

**SWISSPEARL**

# Positive impact on your DGNB project



# Choose Swisspearl in your sustainable building

DGNB is a voluntary sustainability certification scheme adapted to the Danish building codes, providing a common framework for architects, builders and manufacturers when developing sustainable buildings.

The system includes all aspects of sustainability and offers the possibility to calculate the LCA and LCC of the total building at all building stages. It serves as a decision tool to optimise the building according to the requirements as well as altering the choice of material for the final certification.

Swisspearl Facade\* products are evaluated on five of the DGNB qualities; process, environmental, economic, social and technical. The sustainability performance of a building is evaluated on specific criteria within each of these areas.

Swisspearl facade\* products mainly contribute to the DGNB certification qualities; Environmental, Economic and Technical. Key to this contribution is the high transparency of the life cycle assessment as well as the long lifetime of Swisspearl facade\* products.

The contribution to process quality is due to the fact that these criteria are product specific and primarily dependent on the building design and the construction process.

Contribution to social quality is relevant when Swisspearl facade\* boards are occasionally used indoor for design purpose.

■ DGNB quality  
■ Swisspearl's positive impact

Procent



# Contribution to DGNB certification

## Process Quality

Swisspearl provides detailed guidance for design, handling and installation of products, to ensure a perfect facade installation and to minimise risk of installers leaving defects in the construction. Swisspearl provides full documentation of required building data and the composition of the materials, as well as on the environmental impact.

The key components in Swisspearl facade\* boards are engineered fibres and cement, which makes the product strong and unaffected from day-to-day impacts and highly resistant to most external conditions and impacts.

## Environmental Quality

Swisspearl facade\* boards do not contain hazardous substance. Leaching tests are performed to confirm the low risk our facade\* boards pose to the local environment as well as living up to the current REACH policies.

We strive to utilise resources efficiently, reduce waste and emissions as well as impacts on the environment and consumption of non-renewable resources throughout all stages of a building's life cycle.

Wastewater treatment plan ensures water discharged to the public sewerage system contains no harmful particles or residues from production. Dust and wet cuts are recycled back into the production.

All cement and mineral fillers are extracted locally and delivered directly to Swisspearl factories, to minimise the transportation of raw materials. Most finished goods are transported by train or by sea to lower CO<sub>2</sub> emission during transportation. The procured cellulose in Swisspearl facade\* products have certified chain of custody, e.g. FSC or PEFC Certification.

\*) Facade covers the Swisspearl products Patina Original, Patina Rough, Patina Inline, Deco, Cover, Solid and Transparent.



**Swisspearl fibre cement products are designed to withstand extreme weather and last for decades.**



**Swisspearl provides 3<sup>rd</sup> party verified data for your lifecycle assessment of a building.**



**Swisspearl facade\* boards have a life time of 40-60 years, contributing to a low Total Life Cycle Cost (LCC).**



**Swisspearl facade\* boards create and contribute with new design and engineering options.**



**Swisspearl systems can easily be disassembled and separated into material parts.**

### **Economic Quality**

Our products are guaranteed to meet industry requirements for cost-effective construction as well as long-term durability.

The robustness of the boards combined with a weather-resistant surface contributes to lower the life cycle cost of the building envelope. If a board must be removed e.g. because of damage, Swisspearl facade\* boards can be removed in a non-destructive way simply by removing the mounting screws and install a new sheet.

Our facade\* boards do not require maintenance, and have no costs associated with operation and maintenance of the building.

### **Social Quality**

Swisspearl facade\* boards are mainly used as outdoor cladding. Our aesthetic product designs are occasionally used as interior cladding where it contributes to creating artistic and creative building design.

The range of Swisspearl facade\* board formats, textures and colours enables a variety of design options, supporting identity of a building and making the building blend into the surroundings and community.

Our facade\* boards provide you with ideal options for blending materials, shapes, surface texture and colours in innovative, eye-catching configurations.

### **Technical Quality**

Swisspearl facade\* boards have an impact on the quality of the building envelope. The environmental properties of our facade\* boards are declared in a 3<sup>rd</sup> party verified and product specific Environmental Product Declaration, with LCA data used to screen or calculate the Life cycle of a DGNB certified building.

With a ventilated facade\*, fluctuations of temperature in the outer wall are minimised. Sunlight and heat is ventilated away from the facade and the natural ventilation behind the facade panels reduce risk of condensation. Ease of cleaning and maintaining the facade, contributes to lower energy consumption and adhered environmental impacts in combination with reduced operation costs in the building's lifetime.

The easy disassembly of our facade\* boards increases the possibility of reusing our products in a similar function or high-value recycling, when installed correctly and in compliance with Swisspearl installation manuals and guidance.

Load-bearing structures and performance of individual materials have a significant impact on the fire safety of a building. Swisspearl's facade products are non-combustible with a reaction to fire class A2-s1, d0.



**Kindergarden Bakkeland, Aalborg**  
**DGNB Platin**



**Construction year: 2016-2017**  
**Product: Cover &**  
**Cembrit Windstopper Extreme**

The first DGNB Platin certified Kindergarden in Denmark, in central Aalborg. The facade is constructed as a double construction with green Cover and a list cladding on top. With this solution the building falls naturally into the surroundings with a dynamic play of expression depending on the angle you see the building.

The special properties in Cembril Windstopper Extreme was chosen to fulfill the high demands on durability and quality. It protects the construction to severe weather conditions up to 12 month and prevent and reduce the risk of moisture problem in the wall construction.



