

# ALFIX<sup>®</sup>

*Responsible strength*

## Pools

**Swimming pool tiling with Alfix**





# Strong solutions for swimming pools with Alfix

Swimming pools require careful planning from design phase through choice of materials to performance.

It is a highly complex field calling for specialists with advanced expertise and extensive experience.

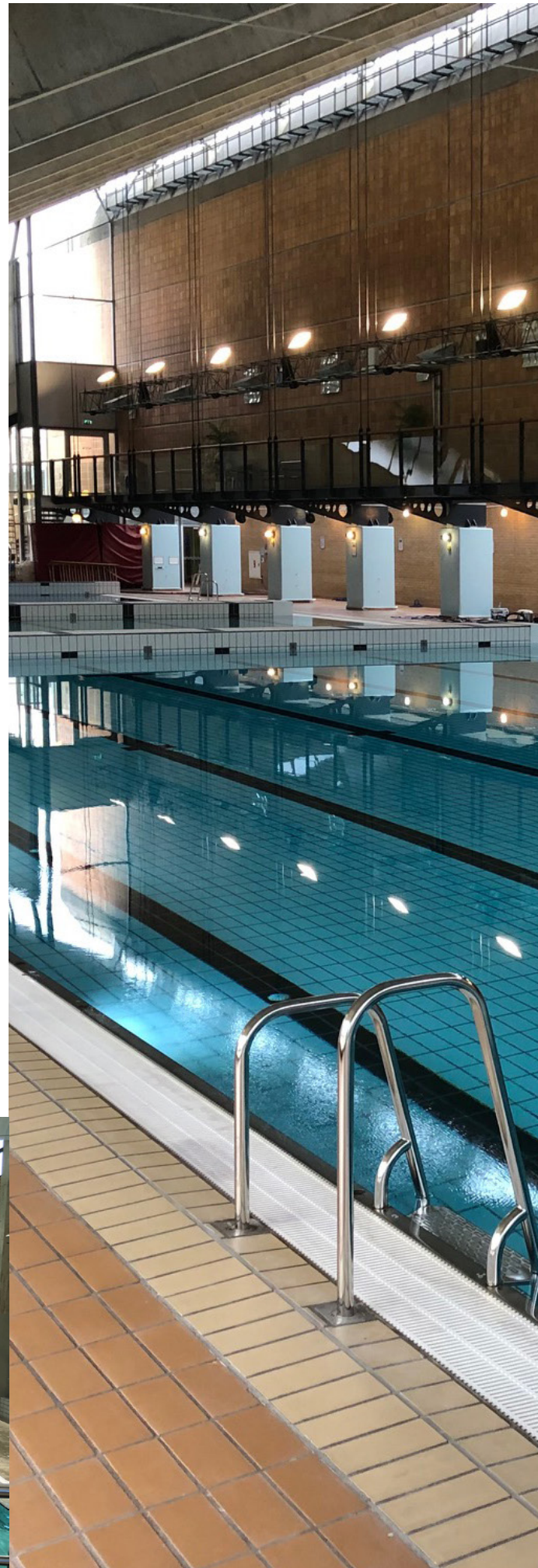
The materials selected for swimming pool floors and walls have a significant bearing on safety, ease of maintenance, running costs and environmental impacts. Ceramic floor, wall and mosaic tiles are the obvious choice for coverings that require easy cleaning, non-slip and wear-resistance. Furthermore, ceramic coverings add aesthetic value to the final result.

A PVC liner can also be used as swimming pool surface, acting as a membrane and protecting the concrete substructure, with ceramic tiles applied directly onto the liner at the water level.

Alfix has been supplying tile adhesives and grouts for swimming pools in Denmark, Norway, Sweden and England for more than 40 years. Over the years, technology and workmanship have changed – the traditional thick bed method using sand and cement has given way to the thin bed method using factory-made cement-based tile adhesives.

Continuous product research and development ensure that the Alfix range always meets the latest swimming pool standards. The European Construction Products Regulation (CPR) requires CE marking to be applied to all products covered by a harmonised standard, with corresponding Declarations of Performance (DoP). Wet room/pool membranes are certified with ongoing tests monitored by an accredited Danish institution (Dancert).

These instructions are based on national and international publications and general practical experience built on specific Alfix projects in the Nordic region. A list of references will be provided on request.







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## Standards/references

- Danish code of practice for swimming pools, DS 477, 2nd edition 2013
- BKR, Riktlinjer för plattsättning i pooler och badeanläggningar [swimming pool tiling guidelines]
- BKF, Flislegging av bassenger Del 1: Prosjekteringsråd om betong og flisarbeider [tiling in pools, part 1: concrete and tiling design guidance]
- BKF, Fliskledte svømmeanlegg - vannkvalitet og materialevalg [tiled swimming pools - water quality and choice of materials]
- Concrete specification, performance, production and conformity EN 206-1
- Watertightness of concrete pool, EN 1992
- Byg-Erfa datasheet 890415
  - Tømning af svømmebassiner [emptying swimming pools]
- ZDB-Merkblatt Schwimmbadbau, Hinweise für Planung und Ausführung keramische Beläge im Schwimmbadbau – August 2012 [swimming pool construction, planning and execution guidance, ceramic coverings]
- Liquid applied water impermeable products for use beneath ceramic tiling bonded with adhesives, EN 14891
- Tile adhesives, EN 12002/12004
- Grouts, EN 13888
- Ceramic tiles, EN 14411:2012



## Substructure, concrete pool

Pools applied with ceramic tiles require an absolute watertight substructure or shell. Concrete quality (45) with a low water/cement ratio and minimum shrinkage. Exposure class XD2.

Preparations for plumbing and light fittings etc. should be securely anchored before casting the concrete in situ to obtain the best possible seal.  
Minimum age of concrete before commencing ceramic tiling: 6 months.

