



## **Sto-Ecoshapes**

Insulated facades with  
prefabricated render elements

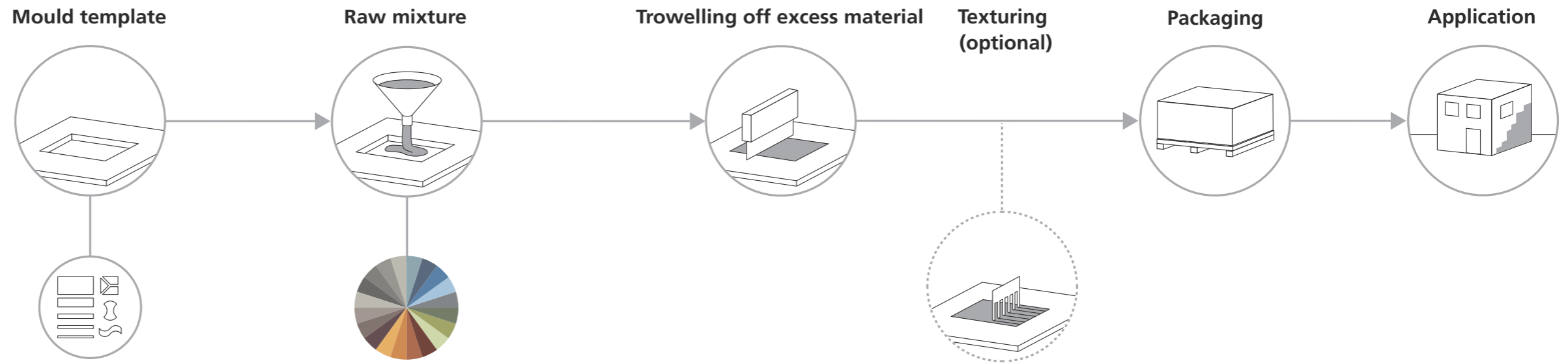
## Prefabricated render elements

Sto-Ecoshapes are made of over 90 % mineral components. When it comes to the manufacturing process, you decide on the shape, colour, and texture of the render elements.

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# Manufacturing process

A glimpse into the simplified manufacturing process gives you some idea of the options available when using Sto-Ecoshapes to create a customised surface for your project. Firstly, the shape (template) and colour (raw compound) of the render elements can be customised. In the subsequent manufacturing process, the surface of the compound can be given a customised texture while it is still wet using various tools (texturing). There are also additional opportunities to customise the design when applying the render elements to the building.



## Sustainable facade cladding

Cladding facades is also a responsible decision as far as sustainability is concerned. This is illustrated by the following data regarding the manufacturing process:

- The raw material is made of over 90 % mineral components.
- The controlled drying of the finished render elements takes place at 60° C.
- Due to the low weight of the material, one lorry can transport Sto-Ecoshapes for up to 6000 m<sup>2</sup> of facade surface.

### Mould template

The template is produced in accordance with the planner's specifications.

#### Factors influencing the design:

- Shape
- Format (maximum format: 840 mm x 420 mm x 8 mm, larger formats available on request)

### Raw mixture

The raw material, a compound similar to render, is placed into the template.

#### Factors influencing the design:

- Colour shade (colour choice: Sto Architectural Colors at [www.sto.de/ac](http://www.sto.de/ac), custom colour shades on request)

### Trowelling off excess material

To achieve a uniform layer thickness, the raw compound is trowelled off over the template.

### Texturing

The wet compound is textured using various tools. Additive colour shades and granulates (special effect aggregates made from glass, silicon carbide, etc.) can be added on request for further surface customisation.

#### Factors influencing the design:

- Tools
- Direction of tool use (linear, in a criss-cross pattern)

### Packaging

The prefabricated render elements are packed in suitable packaging (in accordance with the planned laying pattern if applicable). One lorry can transport the material for up to 6000 m<sup>2</sup> of facade surface.

### Application

The prefabricated render elements are applied to the building.

