

RENOLIT
ALKORPLAN

Installation
Manual



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At **RENOLIT ALKORPLAN** we want to make your life easier with the publication of this installation manual, a guide to ensure that your projects turn out well.

As you no doubt already know, **RENOLIT ALKORPLAN** waterproof membranes meet the highest standards of quality and innovation, but only with your collaboration and professionalism is it possible to make the best use of our products.

We would also like to remind you that we organize regular training sessions at our facility in Sant Celoni (Barcelona), where we provide practical advice and assessment on the installation of **RENOLIT ALKORPLAN** membranes. Please get in touch with us if you would like more information.

We hope that this document will be of assistance.

Initial Preparation

Structural Control

- If the pool is close to the water table or is liable to be affected by rising groundwater, it is a good idea to install a drainage system around the perimeter.
- For a concrete or brick substrate use only cement bindings and coatings (do not under any circumstances use lime!).
- The infiltration of soil (high water table) between the pool and the membrane may bring with it organic material and microorganisms. We recommend repairing any crack in the structural base.

Installation



- Clean the pool well and make sure that the walls and bottom of the pool are smooth so that no rough spots will appear once the membrane is installed.
- We recommend wearing white-soled sports shoes in order to avoid friction marks appearing on the membrane.



Membranes and Accessories

- 1 Membrane **RENOLIT ALKORPLAN 2000/3000**
- 2 Membrane **RENOLIT ALKORPLAN 2000/3000 anti-slip**
- 3 Sanitizer **RENOLIT ALKORPLUS (81052)**: to disinfect the structure
- 4 Fixation of membrane on walls: Metal sheet section **RENOLIT ALKORPLUS (81170)** and expansion rivets **RENOLIT ALKORPLUS (810511)**
- 5 PVC section **RENOLIT ALKORPLUS (8GAYPAAA)** and 9 mm tape **RENOLIT ALKORPLAN (81048)**
- 6 Contact glue **RENOLIT ALKORPLUS (81043)**: to attach the membrane to specific construction details (steps, columns, benches, etc.) and the geotextile to the base
- 7 Geotextile **RENOLIT ALKORPLUS (81006)**: protective felt between the base and the membrane
- 8 Seam sealer (liquid PVC) **RENOLIT ALKORPLUS**
- 9 Application bottle **RENOLIT ALKORPLUS (81145)** and dispenser nozzles (81245): to apply the seam sealer
- 10 To mark the lanes in sport swimming pools: Marking bands **RENOLIT ALKORPLAN (81113F01)**



Tools Needed for Installing the Membrane

- 1 Hot-air welder with 20 mm nozzle
- 2 A brass wired brush
- 3 A silicone pressure wheel
- 4 Scissors
- 5 A knife with curved blade
- 6 2 meter steel ruler
- 7 A folding ruler
- 8 Spirit level
- 9 A percussion drill and drill bits
- 10 A scribing iron for checking the welds
- 11 A hammer
- 12 A pencil



Safety Accessories

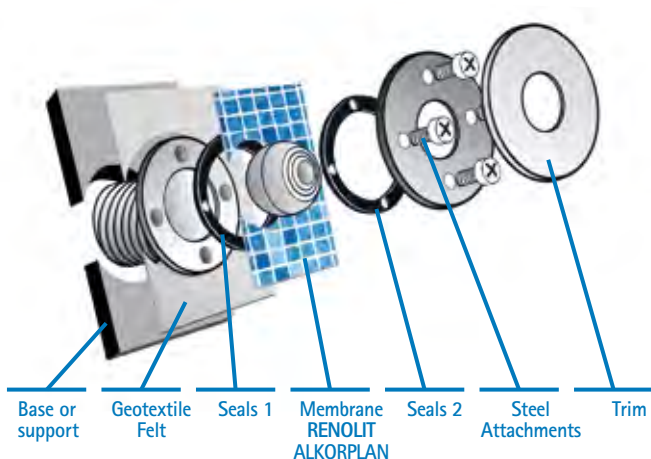
- 1 Protective goggles
- 2 Gas mask
- 3 Gloves
- 4 Knee pads

In indoor pools we recommend ventilating the work area using an exhaust fan or similar device



Pieces to Seal

- All accessories (skimmers, nozzles, drains, etc.) should be double sealed and compatible with the membrane.
- Joints using flanges should be completed as per the manufacturer's instructions.
- On the walls of mortar-lined pools be sure to protect flange's blind holes so they do not become blocked by the mortar.



Heat Fusion Welding

All surfaces to be welded should be clean, dry and free of dust.

