



**Engineering progress
Enhancing lives**

COVREX by REHAU

Technical Information



A major component of every modern indoor or outdoor swimming pool is a pool cover. Apart from a technically optimum and convenient solution, aesthetic and hygienic requirements count for the customer.

With the foamed swimming pool cover COVREX by REHAU an innovative product which fulfils the highest requirements by its sophisticated design and excellent material properties has been developed.

The advantages at a glance

1 Design and function:

- Sophisticated design and excellent material properties
- High bending strength
- Small coiling radius thanks to the special profile shape
- Very high resistance to hail

3 Protection and care:

- Accident prevention to the pertaining French safety directive NF P 90 308
- Extremely resistant to the weather and thereby suitable for all-year use
- Resistant to external influences and UV radiation

2 Processing:

- Simple retrofitting due to special design of the cross-section
- Suitable for both above-ground and underfloor systems and also for unusual pool shapes
- No additional fabrication of the profiles necessary
- Individual cutting of the profile elements during installation on site
- Simple installation

3 Energy:

- Reduction of the operating costs by up to 80 %
- Excellent insulating properties due to the intelligent profile concept



COVREX by REHAU fulfils the requirements of our customers with regard to:

- Ecology
- Economy
- Safety and design

Product range

Article number

Swimming pool cover profile 1626823

Make-up of delivery

Timber frame crate - Capacity max. 80 profile slats. Large box max. length 6050 mm - Capacity max. 40 profile slats

Spacers

Make-up of delivery 100 pieces in plastic bags. Secured on the side to prevent the profile slats slipping.

Standard lengths from the warehouse

4050 mm

4550 mm

5050 mm

5550 mm

6050 mm

Non-standard available on request up to max. 12 500 mm

Colours

| | |
|-------------------|-------------|
| White/Pebble Grey | 69572/69571 |
|-------------------|-------------|

| | |
|------------------------|-------------|
| Light Blue/Pebble Grey | 74031/69571 |
|------------------------|-------------|

| | |
|-------|-------|
| White | 69572 |
|-------|-------|

| | |
|-------------|----------|
| Light Ivory | RAL 1015 |
|-------------|----------|

| | |
|-------------|-------|
| Pebble Grey | 69571 |
|-------------|-------|

Technical Information

Validity

This Technical Information applies to the REHAU pool cover system COVREX by REHAU. Beyond this information, the products are specified in their scope of delivery in the Technical Delivery Specification TDS T79/ 02 in the latest version.

Field of application

REHAU pool cover systems were developed for use as covers for private and public swimming pools.

They are used:

- to protect against dirt and other negative external influences
- to save energy
- to protect people from accidentally falling into the pool

They are not conceived for the purpose of walking or staying on swimming pools or as storage surfaces.

Product description

REHAU pool cover systems consist of high-quality PVC (polyvinyl chloride) slats specially developed for this application, which are co-extruded and therefore integrally bonded with hinges made of PUR (polyurethane). The cross-section design permits tight coiling radii and thereby compact cover units. The REHAU pool cover systems are therefore particularly suitable for retrofitting. Specially stabilised formulations were developed to ensure their suitability for this application and provide the highest possible protection against UV radiation and hydrolysis.

Due to the foamed design of the PVC slats which ensures their load-bearing capacity and allows them to float, special end caps to seal the hollow chambers are no longer necessary. This eliminates a considerable amount of fabrication work and allows the covers to be adapted to the actual circumstances on site.

In particular, the covers can be cut to fit unusual pool shapes. This permits the use of the REHAU pool cover systems for pools where conventional solutions are inadequate or completely unsuitable.

REHAU pool cover systems also make it possible to replace individual profile elements quickly and easily if necessary.

Due to the foamed design, excellent insulation properties are also achieved.

