

Declaration of Performance

No. 045/DoP

In accordance with Regulation (EU) No 305/2011 of the European Parliament and of the Council laying down harmonised conditions for the marketing of construction products (CPR EU 305/2011)

1. Unique identification code of the product-type:

Fibre-cement flat sheets

Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):

Swisspearl Plank, Swisspearl Plank Connect, Swisspearl Panel

2. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Flat sheets

Internal wall finishes

External wall and ceiling finishes

3. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):

Swisspearl Group AG

Eternitstrasse 3

CH-8865 Niederurnen, Switzerland

Email: info@swisspearl.com

4. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):

Not applicable

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

AVCP System 3 / System 4

- 6a. Name and identification number of the notified body (in case of the declaration of performance concerning a construction product covered by a harmonised standard):

Manufacturer performed the Initial Type Test according to EN 12467.
Evaluation report no.: 4-62/ITT/20220228, dated 28th February 2022 and Evaluation Report no. 4-41/ITT/20210611, dated 11th June 2021.

MPA Bau Hannover
Notified body No. 0764
Nienburger Straße 3,
D-30167 Hannover, Germany

Notified Body performed reaction to fire and classification according EN 13501-1.
Classification report no. 211078, dated, 15th March 2021.

- 6b. Name and identification number of the Technical Assessment Body (in case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued):

Not applicable

7. Declared performance:

Essential characteristics	Performance	Harmonised technical specification
Type of sheets	NT	EN 12467:2012+A2:2018 Fibre-cement flat sheets Product specification and test methods
Intended use category	A	
Class of strength	2	
Mechanical resistance	Min. 7 MPa	
Apparent density	$\geq 1200 \text{ kg/m}^3$	
Reaction to fire	$\leq 8 \text{ mm joints}$ Class A2-s1, d0	
Water impermeability	No water drops	
Water vapour permeability	Not applicable	
Dimensional variations	Level I	
Release of dangerous substance	No performance determined	
Durability against warm water	$R_L \geq 0,75$	
Durability against soak/dry	$R_L \geq 0,75$	
Durability against freeze-thaw	$R_L \geq 0,75$	
Durability against heat-rain	Pass	

8. Appropriate Technical Documentation and/or Specific Technical Documentation:

EN 12467:2012+A2:2018
Fibre-cement flat sheets
Product specification and test methods

The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3.

Signed for and on behalf of the manufacturer by:



Joachim Ebenhoch

Global Head of Innovation
Swisspearl Group AG
Niederurnen, 08.08.2024

Owner: Swisspearl
No.: MD-24137-EN_rev1
First Issued: 21-05-2025
Revision: 19-02-2026
Valid to: 21-05-2030

3rd PARTY **VERIFIED**

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | **ISO 14025 & EN 15804**



Owner of declaration

Swisspearl Danmark A/S
 Gasværksvej 24, 1.
 9000 Aalborg
 DK18336774

SWISSPEARL

Issued:

21-05-2025

Valid to:

21-05-2030

Programme

EPD Danmark
www.epddanmark.dk

epddanmark

- ☐ Industry EPD
☒ Product EPD

Declared product(s)

Plank

Number of declared datasets/product variations: 1

Production site

TPI Fiber Cement Plant 99 Moo 7 T.Bankaeng A.Chalermprakiat
 Saraburi, Thailand

Use of Guarantees of Origin

- ☒ No certificates used
☐ Electricity covered by GoO
☐ Biogas covered by GoO

Declared/ functional unit1 m² of fiber cement Plank**Year of production site data (A3)**1st of January 2022 to 31st of December 2022**EPD version**

EPD version [2], 19-02-2026: updated content declaration table

Basis of calculation

This EPD is developed and verified in accordance with the European standard EN 15804+A2.