To prove for watertightness, the concrete shell should undergo a water pressure test to reveal any leakage before tiling. Hence, fill up the pool with water for at least 7 days. The test should include jointings, seams and other embedded parts.







## Overflow channels and penetrations

Depending on still water level, pool nosings may come in many forms.

With high-level overflow channels, the water level of the pool is at the same level as the barefoot area, creating a risk of capillary suction from the pool wall.

See principle drawings, fig. No. 1 and 2

To prevent moisture movement, Alfix Epoxy Primer is used as a capillary break. Joints connected to overflow channels are sealed using Alfix Epoxy Primer with an easy flowing consistency.

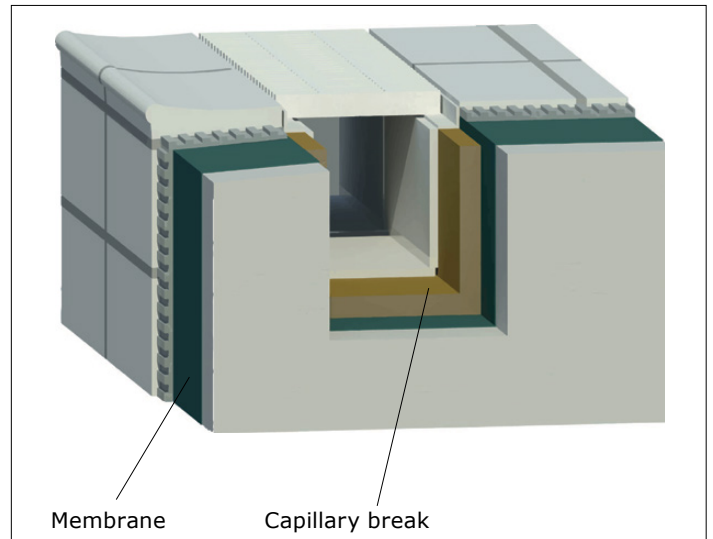
Joint width: Max. 20 mm.

Part B is mixed with part A. Use a stirrer with a low-speed electric drill and mix until a smooth paste is obtained. Sprinkle in the sand while mixing.

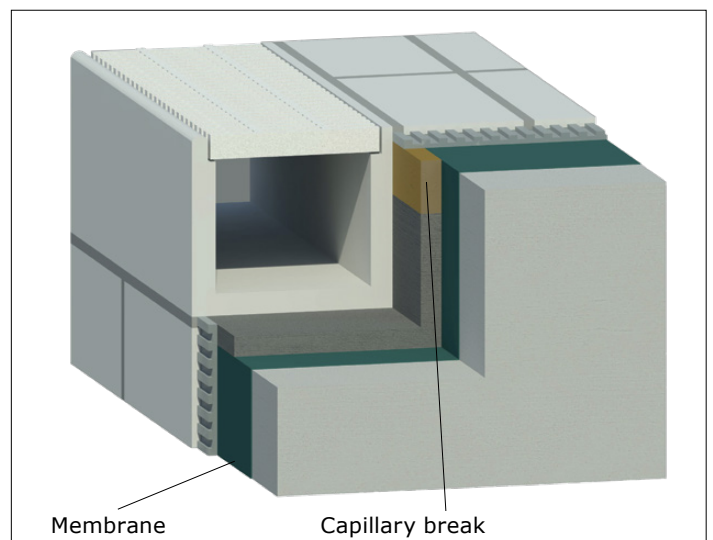
To obtain an easy flowing consistency, hold back approx. 8 kg Alfix Sand type 10: 0,1 - 0,3 mm.

Mixing time: Approx. 3 minutes.

Working time: Approx. 50 minutes.



*Fig. 1: Example of an pool nosing – the water is level with the surrounds and there is a risk of capillary suction from the pool wall.*



*Fig. 2: Example of an edge – the water is level with the surrounds and there is a risk of capillary suction from the pool wall.*

## Overflow channels and penetrations

A 30-50 mm layer of Alfix Epoxy Primer mixed with 8 kg sand type 10 is applied as additional reinforcement around penetrations such as lighting fixtures, pipe openings and drains, acting as a capillary break and to compensate for structural weakness.

Use Alfix Epoxy Primer, mixed with quartz sand, as a bonding bridge between substrate and fixtures.

See principle drawings, fig. No. 3, 4 and 5.