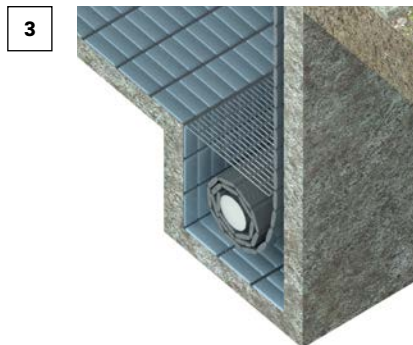
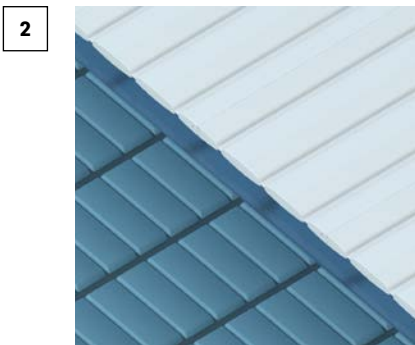
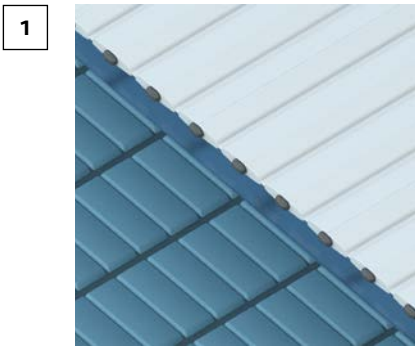
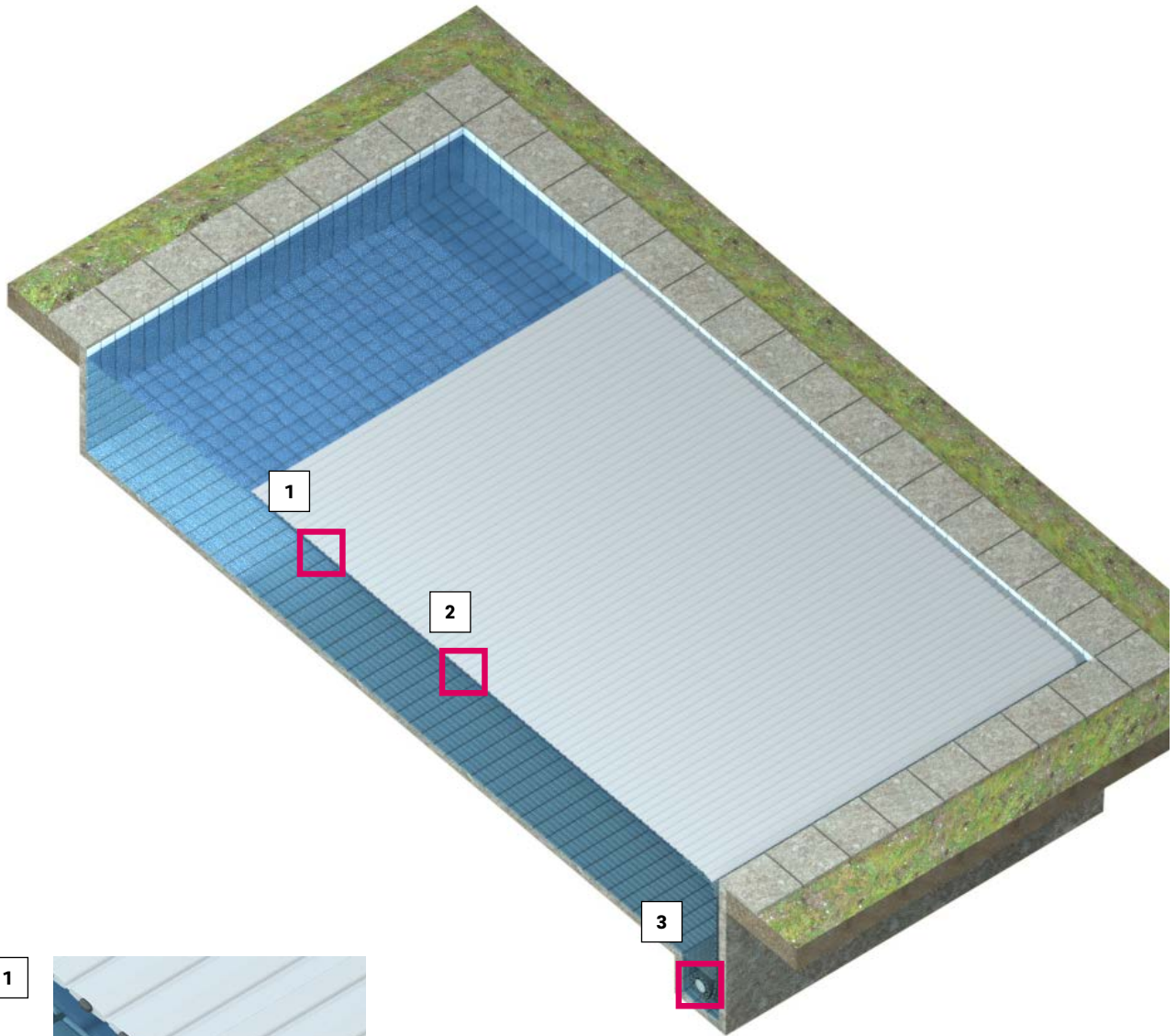
Due to the special profile concept, REHAU pool cover systems are also much less sensitive to wind and storms in comparison with conventional covers and are particularly resistant to hail.