Comparability

EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

Validity

This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

Use

The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

EPD type

- ☐ Cradle-to-gate with modules C1-C4 and D
☐ Cradle-to-gate with options, modules C1-C4 and D
☒ Cradle-to-grave and module D
☐ Cradle-to-gate
☐ Cradle-to-gate with options

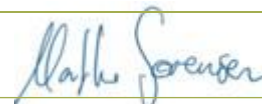
CEN standard EN 15804 serves as the core PCR

Independent verification of the declaration and data, according to EN ISO 14025

☐ internal ☒ external

Third party verifier:


 Linda Høiby


 Martha Katrine Sørensen
 EPD Danmark

System boundary (X = included in LCA; MND = module not declared)																	
Product			Construction process		Use							End of life				Beyond system boundary	
Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse- recovery- recycling potential	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Product information

Product description

The main product components are shown in the table below.

Material	Weight-% of declared product
Cement	30-40%
Silica sand	40-50%
Fibres	5-15%
Water	10-20%
Paint	<5%
Filler	<5%

The construction of the production plant, the production of machinery, screws for installation of the product, and lubricants for the machines are excluded due to lack of data and because their impacts are not relevant because they are under the cut-off rule.

Product packaging:

The composition of the product packaging is shown in the table below.

Material	Weight of packaging material (kg)	Weight-% of packaging
Wooden pallet	0.539	61%
PE foam for anti scratch	0.001	0.11%
Cover film	0.054	7%
Coner paper	0.004	0.45%
Plastic strap PE	0.005	1%
Trim for bracing (wood)	0.027	3%
Wooden pallet	0.247	28%
Sum/average	0.88	100%

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of the fiber cement Plank on the production site located in Thailand. Product specific data are based on average values collected in the period 2022. Background data are based on GaBi Sphera Professional 2024 and Ecoinvent v3.10 and are less than 10 years old.

Generally, most of the used background datasets are of high quality, and the majority of the datasets are only a couple of years old.

Geographical representativeness: The production of the Plank takes place in Thailand and the use and end of life takes place in Denmark. Most of the processes used for Thailand are global processes. Most of the processes used for Denmark are either Danish or European processes. Most of the processes in this study therefore have a geographical representativeness which is evaluated to be "good" because they cover a larger area in which the area under study is included.

Foreground system: The product is produced using residual electricity from grid in Thailand. Background system: Upstream and downstream processes are modelled using electricity grid mix.

Database(s) and LCA software used: Generic data and background data are based on the GaBi Sphera professional database version 2023 and the Ecoinvent 3.10 database.

Hazardous substances

The Swisspearl Plank contains less than 0.1% (w/w) of substances listed on the "Candidate List of Substances of Very High Concern for authorisation"

(<http://echa.europa.eu/candidate-list-table>)

Product(s) use

The Swisspearl Plank can be used on building facades.

Essential characteristics

Because of the properties of fibre cement, the Swisspearl Plank does not rot, crack, or require repainting. Main components are cement, silica sand, cellulose fibers, water and selected additives and can be mounted both horizontally and vertically. Ideal for replacement of wood on

the facade due to the limited maintenance required.

Swisspearl facade boards are covered by the harmonised technical specification EN 12467.

Further technical information can be obtained by contacting the manufacturer or on the manufacturers website: [Swisspearl Fibre Cement - Plank Original facade board - Swisspearl](#).

Declaration of performance is according to EU regulation 305/2011 is available for all declared product variations of the plank.

Reference Service Life (RSL)

The reference service life is 50 years or higher according to the table published by the BBSR¹.

Picture of product(s)



¹ [BNB Nutzungsdauern von Bauteilen 2017-02-24.xls \(nachhaltigesbauen.de\)](#) Code 335.551

LCA background

Declared unit

The LCI and LCIA results in this EPD relates to 1 m² of fiber cement Plank.

Name	Value	Unit
Declared unit	1	m ²
Density	11.96	Kg/m ²
Conversion factor to 1 kg.	0.08	-

Functional unit

Not defined.

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804.