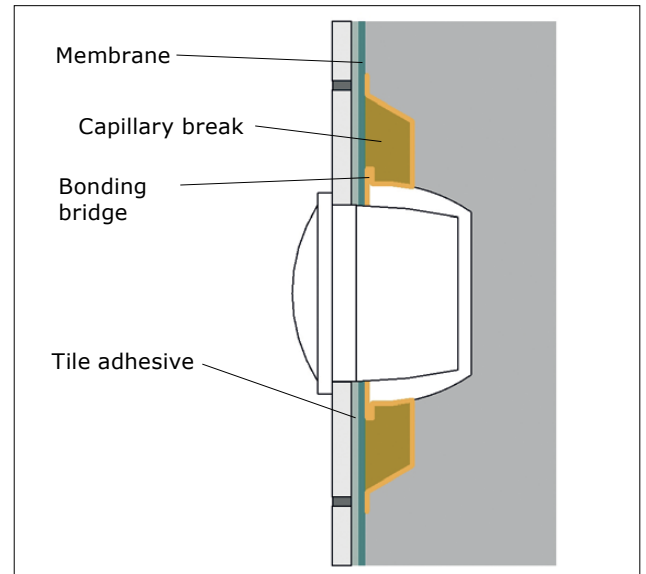


Fig. 3: Example of a seal around a lighting fixture

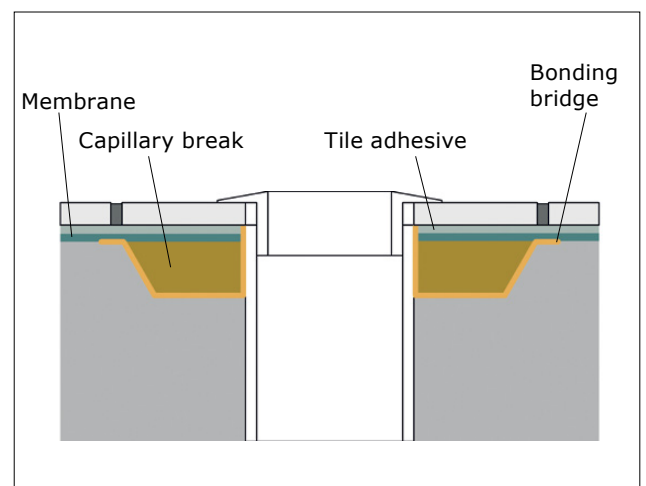


Fig. 4: Example of a seal around a drain

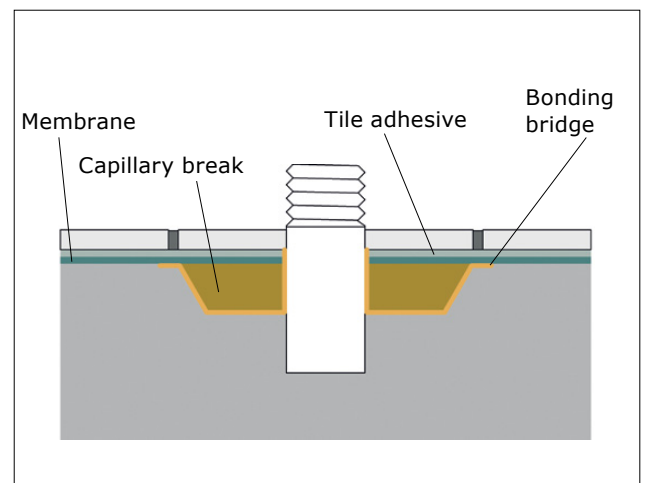


Fig. 5: Example of a seal around a permanent fixture

For reinforcement around fixtures on vertical surfaces, use Alfix Epoxy Primer, if necessary added a thixotropic agent (thickener) or extra sand.



# Levelling of pool walls and pool floor

## Product selection

Product	Wall	Floor	Working time at +20°C	Bed thickness	Curing time before tanking/tiling	Compressive strength
Alfix ProFix Flexible tile adhesive	X	X	3 - 4 hours	1 - 5 mm	1 day	13 - 15 N/mm <sup>2</sup>
Alfix PlaneMix 25 exterior Self-levelling and smoothing compound		X	20 - 30 minutes	2 - 25 mm	2 days	25 - 35 N/mm <sup>2</sup>
Alfix PlaneMix 100 Fast-setting screeding mortar for floors		X	50 - 60 minutes	20 - 100 mm	1 day	25 - 35 N/mm <sup>2</sup>
Alfix PlaneMix S40 Pool and concrete repair mortar	X	X	1 - 2 hours	5 - 40 mm	2 - 3 days	≥ 40 N/mm <sup>2</sup>

## Surface preparation

The surface should be structurally sound and able to support loads. The surface should be free from dust, grease, salts, fouling, and other contamination. Any damaged concrete should be cut away. The surface should be wettable.

Depending on substrate, the concrete may require milling, alternatively dry or wet sand blasting. The cohesive strength should be  $\geq 1.5$  N/mm<sup>2</sup>. Any visible reinforcement bars should have corrosion protection.

Working temperature: +10°C - +25°C.

### Alfix ProFix

For filling holes, cracks, gaps and uneven areas from 1 - 5 mm. Can be applied directly onto the substrate with a smooth trowel as a thin layer or for levelling.

Mixing: 5.4 litres of clean, cold water per 20 kg powder.

### Alfix PlaneMix 25 exterior

For patching, repairing and resurfacing of uneven areas from 2 - 25 mm. Remember to mask floor drains, etc. Requires priming with Alfix PlaneMixPrimer diluted 1:6 with clean water. Commence levelling or straightening once the primed surface is dry or no later than 24 hours after priming is completed.

Mixing: 3.2 - 3.6 litres of clean, cold water per 20 kg powder.

### Alfix PlaneMix 100

For repairing and screeding from 20 - 100 mm. The surface is brushed/slurry bonded with a mix of Alfix PlaneMixPrimer and Alfix PlaneMix 100 in the ratio 1:1 for full coverage. Alfix PlaneMix 100 is applied wet-on-wet with a smoothing board/straightedge for compaction and straightening. Application, rendering and smoothing should be carried out in one continuous operation.

Mixing: 1.8 - 2.0 litres of clean, cold water per 20 kg powder.





# Levelling of pool walls and pool floor

## Alfix PlaneMix S40

For levelling and patch repairs in a thickness of 5 - 40 mm. Suitable for constructions placing high demands on both concrete substrate and mortar.

A bonding slurry coat consisting of Alfix PlaneMix S40 and Alfix PlaneMixPrimer in the ratio 1:1 is always applied first. Brush or broom on slurry coat for full coverage.

**Walls:** On vertical surfaces, allow bonding coat to set before applying Alfix PlaneMix S40. The mortar is then applied to the substrate using a trowel or steel float.

**Floor:** On horizontal surfaces, Alfix PlaneMix S40 can be applied wet-on-wet or within 8 hours upon application of bonding coat.

Ensure sufficient compaction of render to obtain a dense and smooth appearance.

For large areas, use straight edges and guide battens. Edges and transitions should be at right angles with a minimum depth of 5 mm to avoid a weak transitional layer.

Once the mortar starts to set, finish the surface with a float.

Mixing (walls): 3.0 litres of clean, cold water per 20 kg powder.