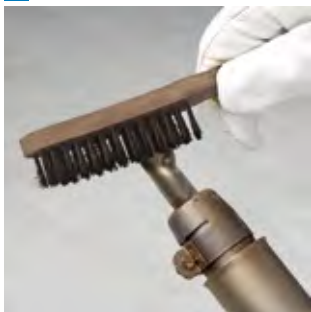
- 1 The ideal operating temperature for hot-air welders tools is between 380 and 450 °C depending on the external temperature and the base. For welders with a manual temperature setting follow the instructions of the manufacturer.
- 2 Use the brass wired brush to clean accumulated dirt from the nozzle and from the exterior of the pool.
- 3 We recommend a minimum overlap of 8 cm.
- 4 Make two welds on the 8 cm overlap, the first being the inner weld and the second at the edge of the overlap.

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Rely on it.

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13 Installation Steps

- 1 Desinfect the base
- 2 Fixation of membrane to the walls:
 - A. Sheet metal sections
 - B. PVC section
- 3 Installation of geotextile on the walls
- 4 Planning and making the cuts
- 5 Installing the membrane on the walls
- 6 Cleaning the floor
- 7 Placement of geotextile on the floor
- 8 Installing the membrane on the floor
- 9 Lining the steps
- 10 Checking the welds
- 11 Application of joint sealant
- 12 Silicone sealant
- 13 Filling the pool

1. Desinfect the Base

- Delute the Sanitizer **RENOLIT ALKORPLUS** (81052), apply it to the base and allow it to dry before installing the geotextile.
- The treatment will desinfect the base to prevent the appearance of microorganisms between the structure and the membrane.



2. Fixation of Membrane to the Walls

There are two ways to attach the membrane to the upper edge of the walls:

A. Metal sheet sections

A steel sheet colaminated with a 0.8 mm **RENOLIT ALKORPLAN** membrane.

- Attach the metal sheet to the upper perimeter of the structure of the pool using expansion rivets (every 15 cm).
- Fix the membrane to the metal sheet using tap and weld on the laminated membrane.



2. Fixation of Membrane to the Walls

B. Rigid PVC profile (9 mm band):

- Place the profile along the length of the upper perimeter and attach using expansion rivets every 10-15 cm.
- Weld the 9 mm strip to the **RENOLIT ALKORPLAN 2000/3000** membrane and insert it into the profile.

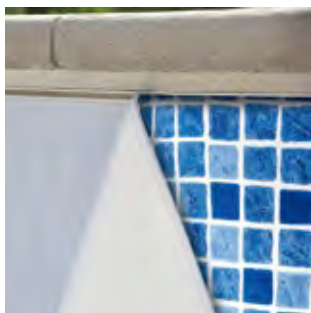
Note:

There are two types of PVC profiles depending on whether or not coping stones have been laid.

- *New pool: the section is attached to the upper perimeter of the pool basin before the coping stones are laid.*
- *Renovation: the section is attached to the part of the perimeter closest to the coping stones already installed.*



Rely on it.



3. Installation of Geotextile on the Walls

Geotextile is a protective filter which has undergone treatment to rid it of microorganisms.

- Apply **RENOLIT ALKORPLUS** contact glue (81043) to the base.
- Avoid using adhesive tape. Install the **RENOLIT ALKORPLUS** geotextile (81006) under the anchoring section.
- Once the geotextile has been installed cut the holes according to the outer diameter of the pieces to be sealed.



4. Planning and Making the Cuts

Be sure to minimize wastage as well as the number of welds, and be prepared to change planned cuts if necessary in order to ensure the best possible finish.

- Take exact measurements from the site and apply them to the roll to be cut.
- Make the cuts along a pencil-drawn guideline using scissors and a curved-blade Stanley Knife®.
- Ensure that cuts and welds in the corners are made at the same angle in order to achieve a more attractive finish.
- In a free-form pool, the cuts will depend on the particular shape of the pool.
- If the walls are wider than the membrane:
1.65 m or 2.05 m – weld the membrane to be added on a flat surface. Be sure to weld the added membrane under the first membrane so that the weld cannot be seen from the surface.

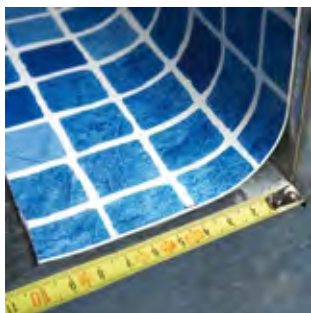
It is prohibited to place joints in areas where pieces to be sealed (skimmers, nozzles, etc.) are located.