Energy modelling principles

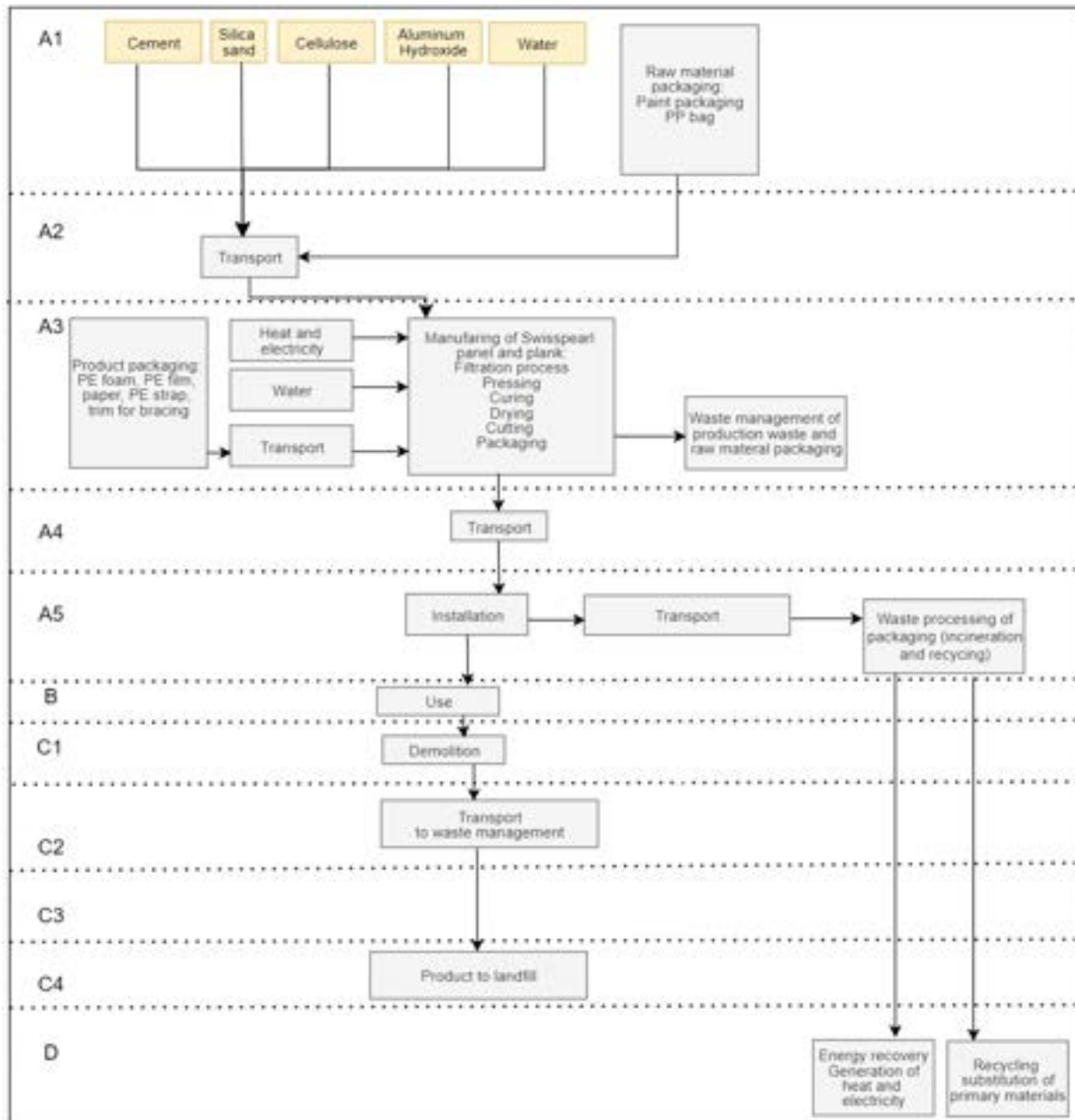
Foreground system:

The product is produced using heat from, oil and electricity from the Thailand residual grid for the production of the fiber cement Plank.

Background system:

Upstream and downstream processes are modelled using electricity grid mix.

Flowdiagram



System boundary

The LCA is cradle to grave and includes all modules, from A1 to D. However, B1-B7 are not relevant, since the products do not require any maintenance, replacement, or refurbishment in their reference service life. 99.994 weight-% of the product has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

According to the rules in EN 15804:2012+A2:2019, 6.3.5, in case of insufficient input data or data gaps for the unit process, the cut-off criteria shall be 1% of renewable and non-renewable primary energy usage and 1% of the total mass input of that unit process.

Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Manufacturing processes

Swisspearl Plank is produced by the use of the Hatschek method: the base materials (binder, fibres, etc) are processed into a homogeneous mixture with water and transferred to the vats of the Hatschek machine.

Rotating sieve cylinders in the vats collect a thin layer of solid material and transfer the layer to a rotating felt for dewatering and further on to the accumulating format roller. The format roller is gradually covered by layers of fiber cement. Once the required thickness of the boards is reached, the fiber cement layer, still moist and mouldable, is unwound and taken from the roll².

After the pre-curing period, the fibre-cement boards are dried. The plank is dried by use of an

Autoclave machine. Autoclaves create a high-pressure, high-temperature environment that accelerates the chemical reactions between the cement and the fibres. This process turns the wet mixture into a hard, durable material.

After the drying process the products are ready to be sanded, trimmed edges, cut to customised size, painted, edge-sealed, hydrophobated and finished with quality controls and packing processes.

Waste during production and raw material packaging is waste handled in A3. The waste is sent to recycling. Credit is not given in A3.

Construction process stage (A4-A5) includes:

Module A4 includes transportation from the production site in Thailand to Denmark. This contains a distance of 18,263 km with a container ship and 250 km with a truck. Module A5 also accounts for the environmental impacts connected to installation of the product.

The installation process takes place in Denmark. The installation requires 1050 W of electrical energy for an electric screwdriver for the Swisspearl Plank. The screwdriver is estimated by Swisspearl to be used for 5 minutes/m². Thereby, a total of 87.5 watt-hours is used. The electricity consumption for installation is accounted for, but the machinery itself is not accounted for because it is under the cut-off, and it is therefore modelled as an empty <us-o> process in GaBi Sphera. The electricity is modelled as Danish grid mix because the product is installed and used in Denmark.

Module A5 also accounts for the environmental impacts associated with the disposal of packaging handled at the construction site meaning the waste management of the final product packaging materials.

²

<http://www.fibreconsulting.com/publications/011011.hatschekfilmsummary.pdf>

Recycling rates of packaging materials are based on Eurostat data from 2020 for Denmark.

It is assumed that packaging material which is not recycled is incinerated with energy recovery.

The distance to the incineration plants is assumed to be 60 km. The distance to the recycling station is based on a study of waste management by Bassi et al. from 2017. It has not been possible to find a source on what the average distance to the recycling station is in Denmark. 100 km has therefore been assumed based on input from professionals in COWI working with resources and recycling.

Use stage (B1-B7) includes:

As there is no maintenance, repair, refurbishment or any operational water or energy consumption related to the use of the plank during their reference service life, all modules in the use stage (B1-B7) are considered to have no environmental impact.

End of Life (C1-C4) includes:

Module C1 accounts for the environmental impacts associated with dismantling and demolition of the facade boards. Demolition requires 1050 W of electrical energy for an electric screwdriver for the Swisspearl Plank. Thereby, a total of 87.5 watt-hours is used. The electricity consumption for installation is accounted for, but the machinery itself is not accounted for because it is under the cut-off, and it is therefore modelled as an empty <us-o> process in GaBi Sphera. The electricity is modelled as Danish grid mix because the product is installed and used in Denmark.

The average distance to waste handling facilities is the same for C2 as for A5 which is 60 km. The truck type for all product types is the GLO: Truck, Euro 6 A-C, 28 - 32t gross weight. The utilisation rate is 61%, which is the default value including empty runs in GaBi.

The Plank is sent to landfill and therefore there are no environmental impacts associated with

waste processing of materials flows intended for reuse, recycling or energy recovery.

In C4, the disposal module, the product is waste handled. 100% of the product goes to landfill. The landfill process includes percolate. It is assumed that the biogenic carbon of the cellulose contained in the fiber cement plank is released as CO₂.

Re-use, recovery and recycling potential (D) includes:

Module D – The Plank is sent to landfill after use. The product has therefore no impact during this stage and no associated environmental impacts. The credits in module D therefore stem from incineration of the packaging disposed in A5.

The incineration process and recycling processes take place in A5 and the energy credit and material credit take place in module D.