Mixing (floor): 2.7 litres of clean, cold water per 20 kg powder.

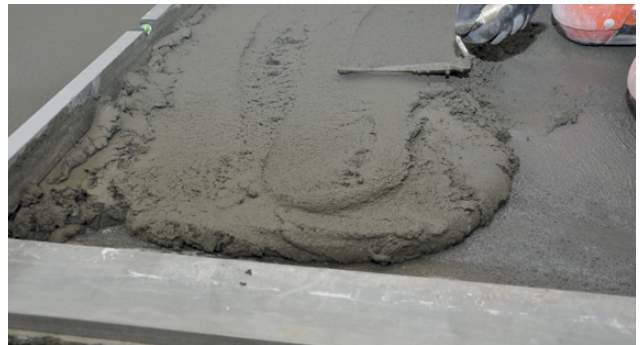
## Curing

To prevent shrinkage and reduced strength, protect Alfix PlaneMix S40 against rapid drying. Cover with plastic sheeting for the first 2 - 3 days.

If working at temperatures below +10°C, the above curing time should be extended.



*Slurry bonding with a brush*



*Application and compaction on floor*



*Levelling off with a straight edge*



*Smoothing with float*



# Water quality

## General information

To select the right membrane, tile adhesive and grout, knowledge of the pool water quality should be gained. The choice of product depends on water temperature, content of calcium carbonate and salt, as well as pH value.

For salt water/hot water pools or pools with lime aggressive water Epoxy products should be used.

## Hot water and salt water pools

Epoxy products are recommended for hot water pools with temperatures above +30°C as well as salt water/seawater pools.



# Tanking of pool walls and floor

## Product selection

Product	Membrane thickness	Crack bridging	Tensile strength	Drying time before tiling
Alfix 2K Sealing membrane, grey, cement/polymer dispersion	2.0 mm	≥0,75 mm	0.8 - 1.2 N/mm <sup>2</sup>	24 hours
Alfix Epoxy membrane, acid and chemical resistant sealing compound	2.0 mm	1.6 mm	5.0 N/mm <sup>2</sup>	16 hours
PVC pool liner DLW delifol NG	1.5 mm		1.9 - 2.3 kN/50 mm	24 hours
PVC pool liner RENOLIT ALKORPLAN 2000 - type 35216	1.5 mm		≥1.1 kN/50 mm	24 hours

## General information

The pool structure or shell should be completely watertight. To ensure this, fill the pool with water before tiling is commenced.

Apply a tanking membrane before tiling for greater protection from microcracking and movements in the concrete. A membrane provides greater elasticity and protects the concrete, but also tends to reduce adhesion strength.

The concrete should be sound, with a cohesive strength of at least 1.5 N/mm<sup>2</sup>.  
Moisture content < 4% (weight percent).

Epoxy membranes are recommended for hot water or salt water pools as they provide greater protection against salt and chloride ingress.

Working temperature should not be below +10°C.

# Tanking of pool walls and floor

## Alfix 2K Sealing membrane, grey

### Surface preparation

Prime concrete substrate with Alfix PlaneMixPrimer, diluted 1:6 with clean water.

### Sealings

In junctions between wall and floor, for internal vertical corners, and around pipe penetrations or sanitary installations, use Alfix VT strips and Alfix VT corners. Brush the sealing compound onto the substrate and press strip or corner firmly into the wet sealing compound. Smooth the surface to remove any voids. The overlap at corners should be at least 5 cm. Upon application of sealing strips and corners, bridge over the surface with a new coat of sealing membrane.

### Tanking

Apply Alfix 2K Sealing membrane to the substrate in three coats, in total, starting with a smooth, thin pore filling coat.

Drying time: approx. 1 hour.

Next, apply Alfix 2K Sealing membrane with a 4 x 4 mm notched trowel held at an angle of 60°, then smooth the surface into a pore filling coat to full coverage.

Drying time: 24 hours at +20°C.

Finally, apply a final coat of Alfix 2K Sealing membrane with a 4 x 4 mm notched trowel held at an angle of 60°. Smooth the surface to ensure an even layer thickness of approx. 2 mm.

Coverage: approx. 3 kg/m².

Drying time before tiling: Min. 24 hours at +20°C.



Priming with Alfix PlaneMixPrimer



Bedding Alfix VT corner in sealing membrane



Bedding Alfix VT strip in sealing membrane



Applying Alfix 2K Sealing membrane – pore filling coat



Applying 2K Sealing membrane and smoothing



# Tanking of pool walls and floor

## Alfix Epoxy Membrane

### Surface preparation

The substrate should be pre-treated with Alfix Epoxy Primer mixed with quartz sand, Alfix Sand type 1: 0,3 - 0,7 mm.

The surface should be completely saturated with sand. Remove all excess sand by sweeping and vacuuming. Drying time: Min. 16 hours at +20°C, max. 48 hours.

### Sealings

In junctions between wall and floor, for internal vertical corners, and around pipe penetrations or sanitary installations, use Alfix VT strips and Alfix VT corners. Brush Alfix Epoxy Membrane onto the substrate and press strip or corner firmly into the wet membrane. Smooth the surface to remove any voids.

The overlap at corners should be at least 5 cm. Upon application of sealing strips and corners, bridge over the surface with a new coat of Alfix Epoxy Membran.

### Tanking

Apply the membrane in two coats to full coverage, each coat 1 mm thick.

Always bed sealing strips in the first layer. Apply the membrane by short pile paint roller or a 4 x 4 mm notched trowel, and subsequently smooth the surface. Drying time: Min. 16 hours at +20°C, max. 48 hours.

In the second layer, sprinkle quartz sand 0.7 - 1.2 mm (type 2) directly onto the freshly applied membrane until the entire surface is covered in sand. Use a sandblasting gun if necessary.