5. Installing the Membrane on the Walls

The walls of the pool should each be lined independently.

- Make sure you have an overlap of at least 8 cm at both ends of the membrane for the weld on vertical walls.
- Make sure there is an overlap of at least 10 cm at the bottom of the wall to later weld onto the floor membrane.
- It is better to weld the side wall membranes in the corners in order to obtain a more attractive finish.



5. Installing the Membrane on the Walls

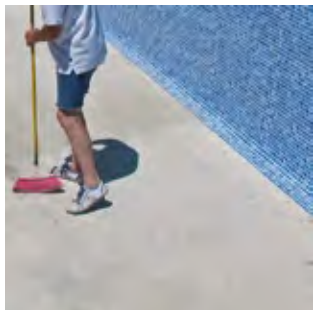
Lining the corners

- To make each angle:
 - Make the angle and cut at 45° without going all the way to the corner (stop 1 cm short).
 - Weld the two membranes that make the vertical angle from the inside to the outside of the corner.
 - Ensure that the weld is exactly in the corner using a ruler if necessary.



6. Cleaning the Floor

- Clean the basin of the pool well ensuring that there are no rough patches before affixing the geotextile to the floor.
- The floor area should be smooth and free of stones or roughness so that the membrane ends up smooth and even.



7. Placement of Geotextile on the Floor

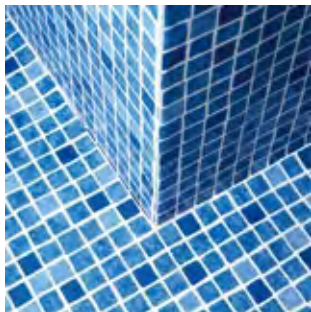
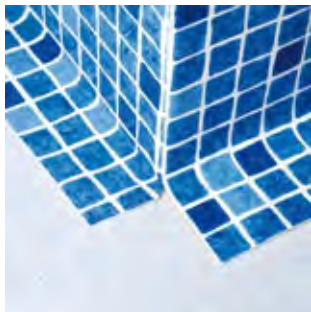
- Cut the geotextile to fit the dimensions of the floor and attach it using **RENOLIT ALKORPLUS** contact glue (81043).
- To join two sections of geotextile, apply **RENOLIT ALKORPLUS** contact glue lengthwise along the join between the two panels.

Gently apply pressure to stick the sides together making sure that they don't overlap.



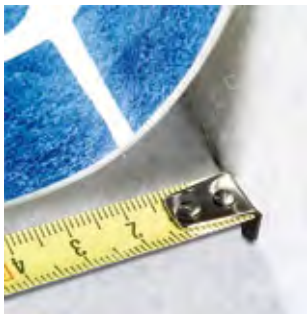
8. Installing the Membrane on the Floor

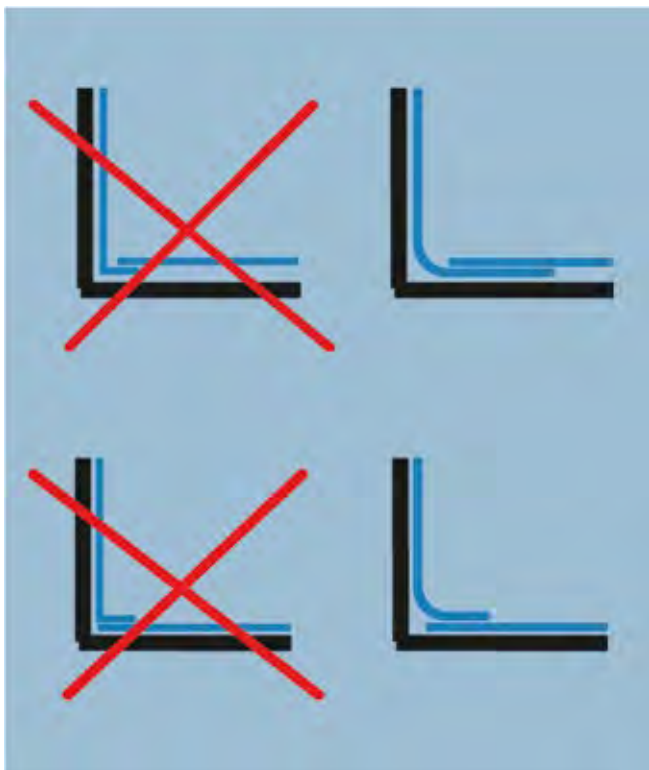
- Place the rolls on the floor either lengthways or across the pool so that the number of welds will be minimized.
- During the lining of the walls, a 10 cm long overlap should be left at the bottom to be welded under the floor membrane where they meet.
- When using **RENOLIT ALKORPLAN 3000** printed membranes which have symmetrical patterns (Mosaic, Byzance and Persia) intent to align the patterns on the two membranes when welding to ensure an excellent finish.
- Where the floor has a steep incline, attach the overlap of the wall membrane to the floor using expansive rivets every 15 cm to ensure that the membrane of the floor does not slip towards the deeper section of the pool.