Regarding crediting for recycling of paper and board in the packaging, the ecoinvent process for kraft paper used for credit has been edited, so only the virgin wooden inputs are credited, not all other inputs in the process e.g. energy.

LCA results

Results for Plank

Core environmental impact indicators for Plank

ENVIRONMENTAL IMPACTS PER M ²												
Parameter	Unit	A1	A2	A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	3.80E+00	2.51E-01	2.10E+00	2.77E+00	1.68E+00	0.00E+00	1.63E-01	6.51E-02	0.00E+00	1.45E+00	-1.11E-01
GWP-fossil	[kg CO ₂ eq.]	5.09E+00	2.52E-01	3.48E+00	2.77E+00	3.27E-01	0.00E+00	1.62E-01	6.56E-02	0.00E+00	1.79E-01	-1.11E-01
GWP-biogenic	[kg CO ₂ eq.]	-1.29E+00	-1.99E-03	-1.38E+00	-5.16E-03	1.35E+00	0.00E+00	1.17E-03	-1.64E-03	0.00E+00	1.27E+00	-6.41E-04
GWP-luluc	[kg CO ₂ eq.]	1.20E-03	1.40E-03	6.30E-04	4.90E-03	1.67E-04	0.00E+00	5.94E-05	1.07E-03	0.00E+00	5.22E-04	-1.21E-04
ODP	[kg CFC 11 eq.]	2.13E-08	2.50E-14	6.60E-08	2.32E-13	5.21E-12	0.00E+00	5.03E-12	9.41E-15	0.00E+00	6.72E-16	-1.01E-04
AP	[mol H ⁺ eq.]	1.97E-02	3.23E-03	1.40E-02	4.65E-02	5.65E-04	0.00E+00	3.21E-04	1.00E-04	0.00E+00	1.30E-03	-2.66E-04
EP-freshwater	[kg P eq.]	6.52E-04	3.99E-07	5.32E-04	1.88E-06	1.55E-06	0.00E+00	1.49E-06	2.73E-07	0.00E+00	3.12E-07	-1.01E-04
EP-marine	[kg N eq.]	4.51E-03	1.36E-03	2.37E-03	1.96E-02	1.75E-04	0.00E+00	1.04E-04	3.84E-05	0.00E+00	3.35E-04	-1.52E-04
EP-terrestrial	[mol N eq.]	4.95E-02	1.50E-02	2.44E-02	2.15E-01	2.01E-03	0.00E+00	9.74E-04	4.51E-04	0.00E+00	3.68E-03	-6.18E-04
POCP	[kg NMVOC eq.]	1.45E-02	3.73E-03	8.51E-03	5.38E-02	4.37E-04	0.00E+00	2.39E-04	9.96E-05	0.00E+00	1.01E-03	-2.63E-04
ADPm ¹	[kg Sb eq.]	6.22E-05	1.09E-08	1.45E-06	7.91E-08	8.91E-08	0.00E+00	8.68E-08	5.57E-09	0.00E+00	1.63E-08	-1.01E-04
ADPf ¹	[MJ]	4.34E+01	2.99E+00	5.45E+01	3.29E+01	2.51E+00	0.00E+00	2.06E+00	8.42E-01	0.00E+00	2.38E+00	-2.11E+00
WDP ¹	[m ³ world eq. deprived]	9.70E-01	1.59E-03	6.27E-01	8.92E-03	1.83E-01	0.00E+00	2.43E-02	9.90E-04	0.00E+00	1.90E-02	-8.16E-03
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication - aquatic freshwater; EP-marine = Eutrophication - aquatic marine; EP-terrestrial = Eutrophication - terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential - minerals and metals; ADPf = Abiotic Depletion Potential - fossil fuels; WDP = Water Depletion Potential											
	The numbers are declared in scientific notation, e.g., 1.95E+02. This number can also be written as: 1.95*10 ² or 195, while 1.12E-11 is the same as 1.12*10 ⁻¹¹ or 0.0000000000112.											
Disclaimer	¹ The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.											