### NB!

In areas of movement, for example in corners where walls meet floor, leave out application of sanding.

For walls, non-slip can be obtained by adding 2 - 3% thickener.

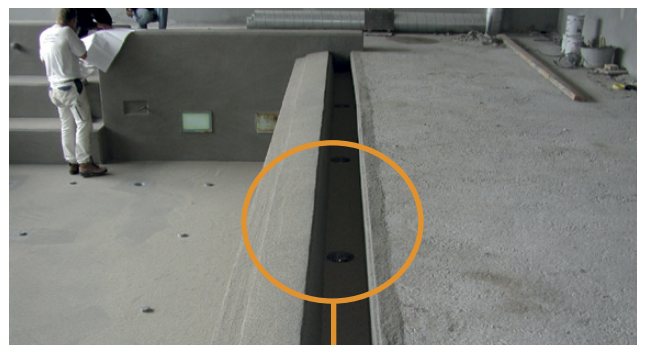
Drying time before tiling: 24 hours at +20°C.



*Applying Alfix Epoxy Membrane*



*Bedding Alfix Sealing strip*



*Surface saturated with sand*



*No sanding in movement areas*

# Tanking of pool walls and floor

## PVC pool liner

Reinforced liner for waterproofing swimming pools, acting as a membrane and finished surface.

Install according to manufacturer's instructions.

If tiles are to be fixed directly onto the liner, the liner should always be adhered to the concrete substrate

To create a complete seal, all overlaps should be hot-air welded. 1 - 2 rows of tiles can be fixed to liner membranes below water level.

## Tiling

Fix tiles in cement-based tile adhesive mixed with Alfix FlexBinder.

## Grouting

In the transition between tiles and PVC liner, use a two-part elastic sealant, such as Arbokol 1025, a sealant designed for areas permanently exposed to water.

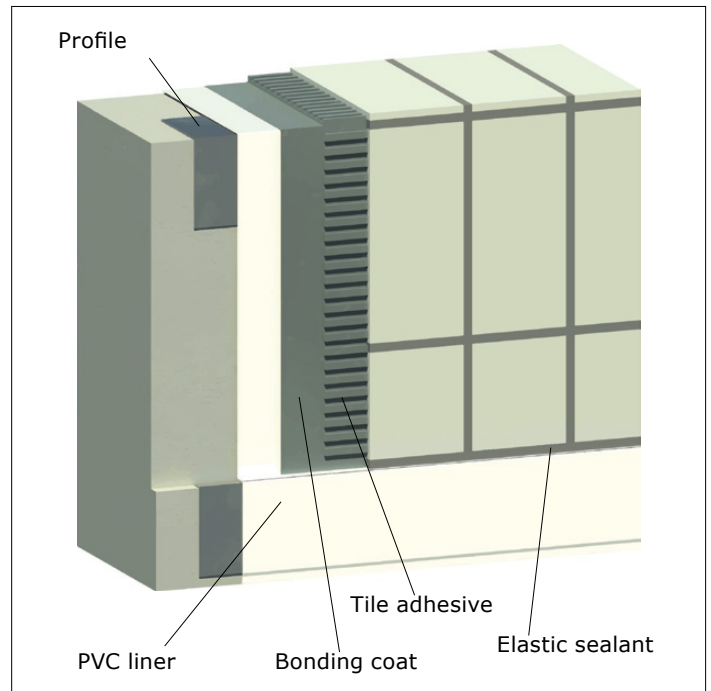


Fig. 6: Example of a ceramic tile covering on PVC liner



# Tiling of pool walls and floor

## Product selection

Product	Concrete	PVC liner	Watertight concrete, Alfex 2K Sealing membrane, Alfex Epoxy membrane	Working time at +20°C	Bed thickness	Drying time before grouting	Tensile strength
Alfix ProFix Flexible tile adhesive	X			Approx. 4 hours	3 - 10 mm	24 hours	1.5 - 2.0 N/mm <sup>2</sup>
Alfix ProFix Flexible tile adhesive		(X)	X	Approx. 4 hours	3 - 10 mm	24 hours	0.8 - 1.2 N/mm <sup>2</sup>
Alfix C2 Epoxy Two-part system	X			Approx. 50 minutes	2 - 4 mm	24 hours	4.0 - 5.0 N/mm <sup>2</sup>
Alfix C2 Epoxy Two-part system		X	X	Approx. 50 minutes	2 - 4 mm	24 hours	0.8 - 2.5 N/mm <sup>2</sup>
Alfix NormalFix + FlexBinder Flexible tile adhesive	X			Approx. 1 hour	3 - 5 mm	2 - 3 days	1.5 - 1.7 N/mm <sup>2</sup>
Alfix NormalFix + FlexBinder Flexible tile adhesive		X	X	Approx. 1 hour	3 - 5 mm	2 - 3 days	0.8 - 1.2 N/mm <sup>2</sup>

(X) = Alfex ProFix mixed with Alfex FlexBinder

Trowel notch size depends on tile size.

Tile size	Notched trowel/notch size
<50 mm	3 x 3 - 4 x 4 mm
50 - 200 mm	6 x 6 - 8 x 8 mm
200 - 300 mm	8 x 8 - 10 x 10 mm
>300 mm	10 x 10 - 12 x 12 mm



## Surface preparation

Watertight concrete should be structurally sound with no crack formation. The cohesive strength of the concrete should be  $\geq 1.5$  N/mm<sup>2</sup>.

Drying times for levelling and application of the membrane or liner should be strictly held.

According to DS 477, the average adhesive strength for tiles fixed on concrete should be 1.5 N/mm<sup>2</sup>.

On request, Alfex offers to do on-site measurement of the adhesion strengths.

Alfex 2K Sealing membrane should be completely dry with a firm fully covering surface.

Alfex Epoxy membrane should be hardened and covered with sand, sandpaper appearance, but free from any loose, excess sand.

