

**SIMONA****ALLPLAST**  
AG

## Outdoor whirlpool made of SIMONA® PP-C-UV Twin-Wall Sheets



Top: outdoor whirlpool in operation; bottom left: construction and completion at Allplast AG; bottom right: transport by mobile crane

Swiss-based plastics processing company Allplast AG built an outdoor whirlpool for the Solbadhotel at the Bernese Oberland tourist resort of Sigriswil in Switzerland. The pool, including fittings and piping, was made from SIMONA® PP-C-UV Twin-Wall Sheets at Allplast AG's production plant. Using a mobile crane, the pool was transported to its destination site as a ready-assembled component, where it was subsequently installed.

### The project at a glance

#### Project

Outdoor whirlpool

L x W x H = 7.60 m x 3.20 m x 1.35 m

#### Requirements

- High rigidity
- High shaping precision
- Non-slip properties
- UV stability

#### Client

Hauenstein Immobilien AG/  
Solbadhotel Sigriswil, Switzerland

#### Contractor

Allplast AG, Switzerland

#### Technical support

- SIMONA AG, Technical Service Centre
- STS Schwimmbadtechnik, Switzerland

#### Products used

- SIMONA® PP-C-UV Twin-Wall Sheets, dimensions 3000 mm x 1000 mm x 54 mm
- Visible side: PP-C-UV embossed, blue, 6 mm
- Underside: PP-DWU AlphaPlus®, grey
- Overflow channel: PP-DWU AlphaPlus®, grey

#### Time of project

2012

#### Duration of project

2 months



From left to right: fitting the stepped bottom; fastening the side walls; installing the nozzles, spotlights and valves

## SIMONA® Twin-Wall Sheets – Equal to any challenge

### Initial situation

An outdoor whirlpool was to be designed and built for a wellness hotel in the Bernese Oberland. Dimensions: 7.6 m x 3.2 m. Depth: 1.10 m – 1.35 m.

### Task

In order to implement the project, a financially viable solution was sought based on the following requirements:

- Light weight, maximum rigidity
- UV stability
- All-year operation at a water temperature of 35 °C
- Non-slip properties

### Solution

SIMONA® Twin-Wall Sheets made of PP-C-UV with an embossed, non-slip surface were able to meet the demanding requirements. The stepped bottom of the pool stands on a concrete foundation. Therefore, no additional reinforcement was required for the twin-wall sheets. Structurally the walls are of cantilever design because supply lines as well as mechanical and electrical components have to be accessible under the walk-over wooden grating. Another challenge was to integrate the numerous massage nozzles, spotlights and valves without affecting the structural properties of the twin-wall sheets. One particularly demanding aspect was the design of the overflow channel that spa guests can walk over, as its level was only allowed a tolerance of less than 2 mm over the entire area. This specification was achieved with precision-shaped vertical supports made of SIMONA® PP-DWU AlphaPlus®, reinforced with stainless steel tubing. The supports, which were also welded to the outer walls, thus stiffen the pool walls at the same time. Owing to the high rigidity and amazingly light weight, the transport and installation of the pool went smoothly.

### SIMONA® PP-C-UV-HKP

#### Properties

- Light weight
- Excellent chemical resistance
- Outstanding fabrication capability
- High strength
- High fracture resistance
- Resistance to microorganisms

#### Fields of application

- Tank construction
- Safety drip pans
- Sound booths and weather booths
- Swimming pool construction

#### Product range

- Sheets made of PE, PP, PPs or PP-C-UV in various formats with variable web spacing and different sheet thicknesses
- Corner elements
- Flat connections

### Further information

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