#### Factors influencing the design:

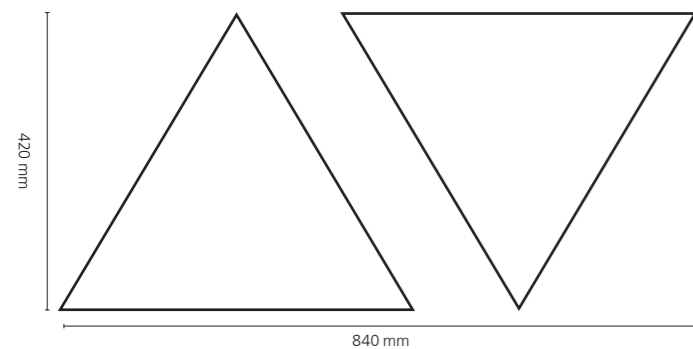
- Full-surface use
- Use in specific areas
- Colour shade of joint (low-contrast or rich in contrast)
- Joint width



## Design parameters

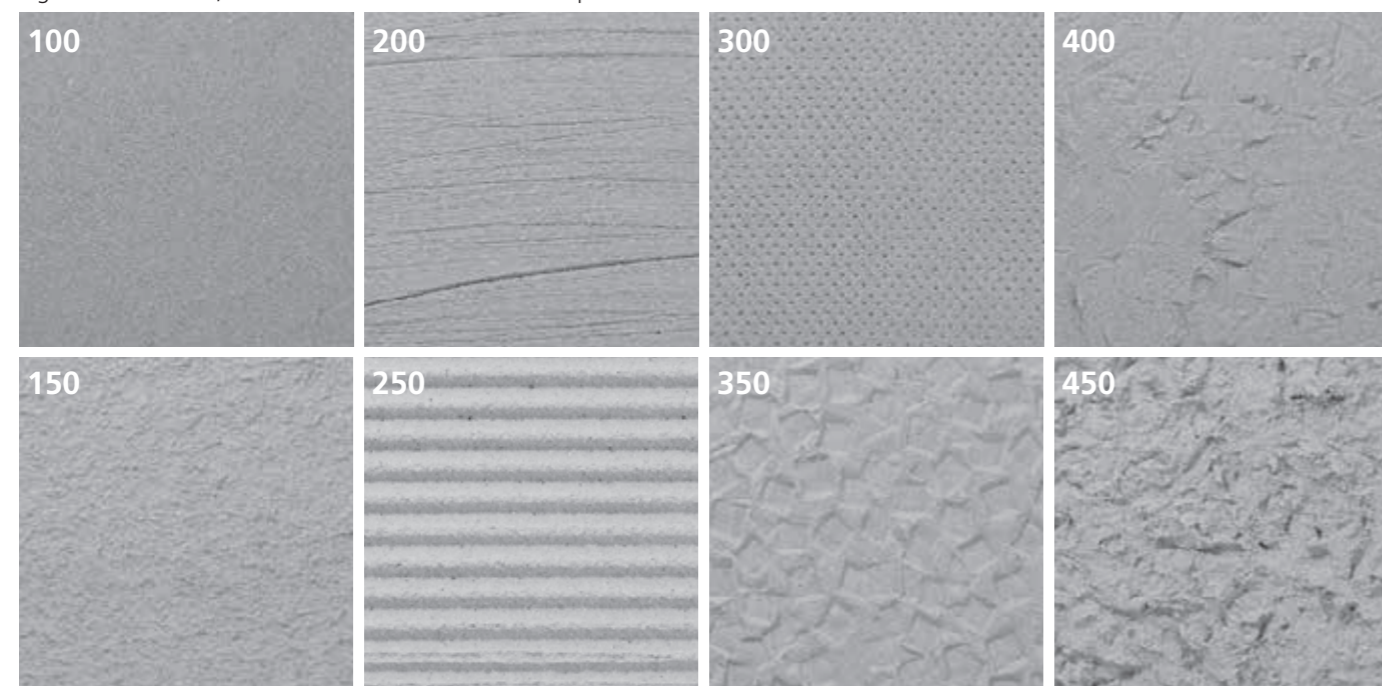
