

Custom Façade Design with Architectural Concrete



Preface Contents

Dear reader,

the façade is the face of a building. Its design has a significant influence on how a building is interpreted. As a specialist for architectural concrete, RECKLI helps your façade make an unforgettable impression. Our reusable elastic Formliners guarantee the unique and economical shaping of your concrete.

As part of the resource-intensive construction industry, we see ourselves as having a responsibility for sustainable practices. And we are happy to assume this responsibility – for our environment and for our employees. With the world's first ISCC+certified Formliner, we are actively committed to realising a more sustainable world.

We offer over 200 finished designs as well as custom design ideas. Our production combines modern machinery and traditional craftsmanship. We precisely apply unique textures, graphics, photos or three-dimensional visualizations to your façade with a premium finish.

Our high-quality surface finishes, such as inhibitors, concrete activators, photo-concrete-film, impregnation treatments and coating systems offer additional design and texture options.

With high standards for aesthetics and quality, as well as over 55 years of experience in research and development, we are a strong partner for the design of architectural concrete. We are trusted by planners and architects all over the world, and our experts are active in 65 countries. Our technicians, model builders, joiners, draftsmen, lab assistants and concrete technicians will provide you with competent support and will work closely with you to see your design idea become a reality. We look forward to your project.



Executive management:
Andreas Delklock, Lutz Hammer and Sven Kosjak (f.l.t.r.)

Contents

- 4 Select
- 18 Unique
- 26 Visuals
- 32 Surface Retarder
- **33 Surface Protection**
- 34 Manufacturing Process
- 36 Applications
- 38 Formliner^{ECO}

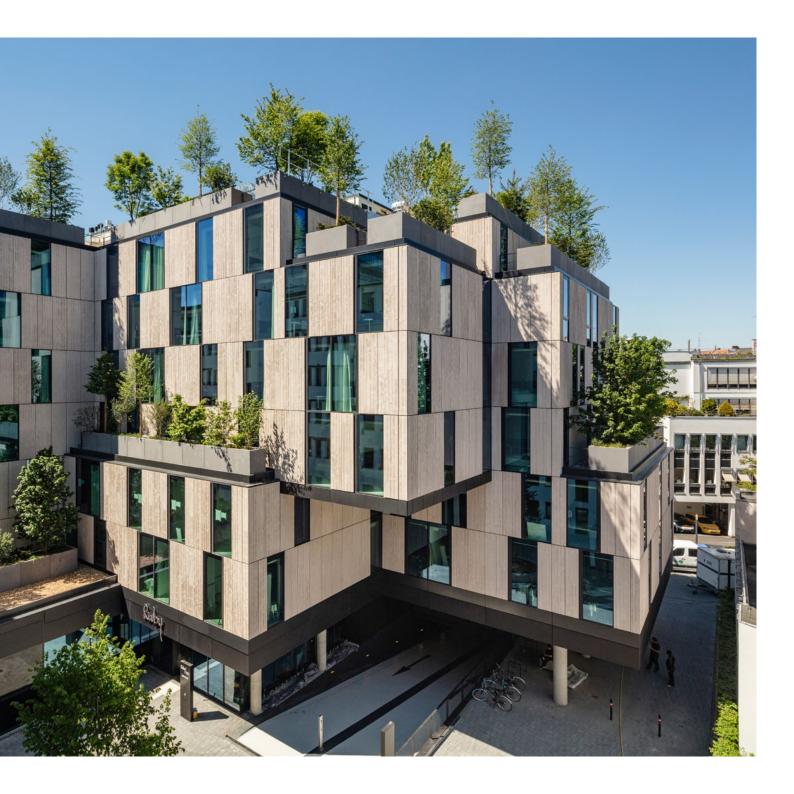
SELECT

Our range of designs available right now. Made by creatives for creatives.

RECKLI SELECT gives architects and planners creative freedom when designing concrete façades. From natural looks to imaginative abstract patterns: the portfolio includes more than 200 designs with rock and stone patterns, masonry, wood, plaster, oriental, abstract, non-slip textures, ribbed or waved patterns and even fractured finishes.

Our elastic Formliners make for a completely breakage-free removal even with complicated and filigree patterns, creating an optically excellent façade without requiring a high level of maintenance. They can be reused up to 100 times, so you really get your money's worth. RECKLI SELECT Formliners can be used to create prefabricated pieces and to pour in-situ concrete.