The slightly curved (convex) cross-section of the slats guides rain and rising water towards the hinges. The hinges can be suitably perforated to drain rainwater. The cover also has a quickly drying surface.

The maximum supplied length is limited due to transport restrictions. Lengths up to 6 m are standard lengths. Beyond this, special lengths up to 12.5 m can be manufactured on request.

When handling the pallets, make sure that forklifts with sliding forks are used. For lengths over 8 m, two forklift trucks are required.

REHAU pool cover systems can be purchased in the colours White, Light Blue/Pebble Grey, Light Ivory, Pebble Grey and, White/Pebble Grey.



Mechanical properties

| | |
|---|---|
| Material designation | RAU-PVC 1700 (polyvinyl chloride, free of plasticisers, foamed) RAU-PVC 1406 (polyvinyl chloride, free of plasticisers) RAU-PUR 2720 (polyurethane) |
| Tear propagation resistance of the polyurethane hinge to ISO 34/1 in N/mm | ≥ 55 |
| Tensile strength of the hinge joint in N to ISO 527 (measured on a 25 mm-long profile cutting; test speed: 50 mm/min) | ≥ 150 |
| Coefficient of linear expansion in 1/°K to DIN 53752 | approx. 0,8*10 ⁻⁴ |
| Xenotest 1200 artificial weathering test, parallel, cycle 102:18 min, 4,000 h to ISO 4892 | grey scale > stage 3 |
| Weight per m ² in kg | approx. 7,0 |
| Load capacity, free-floating per m ² in kg | approx. 4,4 |

The values for the tensile strength and the tear propagation resistance of the hinges were determined with profile cuttings which had been aged (at least 24 hours). Other characteristic data can be seen from the REHAU material data sheets AV 0200, AV 0280 and AV 0080 in their latest versions.

Dimensions and permissible deviations

All dimensions and tolerances are specified in the REHAU drawings PK-57246 in their latest versions.

Surface quality and colour

As a result of the special production process a closed and easy-to-clean surface is achieved. In addition to this, special material formulations have been developed for this application. However, depending on the location of the swimming pool, changes in colour, particularly in the case of bright colours, and also certain surface changes should be expected. These changes can be caused by UV rays and other environmental influences. Also, depending on the location and also the water quality and water composition of the swimming pool, a coating could form and/or discolouration could occur in the hinge area.

This is state of the art and is therefore not connected with any changes to the material properties specified. The functionality of the polyurethane bond remains unchanged. The coating formation can be removed immediately after it occurs using a high-pressure cleaner or brush.