### Shape

Maximum format 840 mm x 420 mm



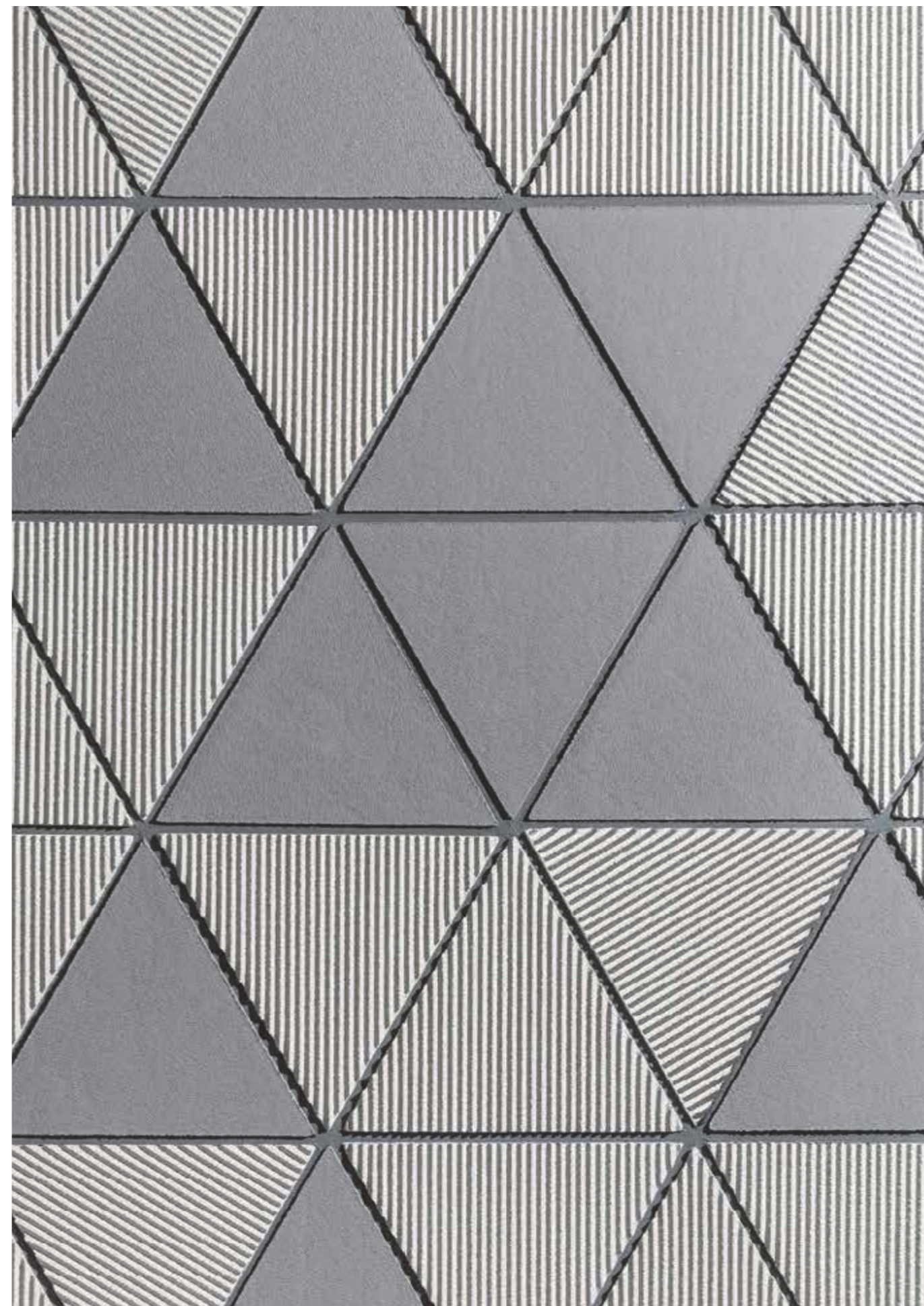
### Texture

Eight basic textures; individual textures available on request



### Colour

The raw compound of the Sto-Ecoshapes and joint material are tintable.