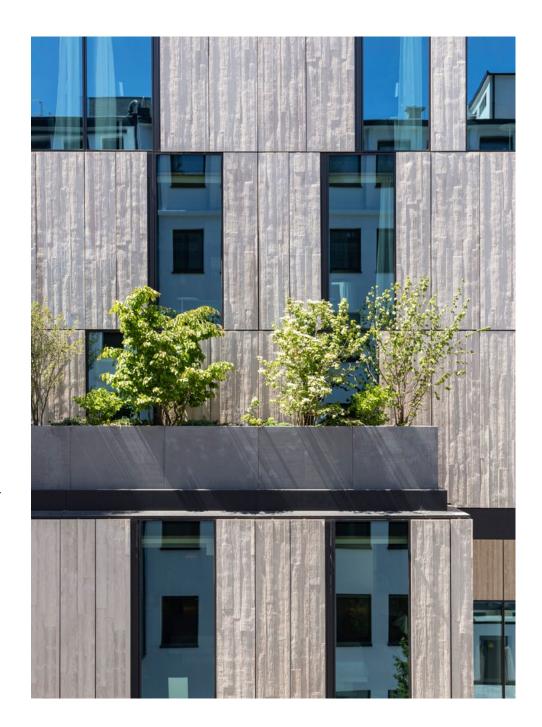
Carré Belge SELECT

PROJECT: Carré Belge
ARCHITECT: Ingenhoven Architects
PRECASTER: Fydro B.V.
YEAR/LOCATION: 2020, Cologne,
Germany

FAÇADE: 2,700 m² of 2/163 Fraser was used to achieve a natural look. The wooden texture with unevenly abutted boards takes up the greenery, emphasizes the connection between the urban environment and nature, all while enlivening the façade.



2/163 Fraser





PROJECT: Ampera House
ARCHITECT: Geiger AG
PRECASTER: Frickbau AG
YEAR/LOCATION: 2023, Schaan,

Liechtenstein

FAÇADE: The façade is defined by the interplay of vertical window bands with the prefabricated concrete elements, for which our Formliner 2/122 Yukon from the RECKLI SELECT series was used. The rocky texture with irregular surface enlivens the façade without appearing restless — and unfolds its aesthetic effect especially in combination with the smooth, black façade of the annex building body. PHOTOS: Mathias Schöpf



2/122 Yukon





PROJECT: Fire Station Ingelheim

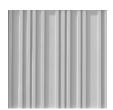
ARCHITECT: Braunger Wörtz Architekten GmbH

PRECASTER: W + S Monnerjahn

YEAR/LOCATION: 2019, Ingelheim, Germany
FAÇADE: The architects opted for a rib structure
from the RECKLI SELECT series to give the sandwich elements a special look. The 1/245 Nevada
design has clear, vertical ribs which, despite their
varied width and arrangement, give a sense of
calm to the façade design. Concrete aggregates
were sourced locally to provide natural colouring
from the surrounding landscape. The external walls
were acidified with our surface retarder to create
a warm beige, sandy look.

рнотоя: Erich Spahn





1/245 Nevada









PROJECT: Apartment houses Tingstorget

ARCHITECT: Arkitema PRECASTER: Benders

YEAR/LOCATION: 2019, Stockholm, Sweden FAÇADE: South of Stockholm, residential blocks are rising with a uniquely Swedish look. Various colors underline the architects' wish to reinforce and enrich the character of the landscape, while our Formliner 1/171 Sinus, whose wave texture brings the façade to life with an interplay of light and shadow. The project is using prefabricated construction methods.

рнотоя: Jansin & Hammarling





1/171 Sinus 18/76







Instead of typical apartment blocks, the planners designed multistory buildings with pitched roofs as you would expect to see on single-family homes. "The pitched roofs lead to architecturally interesting rooftop profiles that reject the status quo and introduce a new type of building to Alby«, say the architects.

PROJECT: RECKLI Headquarters ARCHITECT: Christoph Schildgen

PRECASTER: Hering Group

YEAR/LOCATION: 2022, Herne, Germany

FAÇADE/INTERIOR: For our new headquarters we utilized our Formliners Gironde and Hawaii to create distinct textured surfaces. Gironde was employed for the interior of the reception area, adding a refined and sophisticated texture that enhances the space's ambiance. Hawaii was used on the façade, imparting a dynamic, wavelike pattern that complements the building's pillars. The façade features a grey-colored concrete, expertly crafted by Hering Bau.

