enables an integral tanking system with a single base material (PVC-P), ensuring continuity and compatibility all over the structure contour and isolating it from the surrounding ground water and gases. Experience has shown that connections between different waterproofing products are always a weak point of the system and sometimes can result in leaks caused by the differential behavior of its elements. Continuity in product performance is therefore a key point to minimize the risk of problems on site.

The continuity of **RENOLIT ALKORPRO** system is achieved with the combination of its variants:

- On the base, **RENOLIT ALKORPRO** is installed before the pouring of the ground slab.
- On the walls, **RENOLIT ALKORPRO** can be installed before pouring the structural concrete (pre-applied system) or after (post-applied system).
- Finally, on the roof or podium deck, **RENOLIT ALKORPRO** is installed once the concrete is casted (post-applied).

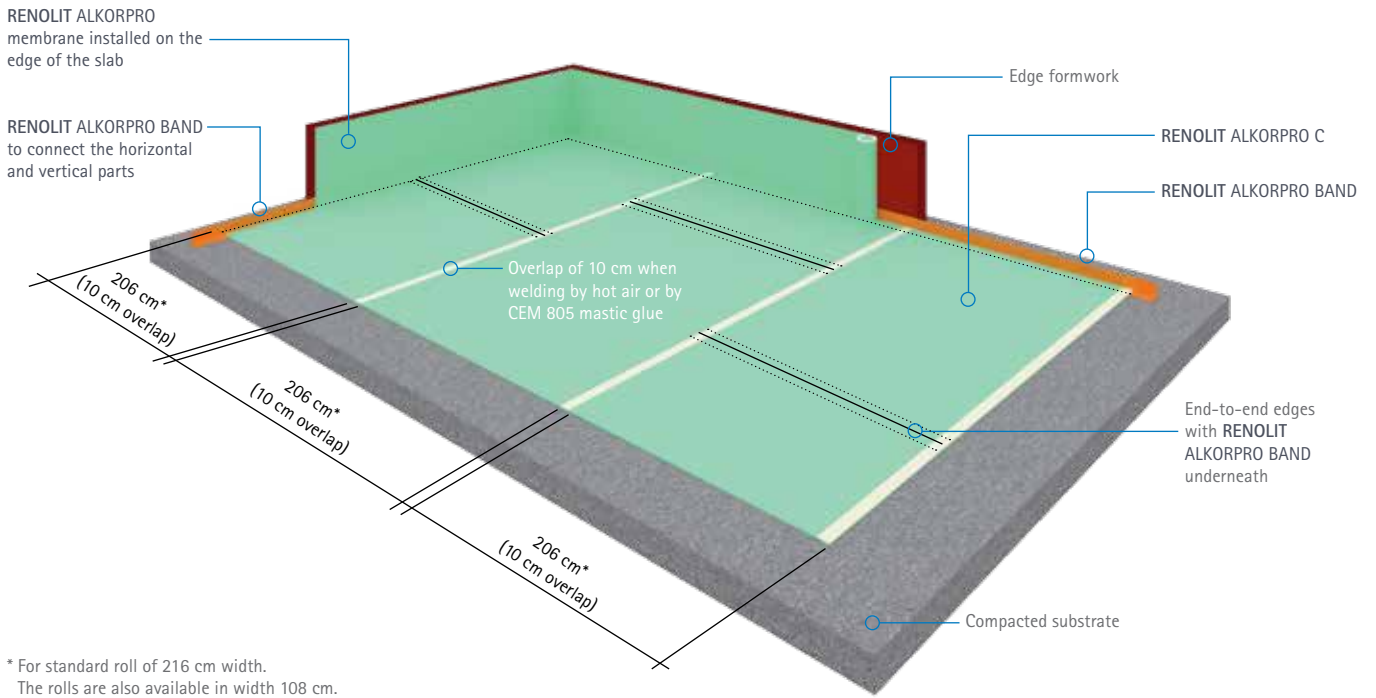
Since all these elements are executed with variants of the same product, all connections can be perfectly executed by one of the 3 methods explained in previous pages.

RENOLIT ALKORPRO provides versatility and effectiveness to your construction design and can be adapted to all types of foundation designs and configurations. And the most important thing, this is achieved with a straightforward range of membranes and accessories.