An example of customised design using the parameters of shape (triangle), texture (100 and 250), and colour (Sto-Ecoshapes: AC 16282 and AC 16286; joint material: AC 16280)

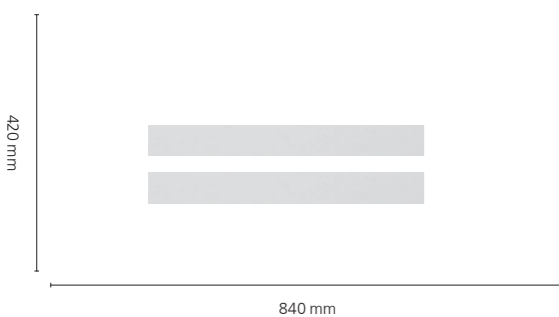


## Reference project

Monochrome,  
texture-based use

The seven-storey structures of the “Schutzengel” (“guardian angel”) residential building project follow the road layout with multiple kinks in the facade. Non-uniform storeys and window openings, plus the way the top two storeys are set back, create exciting visual effects over the large building structure. To create the surface, which is made up of narrow horizontal strips, Sto-Ecoshapes were bonded onto the EWIS without a vertical joint and the entire facade was then coated with white paint.

“Schutzengel” residential building project, CH-Zug  
Architects:  
Leutwyler Partner Architekten AG, CH-Zug



Shape: 450 mm x 50 mm  
Texture: 100  
Arrangement: monochrome,  
texture-based use



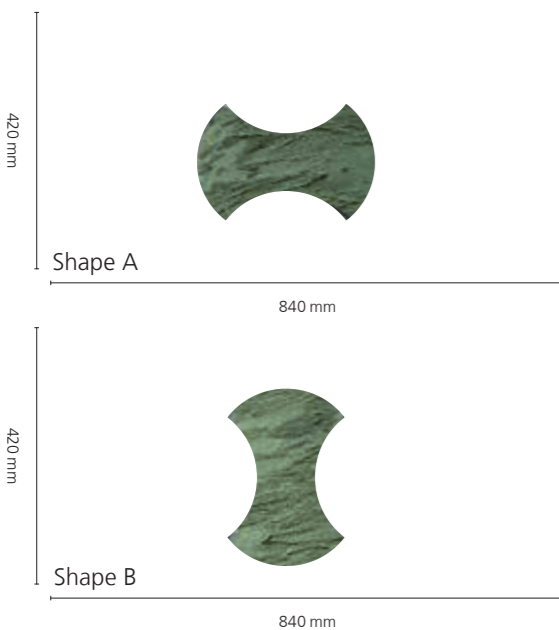


## Reference project

### Polychrome, pattern-based use

In the Netherlands, energy-saving renovation work is to be carried out more efficiently in future. Pre-fabricated systems which can simply be installed on site will help to achieve this aim. An example of this approach can be found in a pilot project on the Zuringhof residential estate in Tilburg: a two-storey building with four residential units and a newly insulated and newly designed facade. Its surface is made up of convex and concave Sto-Ecoshapes set at 90 degrees to each other with a striking colour scheme. The jigsaw-puzzle-style appearance is emphasised by the light-grey, wavy joints. As an interesting touch, the flexible elements also extend over the rounded building edges.

“Zuringhof” residential building, NL-Tilburg  
Architects:  
van den hout & kolen architecten, NL-Tilburg



Shape A: 198 mm x 290 mm  
Shape B: 290 mm x 198 mm  
Texture: 100 + additive colour shades (non-linear)  
Arrangement: polychrome, pattern-based use



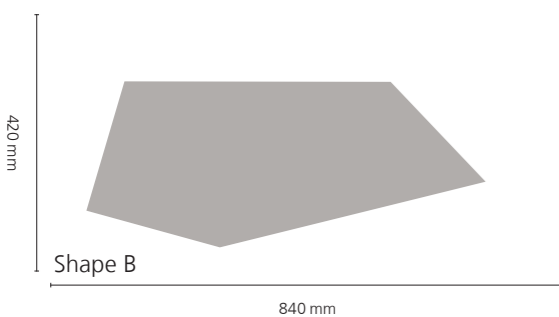
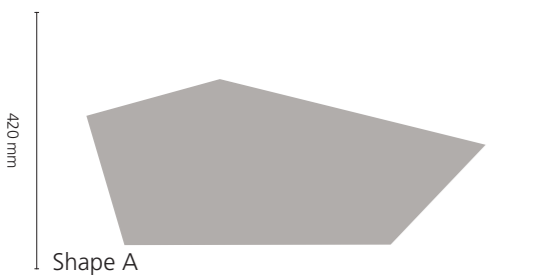