PHOTOS: ► Carsten Nierobisch (exterior)

▼ Jan Ladwig (interior)





2/151 Gironde



2/241 Hawaii





PROJECT: RYSE Hotel
ARCHITECT: Michaelis Boyd

CONCRETE: IVANKA

YEAR/LOCATION: 2018, Seoul, South Korea INTERIOR: The glass façade connects with the surroundings, inviting curious glances from passers-by and allowing natural light to flood the entrance, highlighting the pink resin floor and various surfaces. The contrast between the smooth, polished finish and the rough rock face creates a striking visual impression. The wall, designed to make an immediate statement, features RECKLI's 2/121 Cheyenne Formliner, modeled after a real mountain face. The designers, in collaboration with concrete processor IVANKA, aimed for a rugged, textured look for the accent wall.

PHOTOS: Courtesy of RYSE Hotel and IVANKA





2/121 Chevenne 1 – 7





PROJECT: Integrated Secondary School Wartiner Street

ARCHITECT: NAK Architekten PRECASTER: Geithner Bau YEAR/LOCATION: 2023, Berlin

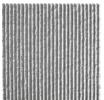
FAÇADE: A robust, durable and cost-effective solution that would form a contrast to the upper part of the façade was needed. Pennsilva was chosen for its coarse fracture structure making it not particularly suitable for graffiti. A sand-colored tone makes the façade appear friendly and bright.

РНОТОS: Adrian Schulz

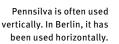


The integrated secondary school for up to 725 pupils was built in the growing Berlin district of Lichtenberg.

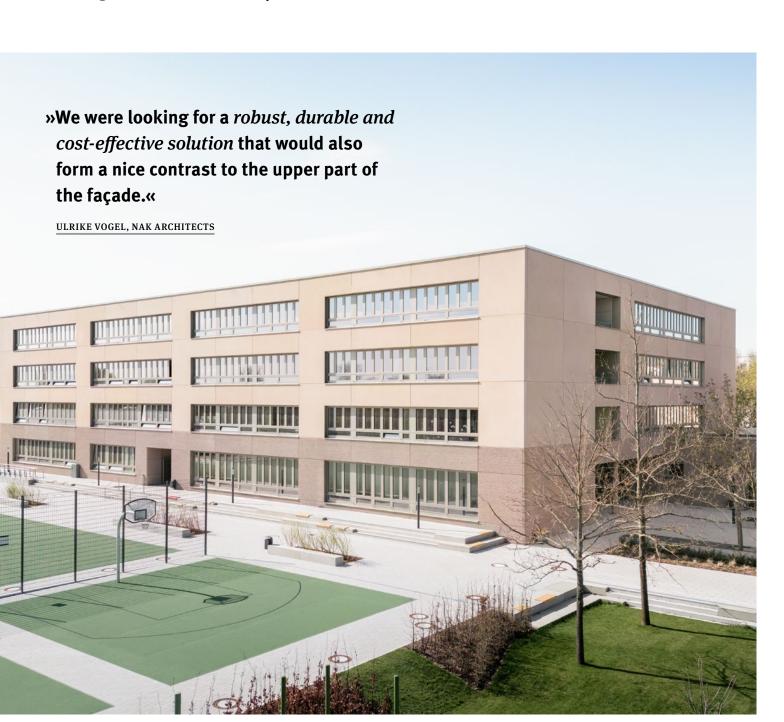




1/316 B Pennsilva









1

Országos Széchényi Könyvtár Archival Storage Building TSPC Kft. Piliscsaba, Hungary 2/61Thames (modified)







Administration Building Frauenfeld, Switzerland 2/163 Fraser







ABSTRACT

Abstract designs play with geometric shapes, straight lines, diagonals, systematic and wild arrangement.

STONE & MASONRY

Concrete transforms into rock, rough stone, natural or rubble stones. A new brickwork look emerges with a systematic layout.

WOOD

Grain, bamboo, reed, asymmetrically buttjoined boards: Wood patterns provide a natural look without increased care needs.

PLASTER

Plaster patterns reflect the look of various plaster methods. The effect can be accentuated with colors.

RIBS & WAVES

Straight-lined, chipped, broken, slanted ribs and waves optionally lend lightness or solidity.

FUNCTIONAL

Special surface patterns with sandlike textures, ripples, pastilles or pimples guarantee the highest degree of anti-slip properties.