8. Installing the Membrane on the Floor

- Leave a gap between the membrane and the corner formed by the walls and the floor so as to avoid wrinkles forming when the membrane tenses under pressure from the water in the pool.
- The size of the gap depends on the height of the walls:
 - 2 cm for walls shorter than 1 m.
 - 2.5 cm for walls with a height between 1 and 1.5 m.
 - 3 cm for wall with a height of more than 1.5 m.



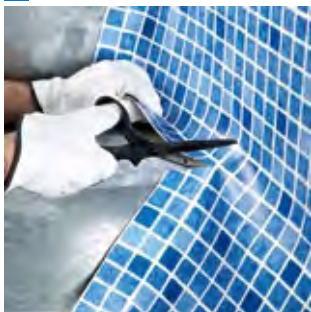


9. Lining the Steps

There are a number of ways to install the membrane on the steps; the following is one of the most common:

- 1 Make the cuts in the interior and exterior angles.
- 2 Attach the membrane to the structure using contact glue on both surfaces, making sure to avoid the appearance of bubbles, wrinkles, etc.
- 3 Attach the membrane to the risers then weld the pieces to the vertical overlaps.
- 4 Make two welds. For the second, use a glove and apply pressure to the two membranes to thermo-fuse them.

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9. Lining the Steps

Installation on steps and risers:

- 1 Attach the membrane to the riser using **RENOLIT ALKORPLUS** contact glue (81043).
 - 2 Weld the riser pieces to the overlap on the wall.
 - 3 Line the step with geotextile (cut to fit) using the contact glue.
 - 4 Line the step with the membrane and weld the joint between the step and the riser.
- Line the step and riser with the membrane and weld them with hot air.

For safety purposes, install **RENOLIT ALKORPLAN NON-SLIP** membrane on all or part of the step.

Notes:

Alternative technique:

- *Fixation of metal sheet sections in the corners of the steps. The metal sheets allow to fix the membrane to the structure by hot-air.*
- *Cut and place geotextile to fill the space between the metal plate sections prior to executing the welds.*

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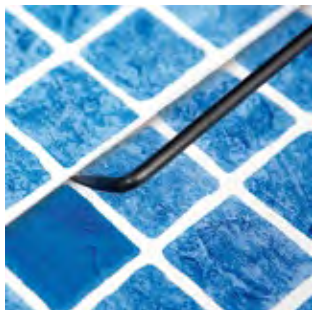


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10. Checking the Welds

- Check the welds using a scribing iron, by quickly moving it along the weld seam and applying constant pressure.
- Re-weld any spot where the point of the scribing iron can be inserted between the membranes.



11. Application of Seam Sealer



- Shake the bottle of **RENOLIT ALKORPLUS** seam sealer (liquid PVC) and fill the applicator bottle.
- Apply **RENOLIT ALKORPLUS** seam sealer along the line of the weld to seal it completely and allow it to dry for around 15 minutes (actual drying time will depend on atmospheric conditions).
- Sealing the welds using **RENOLIT ALKORPLUS** seam sealer ensures better waterproofing and a more attractive finish.



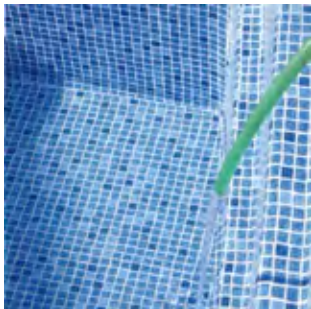
12. Silicon Sealant

- It is essential to seal the join between the membrane and the edge of the pool or coping stones with silicone or polysulfide to prevent the infiltration of water.
- Apply the silicone sealant after the pool has been lined and the liquid PVC has been applied.
- Follow the manufacturer's instructions for the application of the sealant.



13. Filling the Pool

- Fill the pool to a depth of around 20 cm.
- Then attach the various flanges of the special accessories for **RENOLIT ALKORPLAN 2000/3000** reinforced membranes which have been installed (skimmers, nozzles, sumps, lights, hydro-jets). This will help to avoid the formation of folds or wrinkles.



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