## Reference project

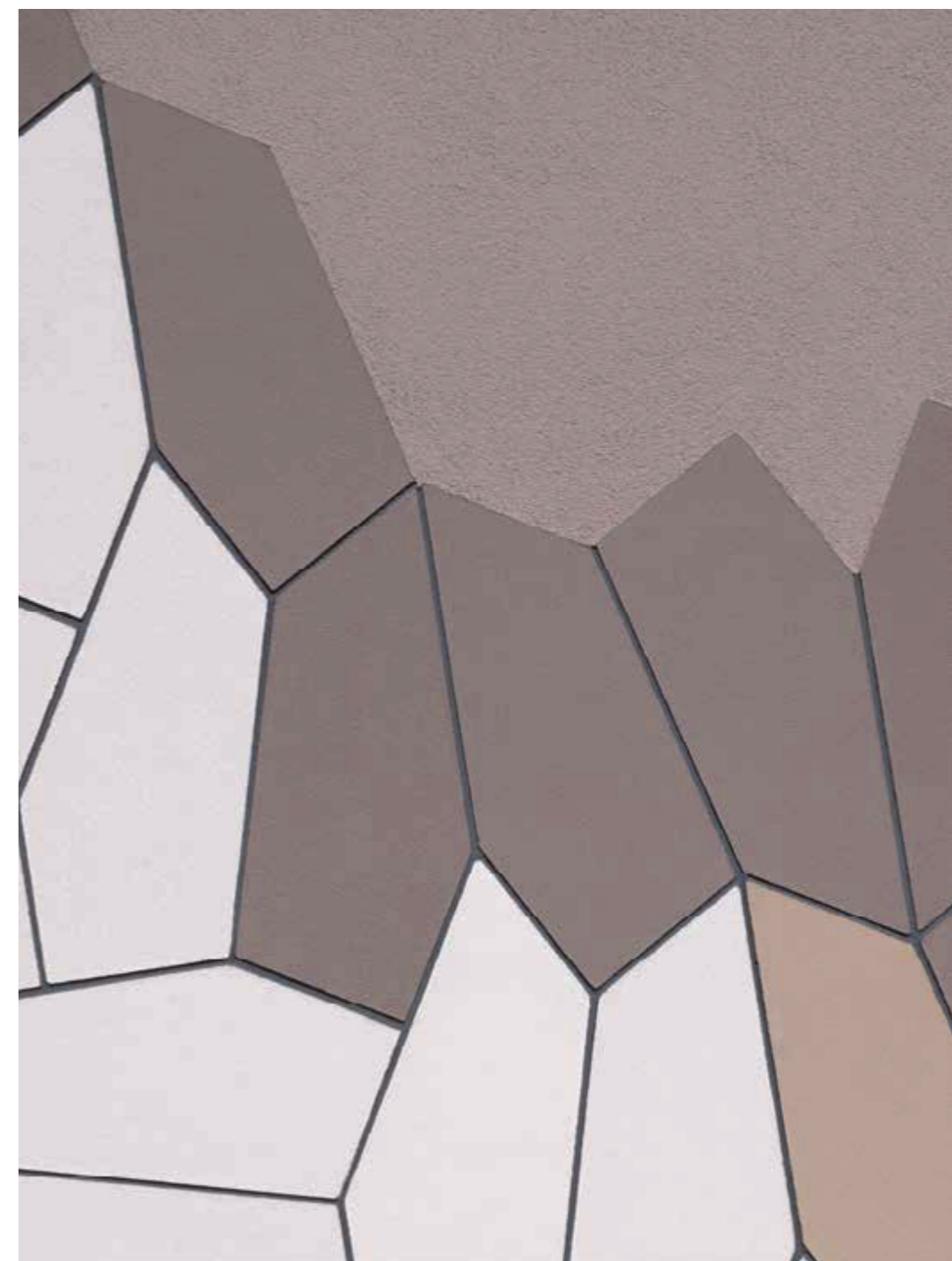
Polychrome,  
pattern-based use in  
specific areas