2/151 Gironde



2/188 Champagne



2/602 Saône



2/122 Yukon



2/139 Auvergne



2/147 Allgäu



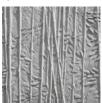
2/173 Santa Cruz 1-4



1/331 Etampes



2/24 Donau



2/152 Martinique



2/163 Fraser



2/62 Tevere



2/69 Marne



2/102 Parana



2/103 Lena



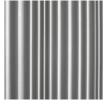
1/41B Ibiza



2/29 Fulda



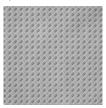
2/77 Tigris



2/175 Friesland



2/115 Pastilles



2/118 Riffel 2-Fold



2/119 Pikes



2/120 Rhombus

You can find our concrete patterns and reference buildings here: www.reckli.com/en/products/concrete-patterns

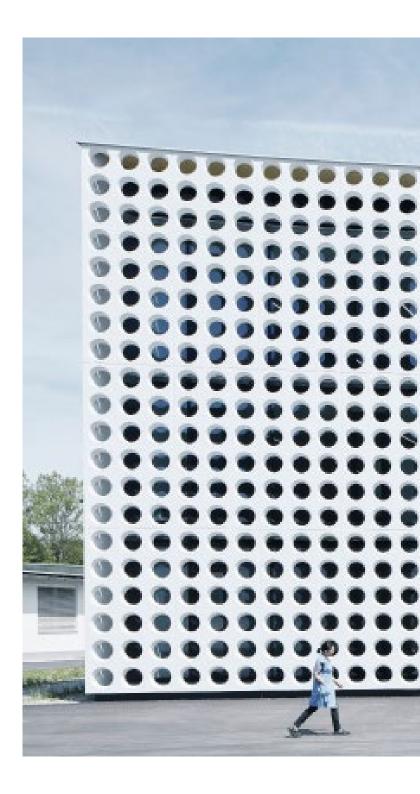
UNIQUE

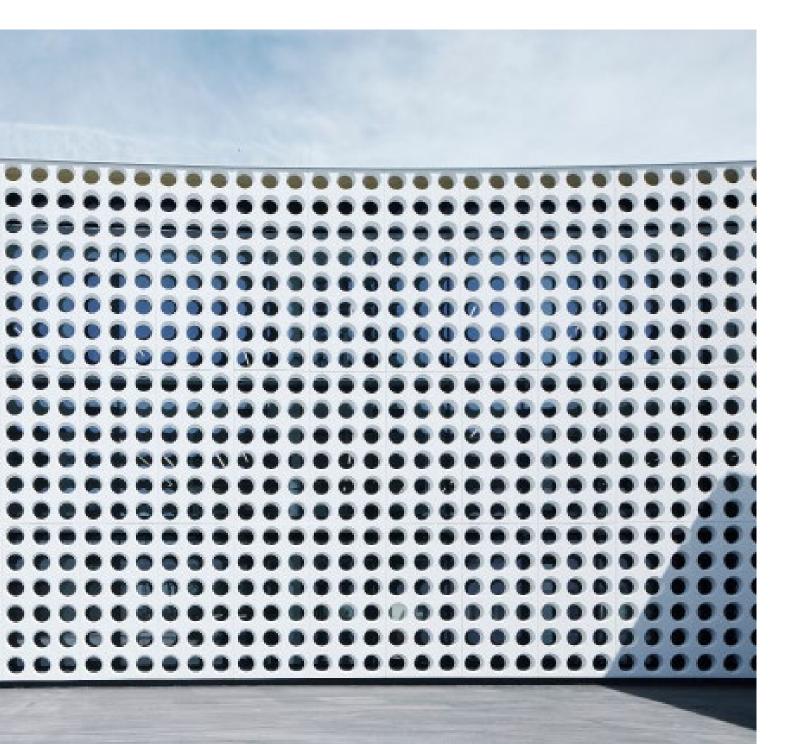
Boundless freedom in façade design.

RECKLI UNIQUE Formliners are the perfect economical solution for individual design ideas or restorations. With these elastic shapes, any design you can imagine can become part of a façade.

In close cooperation with the customer, our inhouse joiners use one-off drawings to create a model of the desired design, which will later be used to create the Formliner.

Custom-made Formliners have proven very useful when restoring historic buildings, as they can encompass complicated motifs in exposed concrete down to the last detail. The fact that they can be reused, makes them a more economical choice. RECKL UNIQUE Formliners can be used to create prefabricated pieces or cast-in-place concrete.