Colours

- White, Colour No.: 69572
- Light Blue / Pebble Grey, Colour No.: 74031 / 69571
- Light Ivory, Colour No.: RAL 1015
- Pebble Grey, Colour No.: 69571
- White / Pebble Grey, Colour No.: 69572 / 69571



Thermal properties

REHAU pool cover systems are suitable for a temperature range from - 20 to + 70 °C. In winter, care must be taken when opening and closing to ensure that the cover is generally free of snow and ice. REHAU pool cover systems have an average thermal conductivity of $\lambda = 0.08 \text{ W/(m}\cdot\text{K)}$, thermal transmittance $U = 4,85 \text{ W/m}^2\text{K}$.

Due to the intrinsic thermal coefficient of expansion, if there are considerable differences in temperature between the profile surface side and the underside this can result in various expansion behaviours. This can manifest itself in the lifting or lifting-off of the profile ends. This is a reversible process that does not result in any negative effects.

Chemical properties

The resistance to chemicals is described in detail in the REHAU material data sheets AV 0200, AV 0080 and AV 0280 in their latest versions.

The REHAU pool covers are sufficiently resistant to the standard, commonly available products from Bayrol, specifically to the cleaning agent Decalcit Super and the algae control agent Algicit, as well as to chlorinated water when used correctly as specified by the manufacturer. (Cf. chapter maintenance hint). Other agents and combinations thereof such as cosmetics and other additives have not been examined. These may attack the material.

To ensure a long service life it is necessary to consistently maintain an average PH value of the water (range 6.8 to 7.4) and to avoid hypochloration (max. chlorine content 1.4 mg/l). In case of hyper chlorination of the pool for specific treatment, we advice to let the pool cover in opened position, filtration system switched on for 24 consecutive hours.

When using salt electrolysis it is to be borne in mind that in the case of a closed cover the operating time of the electrolysis cells must be significantly reduced in order to avoid hypochloration, which in the worst case could cause damage to the cover. Advice is to be sought from the electrolysis cell or pool manufacturer.



Attention

Prolonged use of pool cover COVREX by REHAU in a hyper chlorination ambiance accelerates ageing of the hinge and could result in its failure.

Accident prevention

The use of a REHAU pool cover system is not a substitute for common sense and does not release parents or other responsible persons from their supervisory duties.

The REHAU pool cover systems comply with the French standard NF P 90-308. To comply with the DIN EN 15288-1 standard, measures must be taken on the pool or cover system, such as a storage surface for the pool cover.

Accident prevention is only ensured when the cover is completely and correctly closed. The cover must not be only partially opened or damaged.

The best possible accident prevention is achieved with a peripheral support for the cover at the edge of the pool or with an encircling handrail directly beneath the surface of the water. Conformity with the standards is also ensured if the supports are limited to lateral guides.

The cover must only be opened or closed when the entire pool is under observation. Swimming must not be permitted when the pool cover is not completely opened. The closed pool cover must be secured to prevent it from being rolled or forced backwards. If necessary, a locking mechanism must be fitted.

A sign prohibiting walking on the cover should be erected in an easily visible place in the direct vicinity of the pool.



In order to ensure to final customer clear and complete information, it is mandatory to mention on user's manual or on technical documentation the following points based on documentation D79700:

- Surface quality and colour
 - Thermal properties
 - Chemical properties
 - Accident prevention
 - Maintenance hint
-

Maintenance hint

The user is responsible for caring for the pool cover system. If spraying with a power washer (max. 60 °C at a minimum distance of 500 mm) is inadequate, we recommend Dacalcit Super from Bayrol as a cleaning agent for soiled profiles.

Concentration must not exceed 10% in water (0,1l of Decalcit Super diluted in 1 l of water). Do not use pure product, thoroughly rinse after application.

Coarse dirt such as leaves, twigs etc. must be removed before the cover system is operated.

Do not use sharp-edged cleaning tools or blades.