This school in Lochem in the Netherlands demonstrates how rendered facades can be combined with Sto-Ecoshapes to create exciting results. The architects have combined calm render surfaces in a warm, light-brown shade with Sto-Ecoshapes in a scale-like design. The pentagonal elements can be arranged in all kinds of different ways, making the facade really come alive. The overall appearance is accentuated further by the different colour nuances and discernible joints. As they are flexible, the Sto-Ecoshapes are easy to apply to the partially rounded two-storey structure.

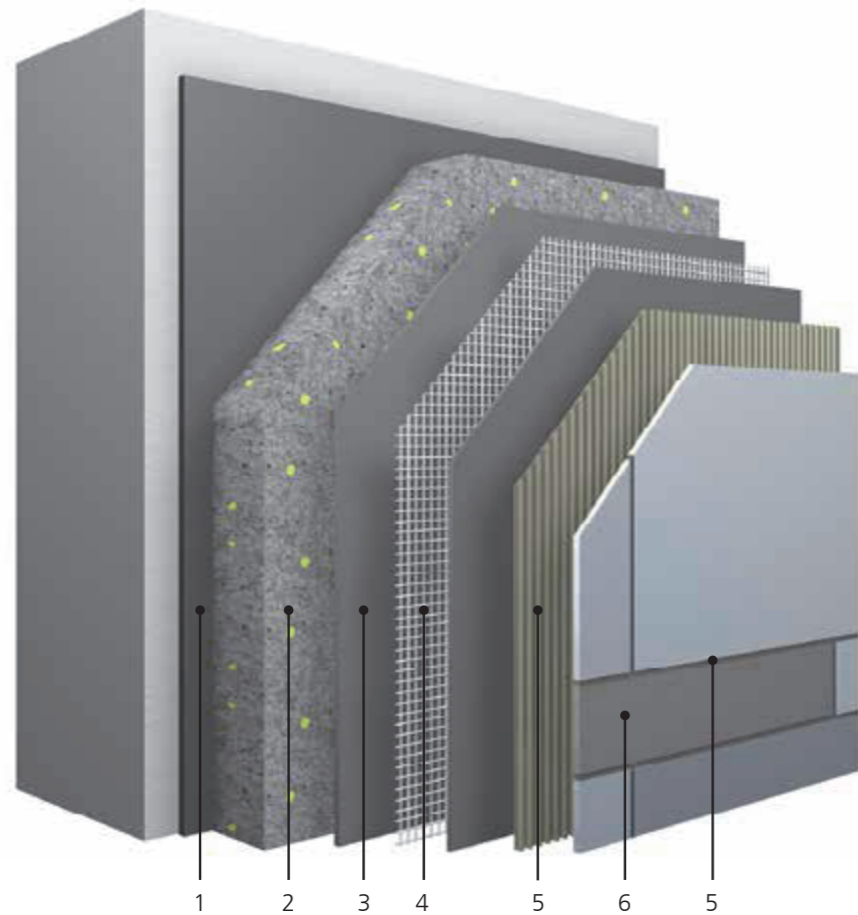
“De Garve” educational building, NL-Lochem  
Architects:  
19 Het Atelier, NL-Zwolle



Shape A: 650 mm x 275 mm  
Shape B: 650 mm x 275 mm  
Texture: 100  
Arrangement: polychrome,  
pattern-based use in specific areas