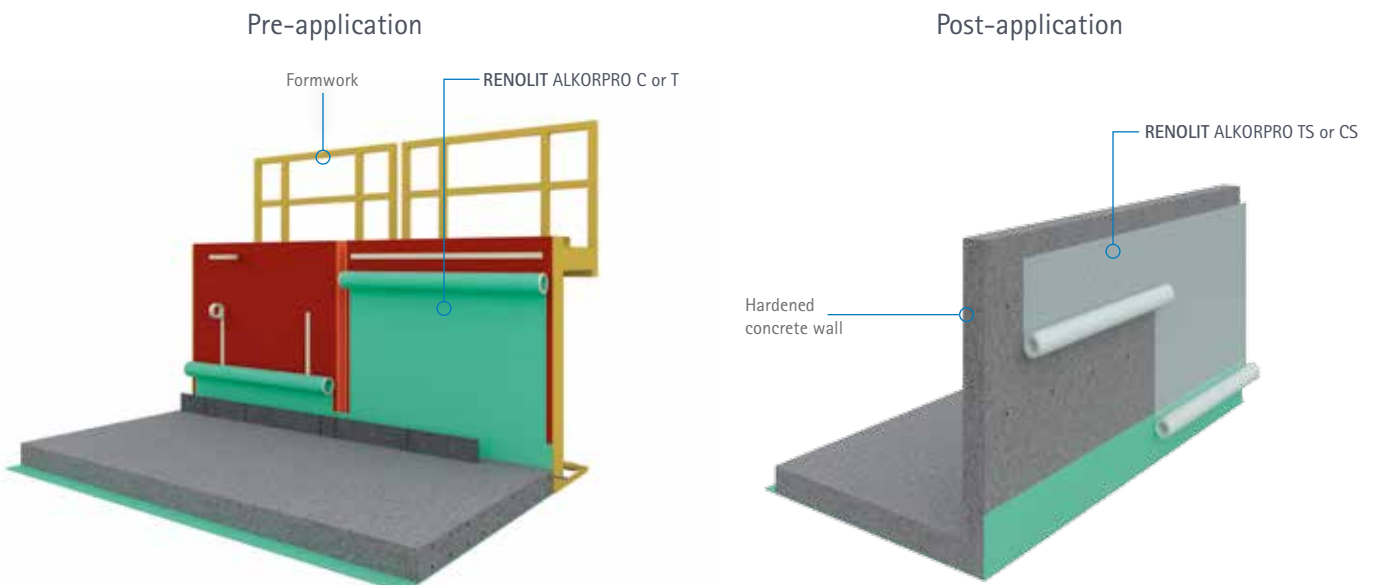
Slabs

RENOLIT ALKORPRO must be installed on a flat, clean and smooth substrate free from protrusions and sharp edges. The fleece surface needs to be oriented to the concrete to pour.



Walls

In case of pre-application, the RENOLIT ALKORPRO membrane must be installed directly on the formwork, before the pouring of the concrete. In case of post-application, the RENOLIT ALKORPRO membrane can be installed on the wall, on top of already hardened concrete.





Accessories

The **RENOLIT ALKORPRO** system is compatible and certified with the following accessories.



Mastic glue **RENOLIT CEM 805**



Cement slurry **RENOLIT CEMdicht 3 in 1**



PVC waterstop



Bentonite waterstop joint **RENOLIT QUELLMAX**



RENOLIT ALKORPRO BAND



Steel Plate Waterstop **RENOLIT CEMflex**

Excellent adaptability and easy detailing

During the installation of a tanking system, many details have to be done in a safe and easy way. The **RENOLIT ALKORPRO** accessories allow to seal different elements as shown in the following pictures.