The tiles should be suitable for pool application and compatible with the actual environment. Water absorption  $\leq 3\%$  (weight percent).

Mosaic tiles should be suitable for pool application, paper- or plastic faced.

Mesh-backed mosaic tiles are not suitable for pools or areas exposed to water.

Use Alfex C2 Epoxy for fixing mosaic tiles.

Working temperature: +10°C - +25°C.

# Tiling of pool walls and floor

## Substrate

- Watertight concrete
- Alfix 2K Sealing membrane
- Alfix Epoxy membrane

## Alfix ProFix

For tiling in pools, back buttering of tiles is always required (buttering and floating method) in order to ensure solid bedding, and hence adhesive is applied to both substrate and tiles.

Apply Alfix ProFix to the substrate with a notched trowel, starting with the smooth edge and continue with the notched edge. Notch size depends on tile size and ensures that the correct amount of tile adhesive is applied.

Back butter each tile with a thin layer of Alfix ProFix before positioning into the wet adhesive, usually within approx. 20 - 30 minutes.

The back of the tile should be completely covered without voids.

Check adhesive coverage regularly.

Mixing: Approx. 0.30 litres of clean, cold water per kg of powder, corresponding to 6 litres per 20 kg bag.



*Applying tile adhesive with a notched trowel*



*Back-buttering the tile with a thin coat of adhesive*



*Fixing tiles*



*Checking adhesive coverage*



# Tiling of pool walls and floor

## Substrate

- Watertight concrete
- Alfix 2K Sealing membrane
- Alfix Epoxy membrane

## Alfix C2 Epoxy

Tiles are fixed in C2 Epoxy and to achieve solid bedding, tiles should be back buttered (buttering and floating method) so that adhesive is applied to both substrate and tiles.

Apply Alfix C2 Epoxy to the substrate with a notched trowel, starting with the smooth edge and continue with the notched edge.

Back butter each tile with a thin layer of Alfix C2 Epoxy and press the tile firmly into the moist adhesive.

The back of the tile should be completely covered without voids. Tile position can be adjusted within approx. one hour after mixing.

For paper-faced mosaic tiles, apply Alfix C2 Epoxy to the substrate with a notched trowel to create a uniform layer. Subsequently, use the smooth edge of the trowel to flatten adhesive ribs and obtain a consistent and smooth surface. Gently tap the mosaic tiles into position with a float or similar tool.

There should not be any voids behind the mosaic tiles. Any epoxy residues on tiles or mosaics can be removed with methylated spirits up to six hours after mixing.

Mixing: Add Part B to part A. Attach a stirrer to a low-speed electric drill and mix until a smooth paste is obtained.



*Applying Alfix C2 Epoxy with notched trowel*



*Back-buttering the tile with a thin coat of adhesive*



*Fixing tiles onto the moist adhesive*



# Tiling of pool walls

## Substrate

- PVC liner

### Alfix NormalFix with Alfix FlexBinder

Note that liner membranes in pools are suitable for the installation of max. 1 - 2 rows of tiles below water level.

Degrease liner using Alfix Deep Cleaner or ethanol and then roughen it with grade No. 40 – 60 sandpaper using sanding block or with careful use of an electric sander. The surface should feel rough and matt with visible signs of sanding, but without any damaging of the surface.

Apply a contact coat of Alfix NormalFix mixed with Alfix FlexBinder.

Thickness: Max. 1 mm.

Mixing: 0.4 litres of Alfix FlexBinder per kg of powder. The consistency can be adjusted with water.

Drying time before tiling: Approx. 2 days at +20°C. Tiles are fixed in Alfix NormalFix mixed with Alfix FlexBinder. Mixing as above.

For tiling in pools, back buttering of tiles is always required (buttering and floating method) in order to ensure solid bedding, and hence adhesive is applied to both substrate and tiles.

Apply adhesive to the substrate with a notched trowel, starting with the smooth edge and then with the notched edge.

The notch size depends on the tile size and ensures that the correct amount of tile adhesive is applied.

Back butter each tile with a thin layer of Normalfix before positioning into the wet adhesive.

The back of the tile should be completely covered without voids.

Check adhesive coverage regularly.

Drying time before grouting: approx. 3 days at +20°C.



Installing PVC liner



Roughening PVC liner



Applying contact coat



Back buttering the tile with a thin coat of adhesive



Fixing tiles



# Grouting of pool tiles

## Product selection

Product	Working time at +20°C	Joint width	Foot traffic	Compressive strength
Alfix IndustryFuge - CeraFill 18 high-strength cement-based grout	1 - 2 hours	2 - 18 mm	24 hours	40 N/mm <sup>2</sup>
Alfix C2 Epoxy Two-part system	Approx. 50 minutes	1.5 – 10 mm	16 hours	65 N/mm <sup>2</sup>
Alfix M-Silicon Elastic sealant	Approx. 15 minutes	5 – 15 mm	48 hours	22 Shore A

## Surface Preparation

Grouting is normally possible two days after tiling is completed.

Joints must be clean, dry and free from loose particles and joint depths should appear uniform.

Any standards or specifications as to the quality and finish of the final grouting result should be established before work starts. It may be preferable to test grout a small area which, upon approval, can act as reference for the remaining work.

In areas permanently exposed to running water, e.g. near overflow channels, always use epoxy for grouting as water movements will induce increased mechanical load and stress.

Elastic joints should normally be limited to areas where structural movements are expected.

Avoid any movement joints below water level.

In a swimming pool environment, the bonding surfaces should always be primed and joint widths should be between 10 and 15 mm.

Working temperature: +10°C - +25°C.