# Reliability



## System build-up

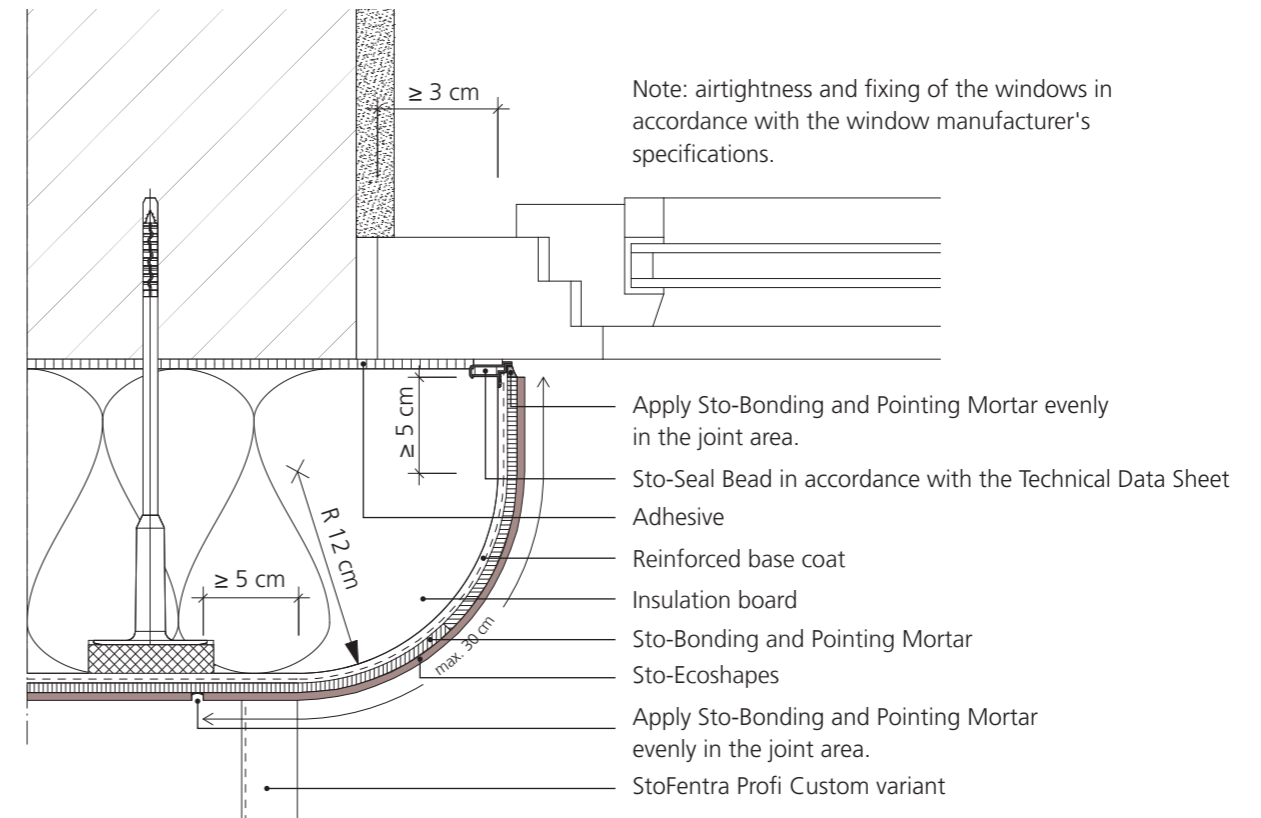
1 Bonding; 2 Insulation; 3 Base coat; 4 Reinforcement; 5 Sto-Bonding and Pointing Mortar (smoothed over once the Sto-Ecoshapes have been applied in order to form the joints); 6 Sto-Ecoshapes

## Tested systems

### Reaction to fire:

- StoTherm Vario and StoTherm Classic® (insulation: polystyrene): fire classification B-s1, d0/B-s2, d0, depending on the structure

- Ageing tests using hygrothermal weathering have been carried out on all system configurations offered
- Practical experience with prefabricated render elements since 1986
- All system components subject to constant quality control



## Construction detail

Connection of a rounded reveal to a window that is flush with the masonry

## Extensive planning data

Construction details for all standard solutions are available online.

## Personal consultation

Our team of advisors – comprising project managers, sales advisors, and technical advisors – will support you throughout all planning phases, including sampling, detailing, tendering, and applicator training.