Additional environmental impact indicators for Plank

ADDITIONAL ENVIRONMENTAL IMPACTS PER M ²												
Parameter	Unit	A1	A2	A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PM	[Disease incidence]	2.23E-07	8.37E-08	4.37E-08	1.23E-06	4.49E-09	0.00E+00	2.74E-09	1.06E-09	0.00E+00	1.61E-08	-1.01E-04
IRP ²	[kBq U235 eq.]	9.91E-02	6.01E-04	1.82E-02	5.62E-03	2.79E-02	0.00E+00	2.48E-02	2.22E-04	0.00E+00	2.78E-03	-3.85E-03
ETP-fw ¹	[CTUe]	2.19E+01	2.26E+00	1.61E+01	2.43E+01	8.15E-01	0.00E+00	5.84E-01	6.25E-01	0.00E+00	1.36E+00	-8.96E-01
HTP-c ¹	[CTUh]	6.19E-09	4.27E-11	2.46E-09	4.46E-10	1.56E-10	0.00E+00	1.39E-10	1.26E-11	0.00E+00	2.02E-10	-1.01E-04
HTP-nc ¹	[CTUh]	4.13E-08	1.57E-09	1.57E-08	1.49E-08	1.81E-09	0.00E+00	8.70E-10	5.66E-10	0.00E+00	2.13E-08	-1.01E-04
SQP ¹	-	1.30E+01	5.45E-01	2.73E+01	1.96E+00	4.69E+00	0.00E+00	4.54E+00	4.14E-01	0.00E+00	4.96E-01	-1.55E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)											
	The numbers are declared in scientific notation, e.g., 1.95E+02. This number can also be written as: 1.95*10 ² or 195, while 1.12E-11 is the same as 1.12*10 ⁻¹¹ or 0.0000000000112.											
Disclaimer	¹ The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.											
	² This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.											

Parameters describing resource use for plank

RESOURCE USE PER M ²												
Parameter	Unit	A1	A2	A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	2.88E+00	1.04E-01	2.73E+00	4.71E-01	7.82E+00	0.00E+00	7.70E+00	7.25E-02	0.00E+00	0.00E+00	-1.24E+00
PERM	[MJ]	1.42E+01	0.00E+00	1.47E+01	0.00E+00	-1.47E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.71E+01	1.04E-01	1.74E+01	4.71E-01	-6.88E+00	0.00E+00	7.70E+00	7.25E-02	0.00E+00	0.00E+00	-1.24E+00
PENRE	[MJ]	4.34E+01	2.99E+00	5.45E+01	3.29E+01	2.51E+00	0.00E+00	2.06E+00	8.42E-01	0.00E+00	0.00E+00	-2.11E+00
PENRM	[MJ]	3.05E+00	0.00E+00	2.91E+00	0.00E+00	-2.91E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	4.64E+01	2.99E+00	5.74E+01	3.29E+01	-4.05E-01	0.00E+00	2.06E+00	8.42E-01	0.00E+00	0.00E+00	-2.11E+00
SM	[kg]	7.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.01E-04
RSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

NRSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m³]	1.87E-02	1.17E-04	1.52E-02	5.42E-04	6.53E-03	0.00E+00	2.81E-03	8.08E-05	0.00E+00	6.00E-04	-6.77E-04
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water											
	The numbers are declared in scientific notation, e.g., 1.95E+02. This number can also be written as: 1.95*10 ² or 195, while 1.12E-11 is the same as 1.12*10 ⁻¹¹ or 0.0000000000112.											

End-of-life (waste categories and output flows) for Plank

WASTE CATEGORIES AND OUTPUT FLOWS PER M²												
Parameter	Unit	A1	A2	A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	4.17E-01	1.03E-10	7.46E-02	1.05E-09	1.89E-08	0.00E+00	1.87E-08	3.22E-11	0.00E+00	3.63E-08	-1.01E-04
NHWD	[kg]	8.20E-01	3.67E-04	4.18E-03	3.41E-03	4.92E-02	0.00E+00	1.08E-02	1.37E-04	0.00E+00	1.20E+01	-3.43E-03
RWD	[kg]	2.40E-04	4.25E-06	7.96E-05	4.04E-05	2.33E-04	0.00E+00	2.14E-04	1.53E-06	0.00E+00	2.70E-05	-1.33E-04
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	0.00E+00	0.00E+00	5.20E-01	0.00E+00	4.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy											
	The numbers are declared in scientific notation, e.g., 1.95E+02. This number can also be written as: 1.95*10 ² or 195, while 1.12E-11 is the same as 1.12*10 ⁻¹¹ or 0.0000000000112.											