# Grouting of pool tiles

## Alfix IndustryFuge - CeraFill 18

For the best result, apply Alfix IndustryFuge - CeraFill 18 with a rubber-backed epoxy squeegee. Spread the grout while working diagonally across the joints, forcing it into them. Be sure to fill the joints completely. When the grout begins to set after approx. 15 - 30 minutes, slurry off the area using a well wrung-out sponge frequently rinsed in clean water. The joints must remain filled.

First, wipe off the tiles diagonally until the joints appear even and filled. Finally, clean the tiles with the sponge. The joints must be filled and match the surface and uses of the tiles.

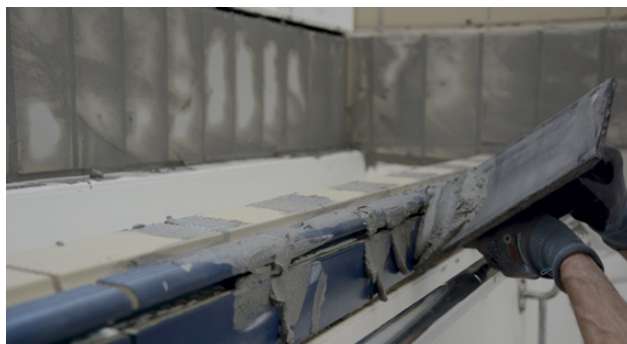
Usually, finished joints should not be washed out to a depth exceeding 1 mm.

For tiles with rounded edges, joints can be adapted to these.

Joints should neither be overfilled nor cover parts of the tiles.



*Applying Alfix IndustryFuge CeraFill 18*



*Fill joints completely*



*Clean tiles with a slightly damp viscose sponge*



*Adjust joints to match the tile design*

### Note!

Avoid acid washing where possible. To ensure complete hardening and full strength, it is important to keep joints moist for the first 4 - 5 days.

Hardening time: at least 14 days at +20°C and 50% RF before filling the pool.

# Grouting of pool tiles

## Alfix C2 Epoxy

Work Alfix C2 Epoxy well into the joints with the aid of suitable squeegee/trowel or hard rubber-backed float. Compact the grout into joints by working diagonally. Ensure to fill joints completely leaving no voids.

Leave as little grout as possible on the tile by holding the float or squeegee at an angle of approx. 65°. It is important to keep float edges clean from material in order to avoid drawing grout out of the joints.

Clean off surplus grouting material shortly after application before material starts to dry. For cleaning use abrasive pad and the smallest possible amount of lukewarm water and wipe over tiles with pad frequently rinsed to emulsify traces of material. Complete cleaning off with a viscose sponge frequently soaked in lukewarm water.

Change water for approx. each 5 m<sup>2</sup>  
Do not leave excess water in joints.



*Applying to wall with epoxy grouting float*



*Applying to floor with epoxy grouting float*



*Emulsifying with an abrasive pad*



*Cleaning with a viscose sponge*

### Note!

Allow at least 6 hours and no more than 16 hours upon grouting before final cleaning takes place. Use lukewarm water mixed with detergent and 10% methylated spirits.



# Grouting of pool tiles

## Alfix M-Silicon and Alfix P-Primer

Bonding surfaces should be dry and clean. Vacuum and degrease with acetone or ethanol.

Prefill deep joints with a suitable backing material, such as polyethylene foam backer rod, to obtain appropriate depth. At its maximum, joint depth should make up 50% of the joint width.

The entire tile edge should be considered as bonding surface.

Apply masking tape along tile edges to protect the tile surface.

Apply Alfix P-Primer by brush onto both bonding surfaces in an even coat and allow the primer to dry completely before commencing the work.

Drying time: approx. 1 hour at +20°C.

As soon as the primer is dry, fill the joints completely against the backing material with Alfix M-Silicon and finish the surface within 15 minutes using smoothing kit, wet wooden spatula, or joint nail.

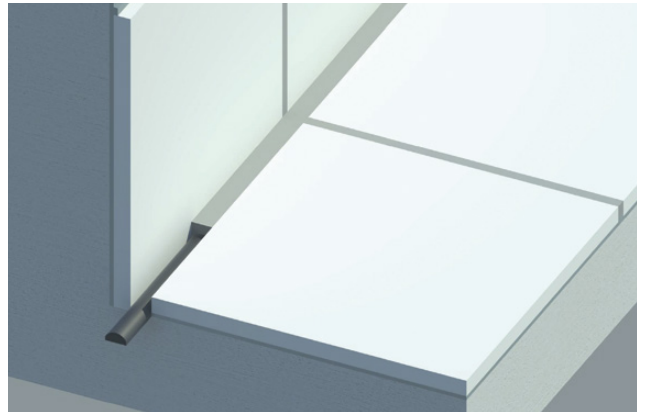


Fig. 7: Backing material is filled-in



Priming after applying masking tape



When the primer is dry, fill-in Alfix M-Silicon



Smooth joints within 15 minutes

### Note!

Remove masking tape immediately after smoothing.  
Curing time before exposure to water: at least 14 days at +20°C and 50% RF.

# Operation, cleaning and maintenance

## Filling and emptying the pool

Upon grouting, allow at least 14 days before filling up any pool with water. It is recommendable to fill and empty pools gradually, changing the water level by 30 - 50 cm per day.

As far as possible, avoid a large temperature difference between the water and substrate.

## General information

Joints exposed to chemical and/or physical impact should be checked regularly and replaced if necessary to prevent further damage occurring.

If possible, avoid any use of high-pressure cleaners.

In case high-pressure cleaners do find use, follow these guidelines:

- Limit the operation outcome to a pressure of max. 6 bar, and preferably even lower.
- Keep the power nozzle at least 0.3 m from the surface.
- Spray at an angle of 30° - 60°.

Alfix Marble Cleaner is recommended for daily cleaning of barefoot areas and shower/changing rooms.

The use of Alfix Marble Cleaner for daily cleaning will prevent the formation of limescale on the surfaces. The product is also effective on all washable surfaces such as sanitary ware, taps, stainless steel, mirrors, etc.