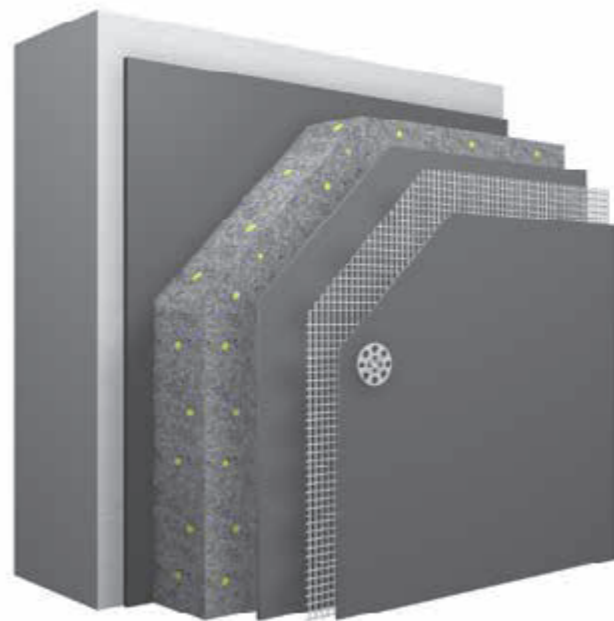
The team of advisors is in turn supported by the EWIS experts from our technical project service.



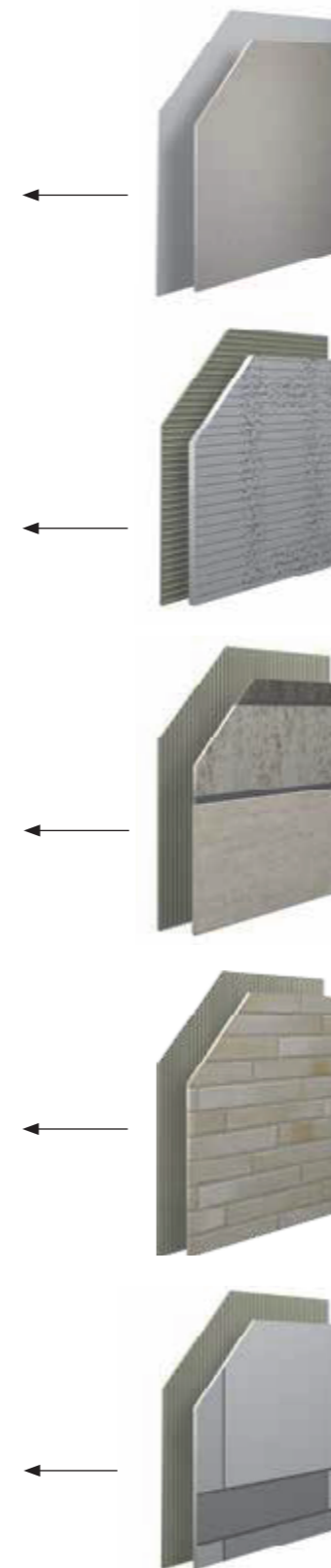
# One insulation system, many options

External wall insulation systems are applied to approximately 170 million m<sup>2</sup> of facade surface throughout Europe each year. They not only contribute significantly to the building's energy efficiency but also offer numerous options for decorating the facade surface.

The Sto-Ecoshapes showcased in this brochure are just one way of customising your EWIS facade.



Example EWIS structure with polystyrene insulation board and anchor fixing through the mesh (for cladding with bricks, for example)



## Render

Our seamless coating comes in a vast range of colours and textures, offering a multitude of design options.

## Three-dimensional facade elements

For three-dimensional facade decoration, we can produce sculptural shapes, ledges, and panels from our Verolith material to apply to EWIS in accordance with your design.

## Natural stone slab

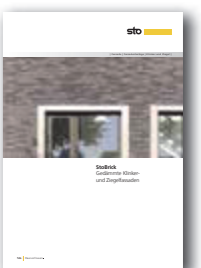
Limestone from our own quarries in Germany is available in modular formats to offer you an individual and economically viable way of decorating insulated stone facades.

## Bricks

The StoBrick range has six groups of brick and high-density brick to offer you a superb selection of masonry for your project.

## Prefabricated render elements

Sto-Ecoshapes are prefabricated render elements that can be individually designed. The material with 90 % mineral-based content can also be used to clad facades which are curved on one side.



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