Handling/installation notes

It is presumed that the pool cover will be preassembled under workshop conditions. In principle, REHAU pool cover systems can be cut to length using common woodworking saws. The choice of the saw blade depends on the cutting speed, although coarse-toothed saws should be avoided. We recommend thorough deburring. The REHAU pool cover systems can always be trimmed on site. However, a good quality cut and thorough deburring should also be ensured here.

The individual elements are then mated together.

If necessary, this step of assembly can be simplified using a neutral soap solution. To avoid stress in the finished cover or damage during installation, it should be ensured that no force is used.

To prevent the elements from slipping against each other after installation, it is recommended that they are fastened with plastic or rust-proof screws. These are inserted centrally in the "top" of the tongue. In the case of assembly with a cordless screwdriver, it should be ensured that this process is carried out at low torque and at a low speed. It is important to ensure here that the screw head is larger than the groove diameter. Assembly is then carried out as described above.

REHAU pool cover systems thereby make it possible to replace individual profile elements if necessary. Individual cover elements can be easily exchanged or replaced simply by releasing the locking elements which prevent slippage between the elements.

The preferred way to fasten the REHAU pool cover systems is by using straps on the coil shaft. The strap can be bolted directly to the cover. The diameter of the shaft should not be less than 120 mm. The special cross-section design of the REHAU pool cover systems permits the cover to be tightly coiled. The outside diameter of the coiled cover is approx. 1/3 smaller than with other known types of pool covers. This is an especially positive feature when retrofitting.



Storage recommendations and handling

The profiles for REHAU pool cover systems are supplied in timber frame crates or reinforced cardboard boxes. The profile pack is wrapped in film. Nevertheless, we recommend storage in a building and crates or boxes must not be stacked. Opened packages and unused profiles should always be stored in dry rooms lying flat. When unpacking, each profile should be folded into a U-shape and removed upwards to prevent scratching when pulling it out. For lengths over 3 m, it is advisable to enlist the help of another person.

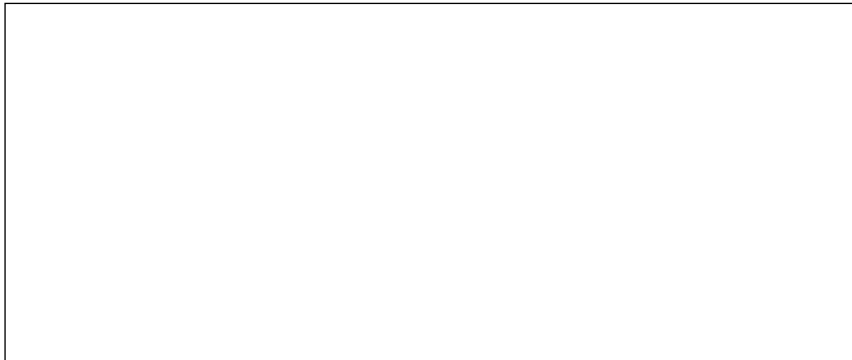
In general, the workplace should be kept clean to prevent scratching by chips etc. The finish of scratched profiles can be restored to a certain extent using a solvent (e.g.: Tangit cleaning agent).

Economy

With outdoor pools, REHAU pool cover systems are used to reduce evaporation losses. Also, cooling of the water by the wind and cold air is reduced. This substantially helps to save both water and energy and thereby to reduce the operating costs.

When used with indoor pools, the covers not only help to protect the building against evaporated moisture, but also achieve a substantial reduction in the energy costs for dehumidification. The odours caused by chlorine gas are also greatly reduced.

By using REHAU pool cover systems, the operating costs can be reduced by up to 80% in outdoor pools and up to 60% in indoor pools.



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processing of the products. Responsibility for these activities therefore remains entirely with the respective user/processor. Where claims for liability nonetheless arise, they shall be governed exclusively according to our terms and conditions, available at www.rehau.com/conditions, insofar as nothing else has been agreed upon with REHAU in writing. This shall also apply for all warranty claims, with the warranty applying to the consistent quality of our products in accordance with our specifications. Subject to technical changes.

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