Dilution: 25 - 50 ml for 10 litres of water.

Apply the solution with a cloth, sponge, spray bottle or foam unit. For stubborn stains, scrub the surface and/or prolong working time.

Acidic products can be used to remove lime and cement residues from tiles surfaces, for example the Alfix Lime and Grout Remover based on phosphoric acid/citric acid. Wet the surface with clean water. Dilute Alfix Lime and Grout Remover 1:5 - 1:10 in water.

Apply the solution with a sponge. Avoid drips, which can leave marks. Leave for 5-10 minutes, then scrub the surface and rinse with clean water.



Do NOT use cleaning agents containing sulphamic acid, such as Alfix Acid Wash, near filtration units, chlorinated pool water or other products containing chlorine. When using acidic products, ensure that any trace of acid is neutralised with an alkaline agent, such as Alfix Marble Cleaner.

# List of products

## Alfix PlaneMix S40

Pool and concrete repair mortar.

- For patch-repair and reprofiling of walls and floors made of all concrete types
- Ideal for levelling/straightening in pools
- For interior and exterior use
- Shrinkage compensation system and fibre-reinforced
- High adhesion and compressive strength
- Excellent application properties
- Layer thickness 5 - 40 mm



## Alfix PlaneMix 25 exterior

Self-levelling smoothing compound.

- For levelling and smoothing subfloors
- Suitable for balconies, industrial floors, etc.
- For locations exposed to upcoming moisture
- For interior and exterior use
- Water and frost resistant
- For slope building
- Layer thickness 2 - 25 mm



## Alfix PlaneMix 100

Fast-setting screeding mortar

- For screeding, levelling and repairing subfloors
- For interior and exterior use
- Semi-dry consistency
- Foot traffic after 3 hours
- Ideal for subfloor repairs
- Layer thickness 20 - 100 mm



## Alfix PlaneMixPrimer

For preparation of different types of substrates prior to levelling.

- Adjusts surface absorbency and improves adhesion
- Suitable as slurry coat
- For interior and exterior use
- Adheres to most substrates
- High water resistance
- Low emission



## Alfix 2K Sealing Compound, grey

For waterproofing of wet room surfaces prior to installation of ceramic tiles.

- For interior and exterior use
- Crack bridging, anti-fracture membrane
- ETA-approved for wet rooms in accordance with ETAG 022
- For pools with a water depth of up to 15 m
- Meets EN 14891 for use in pools
- Rapid setting
- Approved for radon protection



## Alfix Epoxy Primer

Acid-resistant anchorage primer.

- For pre-treatment and as moisture barrier prior to application of Alfix Epoxy Membrane
- For interior and exterior use
- Effective anchorage of the substrate
- Highly chemical resistant





# List of products

## Alfix Epoxy Membrane

Acid-resistant sealing compound.

- Effective waterproofing under ceramic tiles in pools, barefoot areas, etc.
- For interior and exterior use
- Resistant to aggressive chemicals and high mechanical load



## Alfix VT Accessories

**VT strip.** Waterproof laminated sealing strip able to withstand chlorinated water.

**VT internal and external corners.** Waterproof laminated corners.



## Alfix ProFix

Flexible tile adhesive – light.

- For ceramic and quarry tiles, mosaics and natural stone
- For large-sized and porcellanato tiles
- For interior and exterior use
- Easy-flowing consistency for floors
- Rapid strength development
- Bed thickness up to 10 mm



## Alfix NormalFix

- For ceramic tiles and quarry tiles
- For interior and exterior use
- Smooth and easy to apply
- Suitable for swimming pools
- Suitable for wet rooms
- Bed thickness up to 5 mm



## Alfix FlexBinder

For mixing with Alfix tile adhesive to obtain higher elasticity. For use in demanding locations on critical substrates, such as floorboards, vinyl, PVC, fibreglass and steel.

- For interior and exterior use
- Imparts flexibility and water resistance
- Reduces water permeability
- Improves adhesion strength
- Ideal for use with PVC liner



# List of products

## Alfix C2 Epoxy

Acid-resistant industrial grout and adhesive.

- For fixing and grouting ceramic tiles and mosaics
- For interior and exterior use
- Tolerates aggressive chemicals and high mechanical load
- Tolerates high-pressure cleaning
- Joint widths/layer thickness from 1.5 - 10 mm



## Alfix IndustryFuge - CeraFill 18

Cement-based high-strength grout

- For grouting of ceramic wall and floor tiles
- For areas subjected to high mechanical load(s)
- Suitable for car washes, commercial kitchens and swimming pools
- For interior and exterior use
- High mechanical strength
- Improved chemical resistance
- Tolerates high-pressure cleaning
- Joint widths from 2 – 18 mm



## Alfix M-Silicon and Alfix P-Primer

Elastic sealant for swimming pools.

- For areas permanently exposed to water
- For movement joints in tiled areas
- For interior and exterior use
- Designed for swimming pools including Alfix P-Primer
- Fungus and mould resistant
- Tolerates chemical exposure and boiling water
- Joint widths from 5 – 15 mm



## Alfix Marble Cleaner

- Daily use prevents formation of limescale deposits
- Dries up spotless – no further drying required on vertical surfaces
- Ideal for sanitary installations and ware
- Economical in use



## Alfix Lime and Grout Remover

- Gentle, acidic cleaner with powerful limescale and dirt removing properties
- Does not attack chrome or stainless steel
- Removes cement residues from new tiles
- Suitable for sanitary areas









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Alfix is a Danish family firm, established in 1963.

We aim to be a reliable partner for suppliers, designers and builders working toward the Scandinavia of the future.

We have an extensive range: tile adhesives, grouts, levelling compounds, screeding mortar, wet room solutions, render products and other special products.



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**ALFIX®**  
Responsible strength