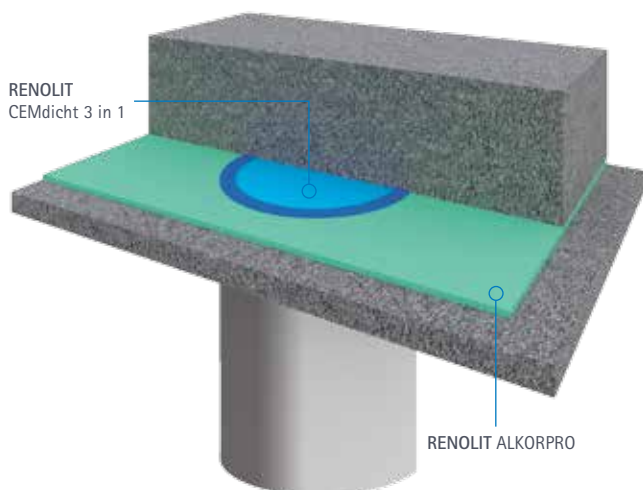


The pipe penetrations are easily sealed using a PVC manchette, the bentonite waterstop joint **RENOLIT QUELLMAX** and the mastic glue **RENOLIT CEM 805**.

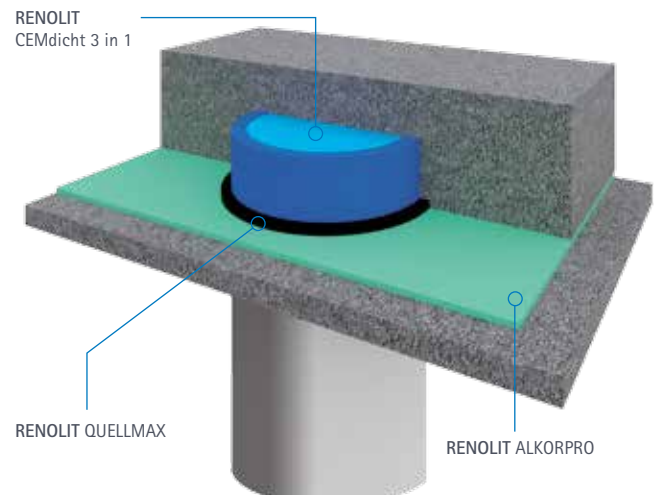


The corners and angle areas are sealed using pieces of membrane **RENOLIT ALKORPRO** shaped and sealed with the **RENOLIT CEM 805** mastic glue.