# Swisspearl facade\* products

## – criteria impact



PROCES

**PRO 1.5 (1.1%)**

Guidance for maintenance and use of the building

**PRO 2.2 (1.7%)**

Documentation of the quality of execution



ENVIRONMENTAL

**ENV 1.1 (7.9%)**

Life cycle assessment (LCA)  
– environmental impacts

**ENV 1.2 (3.4%)**

Environmental risks related to construction products

**ENV 1.3 (1.1%)**

Sustainable resource extraction

**ENV 2.1 (5.6%)**

Life cycle assessment (LCA)  
– primary energy



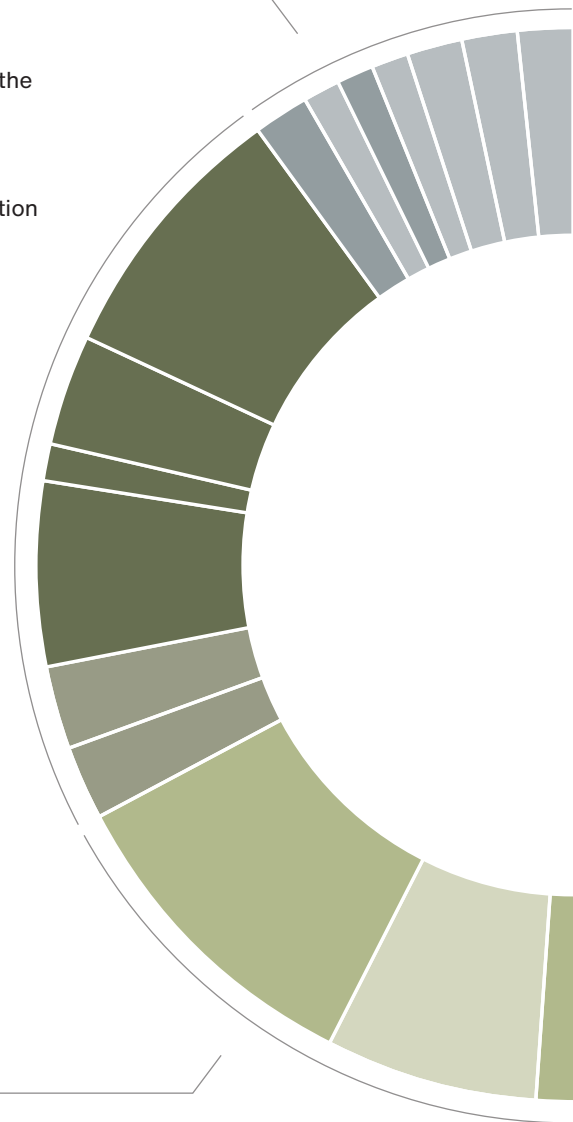
ECONOMIC

**ECO 1.1 (9.6%)**

Life cycle cost

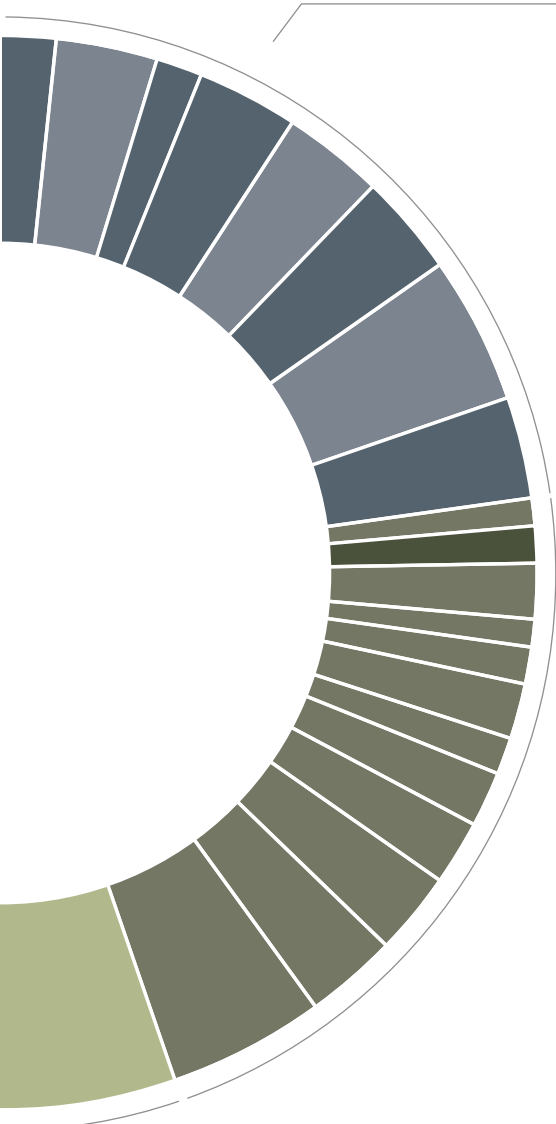
**ECO 2.2 (6.4%)**

Robustness



DGNB is a method that puts sustainability on formula and assesses a building's overall score, where project specific characteristics are evaluated.

Swisspearl facade\* boards positively impact on the highlighted criteria according to the Office Buildings manual, 2016.



**TEC 1.1 (3.0%)**  
Fire safety and security

**TEC 1.3 (3.0%)**  
Quality of the building envelope

**TEC 1.5 (3.0%)**  
Ease of cleaning and maintaining building components

**TEC 1.6 (1.5%)**  
Ease of recovery and recycling

**TEC 1.8 (1.5%)**  
Environmental Product Declarations (EPD)



**TECHNICAL**

**SOC 3.2 (6.4%)**  
Integrated art



**SOCIAL**

## Positive Impact.

Swisspearl facade\* products will positively impact up to 49.7 percent of the overall criteria score in a DGNB project. The contribution of our product is individually calculated by the DGNB Consultant for the specific project.



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