PROJECT: Silhouette Lens Lab
ARCHITECT: X Architects
PRECASTER: Systembau Eder

YEAR/LOCATION: 2017, Linz, Austria

EAÇADE: White concrete makes the building look elegant and light. The concave southern side is defined by a screen of perforations. To this end, 12cm thick prefab concrete pieces featuring the perforated design were secured to the front of the glass façade. »Like a brise soleil, the texture creates exciting interplays between the interior and exterior, « say the architects. »As a counter, the north side has been given large circular openings with convex glazing. « To achieve this, 81 large panels were mounted and then the circular windows installed.

рнотоя: David Schreyer

The basis for the design is a rectangular box that the architects altered using convex line – an homage to the shape of the lens. This arch leads to the new building's entrance.





PROJECT: Khor Kalba Mangrove Centre

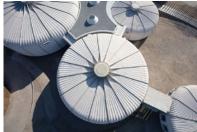
ARCHITECT: Hopkins Architects
PRECASTER: Dubai Precast

YEAR/LOCATION: 2021, Sharjah, UAE

FAÇADE: Designed to reference the shells found on the local shoreline, the pods were constructed from prefabricated concrete segments that were made with aggregates sourced nearby. This design choice not only ensures durability in the harsh coastal climate but also harmonizes with the natural surroundings. The modular construction was tailored to minimize environmental impact, reflecting the project's focus on environmental preservation and sensitivity to its unique setting.







PROJECT: Museum of the Polish Army

ARCHITECT: WXCA FORMWORK: PERI

YEAR/LOCATION: 2023, Warsaw, Poland FAÇADE: Although the Polish Army Museum was founded in 1920, it never had its own premises. This is now changing with the two impressive buildings on the grounds of the Warsaw Citadel. Colored concrete was used for the 7,5 meter high façade, reminiscent of the brick walls of the nearby Citadel. In order to break up the monumentality of the blocks, the concrete has a specially developed chevron pattern. The required Formliners were custom manufactured in our factory with RECKLI UNIQUE. The result: A unique façade structure that creates interesting plays of light and shadow over an area of over 1,000 m². Our Partner PERI provided formwork for our Formliners.

PHOTOS: Marcin Czechowicz





A chevron is a V-shaped mark or symbol. The word is usually used in reference to a kind of fret in architecture, or to a badge in military uniforms to indicate rank.





Industrial Park Fudan University
Shanghai, China



✓ Melbourne
Conservatorium
of Music
Melbourne, Australia

Poema Del Mar Gran Canaria, Spain



4

Simon Fraser University Surrey, Canada







RECKLI®

VISUALS

Make architecture come to life. With independent or lightdependent visualizations.

RECKLI VISUALS Formliners transfer photos to façades. Depending on the resolution of the motif, the Formliner can create a detailed or rough relief on the surface. This creates the impression that the image has been carved into the concrete. The sun brings the façade to life as it moves: the image disappears in perpendicular sunlight, but sunshine from the side casts shadows over the relief that make the photo more visible in the concrete. Artico® neo films visualize photos, images, custom designs and graphics in concrete. The plastic films transfer the motif without wrinkles or kinks, while an inhibitor allows the two-dimensional image to be precisely washed out of the concrete. This washing out means you can feel the motif on the surface. This design does not depend on light and shadow, and can be used on interior and exterior walls.

PROJECT: Emigration Center Bremerhaven

ARCHITECT: Studio Andreas Heller

Architects & Designers

PRECASTER: BWE

YEAR/LOCATION: 2021, Bremerhaven, Germany FAÇADE: Customised Formliners were produced according to the ideas of the architecture firm and the client for the random arrangement of the protruding and receding squares on the façade. The elements are installed on a curtain wall, using a concrete that was coloured light with white cement and corresponds to exposed concrete class 4. A total of 6 models and 10 moulds from the UNIQUE series were produced for the coffered elements of the façade. The portraits were realised using photo engraving Formliners from the VISUALS range. PHOTOS: Werner Huthmacher

The particular challenge: at the client's request, the individual photo engravings were fitted into the special moulds and even had to be interchangeable in order to apply the different portraits to the facade.







The façade features images by the French painter Edgar Degas

as an eye-catching touch.

The angle of light and perspective lead to a variety of effects: indirect light highlights the photo, while direct light and shade let it fade into the background.