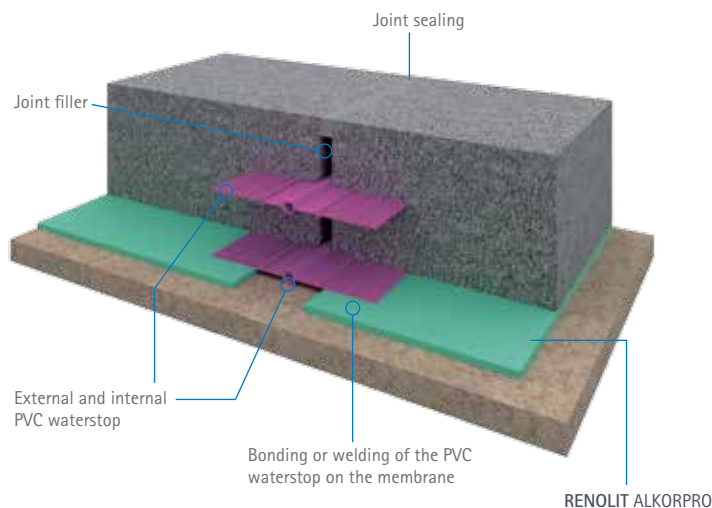
Pile caps



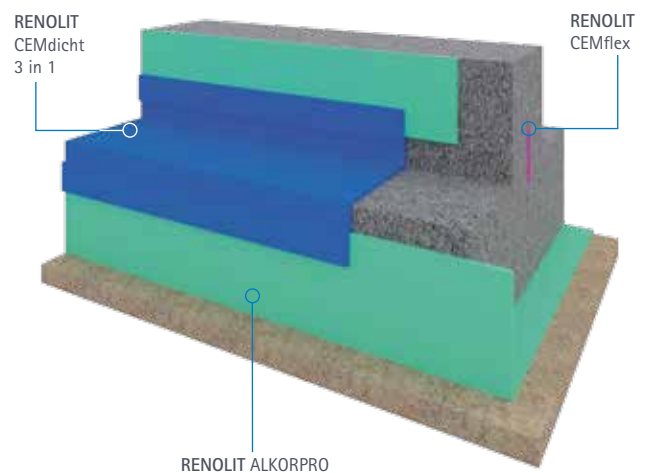
Pile caps



Deflection joint



Footing

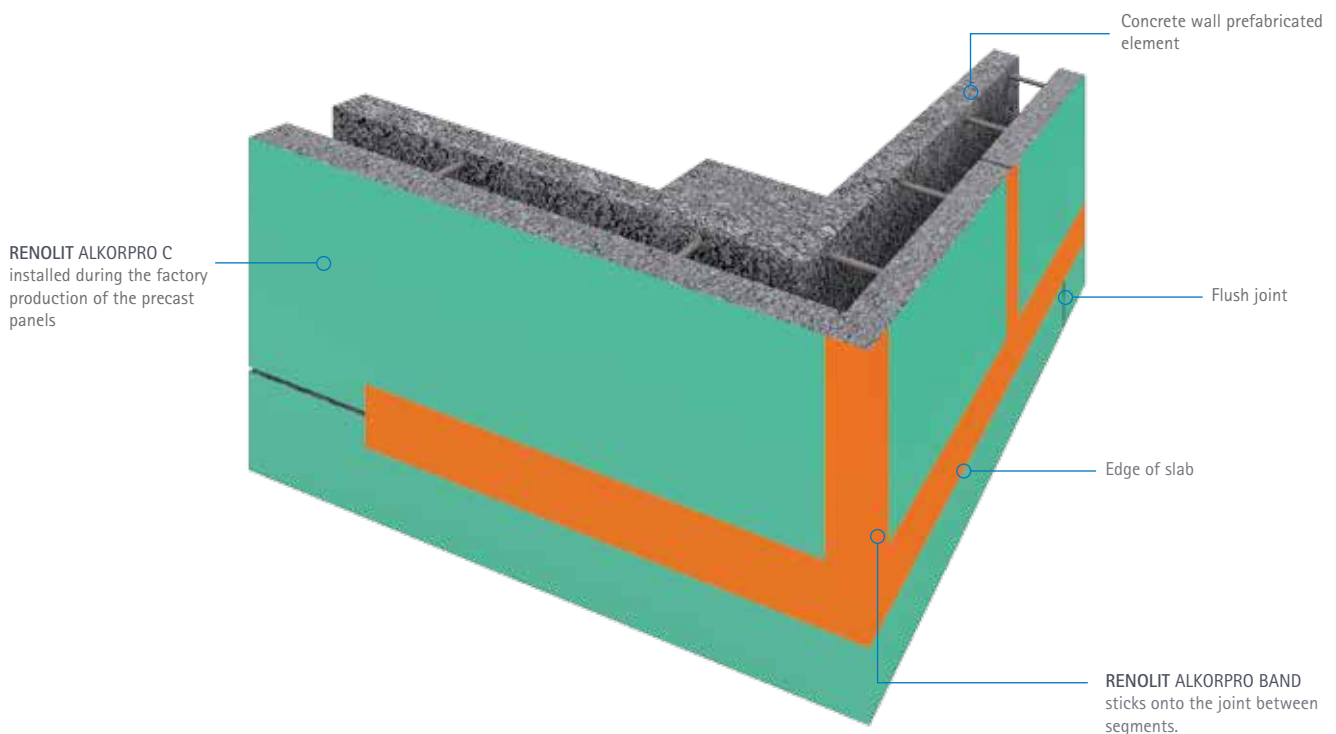




Precast possibilities

The **RENOLIT ALKORPRO** system can be used in combination with precast walls.

RENOLIT ALKORPRO membranes are installed on the external face of the precast wall during factory pouring. It is then transported on site and installed in its final location. The waterproofing is finalized by sealing the joints between the panels with **RENOLIT ALKORPRO BAND** Butyl Tape. This technique saves time for the realization of peripheral walls while ensuring a perfect seal.





Approvals and Agreements

The **RENOLIT ALKORPRO** system has been thoroughly tested by external laboratories in many European countries and holds the most prestigious and stringent approvals, which prove the high reliability of the system.

- CE Marking; EN 13491.
- German standard DIN 18195 and DIN 18533.
- German standard DIN SPEC 20000-202.
- German standard PG-ÜBB / abP.
- French Avis technique CSTB (process on going).
- British BDA Agreement according to BS 8102: 2009 and NHBC TECHNICAL DATA.





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