PROJECT: School Center ARCHITECT: Graf & Rouault

YEAR/LOCATION: 2012, Mottier, Switzerland FAÇADE: The local school in the Swiss town of Mottier has just been expanded by three additional buildings. The complex is grouped around the original building, and a photo façade makes a special statement. The architects Graf & Rouault won a competition for the school center's expansion in 2008 with their design *Three Dancers*. The design set out a complex of buildings with three new constructions.

рнотоя: Matthieu Gafsou

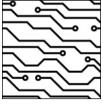




RECKLI artico® neo Be Squared







RECKLI artico® neo Big Data





A RECKLI artico® neo Wasit Youth Center Al Sweihat Sharjah, UAE

RECKLI artico® neo Portrait of Marianne Paris, France

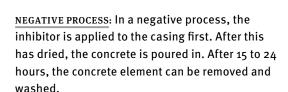


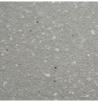
Surface Retarder

FAÇADE: Inhibitors and reatarder products can turn exposed aggregate concrete into a modern design element. It combines optical effects with practical benefits such as nonslip finishes. The surfaces are treated in accordance with DIN V 18500: when the concrete is washed out, the top layer of cement is removed up to a depth of 1/3 coarse grit so that the aggregate becomes visible. The use of colored aggregate such as granite, marble, basalt or gravel gives the surface a unique texture.

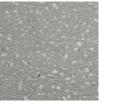


POSITIVE PROCESS: In a positive process, the concrete is poured into the casing. After removal and smoothing, the inhibitor is applied to the fresh surface. This can be washed out in 5 hours to 3 days.













Fine

Washed







Nano

Fine

Washed

Surface Protection 33

FAÇADE: Surface Protection systems shield exposed concrete surfaces from water, dirt and graffiti. Water can allow harmful substances, microorganisms and salts to enter the concrete surfaces. These substances gradually attack the construction and lead to cracks or spalling.

RECKLI's protection systems seal young and old visible concrete surfaces either colorlessly or with an optical effect. They're suitable for treating prefabricated concrete parts, cast-in-place concrete, artificial stone and terrazzo flooring.

ILLUSTRATION: Jens Amende

Concrete Concrete surface surface without with protection protection

COLORLESS IMPREGNATION: The RECKLI OS-D, OS-HO and OS-Premium protection systems can be applied to uncured concrete. They soak into the surface and create a chemical bond. As impregnation treatments don't form a film, the color of the concrete surface remains unchanged.

EFFECT IMPREGNATION: RECKLI OS-Intensive and OS-W are especially suitable for processed and absorbent surfaces such as exposed aggregate concrete, patterned concrete, sandblasted or acidified concrete. The protection systems can be applied to uncured concrete. The materials soak into the surface and create a film with a matte to glossy sheen that intensifies the color of the concrete.

GRAFFIX: This product combines the protective functions of a colorless impregnation treatment with permanent graffiti protection. Graffix leaves the color of the concrete surface unchanged. It can be applied to uncured concrete before it leaves the precast plant. Other materials mostly need 28 days to harden. With our own cleaning solution, RECKLI Graffix Cleaner, graffiti can be washed off without destroying the protective film. This makes maintaining the façade especially easy and economical.

The cleaning process can take place up to 5 times.
Thereafter, the surface has to be re-impregnated.

The production of RECKLI Formliners follows a simple principle: At the beginning lies the inspiration in nature or on a computer. A positive cast is subsequently created in combining traditional craftsmanship and state-of-the-art technology and is then followed by an elastic form.

The original forms for concrete patterns and some individual patterns are created by hand. They are molded out of plaster or cast of existing patterns. The models for the photo-concrete and single individual pattern are done digitally. An individual design or an image are transferred into a file for the CNC-mill by a computer. It cuts the pattern into board material (Exception: artico® neo)

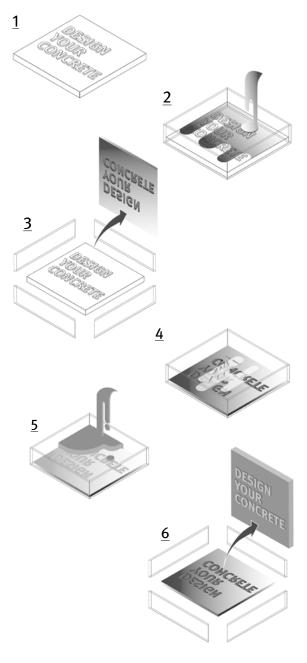
The positive cast is sealed with a release wax and provided with a forming frame. Subsequently, a liquid elastomer is poured onto the cast to produce the Formliner.

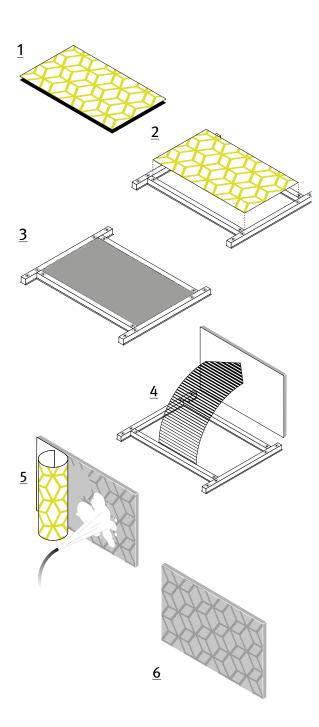
After the synthetic solidifies, the forming frame can be removed. The high elasticity of the Formliner enables a reproduction of the pattern that is true to detail and makes it robust enough to be reused multiple times (up to 100 times).

The Formliner is glued to the mold and waxed with release agents before the concrete is cast.

5 The Formliner can be used at the precast plant and in the in-situ concrete.

After the concrete has hardened, the element can be removed with no problem.





The process is simple: RECKLI artico® neo is a plastic foil on which graphics or photos are printed with a high-quality concrete activator. The concrete activator causes the concrete to set at a different time so that it can be washed out on the surface after demolding. The uppermost cement skin is partially removed. The contrast between the washed out and smooth surfaces makes the graphics or photos visible. The foils are intended for single use.

RECKLI prints the design onto a special foil.

<u>∠</u>

The artico® neo foil is laid into the mold.

3

The concrete is poured into the mold.

4

Once the cement has hardened, the concrete element can be unmolded.

5

The foil is simply removed from the concrete element and the concrete is washed out with a high-pressure cleaner.

6

The interplay of washed out and smooth surfaces makes the design visible.

RECKLI products are suitable for almost all building projects – from floral patterns to photos, from a garden wall to a massive façade.

Commercial buildings



Customer service center (Photo: Eckhart Matthäus)

Supermarket





Regional church office (Photo: Anton Schedlbauer)

Communal buildings

Swimming pool



Bridges and tunnels





Bridge



Bridge Underpass



Parking Garage



School (Photo: Matthieu Gafsou)



Museum

Applications 37

<u>Floors</u>

Tactile paving





Decorative flooring



Non-slip flooring

<u>Walls</u>



Privacy wall







Noise barrier

Residential buildings



Interior design



Stairwell



Residential building façade



Sustainable Formliner – How is it Achieved?

The sustainable Formliner, the RECKLI Formliner^{ECO}, is made from certified sustainable raw materials.

Our Formliner^{ECO} is composed of polyurethane, produced in our factory in Germany. The petroleum products we use for our polyurethane are now obtained from renewable raw materials or from industrial waste, maintaining the accustomed RECKLI polyurethane quality. Reusability, durability, and fidelity of detail in your mold remain consistently excellent.



Which Organization Issues the Certificate?

The International Sustainability and Carbon Certification (ISCC) is an independent initiative and a leading certification system. It supports sustainable, fully traceable, deforestation-free, and climate-friendly supply chains. In a comprehensive audit, our entire supply chain was examined, starting from the supplier of raw materials to the finished product. We are now proud to be able to offer certified sustainable products.



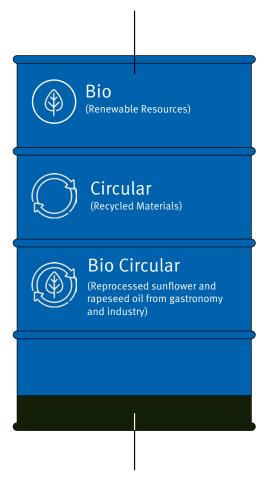
What products are available in a certified version?

The RECKLI Formliner^{ECO} can be ordered immediately and is available for every RECKLI Formliner product, whether it be SELECT, UNIQUE, or VISUALS.

Raw Material

We source our raw materials from selected partners. They consist of:

Up to 90% renewable raw materials, in varying components composed of:



only ~ 10% fossil-based raw materials.