Biogenic carbon content at factory gate for Plank

BIOGENIC CARBON CONTENT PER m² Plank		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0.35
Biogenic carbon content in accompanying packaging	[kg C]	0.37
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Additional information

LCA interpretation

The results in this EPD relates to 1 m² fiber cement Plank with a reference service life of 50 years/product. The Plank has a climate change impact of GWP-total of 12.17 kg CO₂ eq./m². This result is for the entire life cycle of the product including module D.

The production of cement in A1 and the shipping of the product from Thailand to Denmark A4 are the main contributors to most impact categories. It is the cement production that is the largest contributor to climate change with 28% for the Plank, but the shipping accounts for 20% which is also a large fraction of the overall impact on climate change.

The biogenic carbon emissions mainly stem from incineration of the wood packaging in A5 and release of biogenic carbon in the landfill.

Allocation

The factory in Thailand has an overall production of 281,414 tonnes of Fiber cement plank and panel products. The factory produces 3,758 tonnes of Swisspearl Plank and 247 tonnes of Swisspearl Panels.

The raw materials and packaging input for the production of the Swisspearl Panel and Plank are based on exact and specific data for the production for the Swisspearl Panel and Plank production for 2022. Specific data is also provided for the output of the production in terms of Panel and Plank produced per tonnes and per square meter. Furthermore, the production of waste and waste handling at the factory is also given specifically with exact numbers for the Swisspearl Panel and Plank production.

This means that no mass allocation has been needed between the Swisspearl Panel and Plank and the production of other products due to specific and clear data for the production of Swisspearl products in particular going into and out of the production factory.

The electricity, heat and water consumption are based on a one-year cycle for the entire factory. The inputs have been divided by the production output for one year to allocate the energy consumption per ton of the product. Revenue is not driven by the Swisspearl Panel or Plank and the factory's other fibre cement panels and planks, since they are similar in price and the products are similar. Therefore, mass allocation is used consistently throughout the LCA for the allocation of electricity, heat and water consumption.

Technical information on scenarios

Transport to the building site (A4) per declared unit.

Scenario information	Value	Unit
Road transport	28 - 32t gross weight / 22t payload capacity/utilization factor	
Fuel type	Diesel	-
Vehicle type	Truck	-
Transport distance	227	km
Capacity utilisation (including empty runs)	61	%
Gross density of products transported	1495	kg/m ³

Sea transport	Container ship, 5,000 to 200,000 dwt payload capacity, deep sea Sphera <u>so>	
Fuel type	Heavy fuel oil	-
Vehicle type	EURO 6	-
Weighted transport distance	18,263	km
Capacity utilization (including empty runs)	70	%
Gross density of products transported	1495	kg/m ³

Installation of the product in the building (A5)

Scenario information	Value	Unit
Electricity for screwdriver	87.5	Wh

Reference service life

RSL information	Plank	Unit
Reference service Life	50	Years
Declared product properties	The Plank complies with the DS/EN 12467:2012+A2:2018 Plane plader af fibrement – Produktspecifikation og prøvningsmetoder. See also section 3.1.2 for technical properties of the product.	-
Design application parameters	DS/EN 12467:2012+A2:2018 described in section 3.1.2 technical specifications and section 1.6 for the product use.	-
Assumed quality of work	DS/EN 12467:2012+A2:2018 and described section 3.1.2 technical specifications of the product.	-
Outdoor environment	50	years
Indoor environment	not to be used indoor	
Usage conditions	No conditions for usage of the declared unit of fiber cement plank.	-
Maintenance	No maintenance is needed.	-

RSL information	Panel and Plank	Unit
Reference service Life	50	Years
Declared product properties	The Panel and Plank comply with the DS/EN 12467:2012+A2:2018 Plane plader af fibrement – Produktspecifikation og prøvningsmetoder. See also section 3.1.2 for technical properties of the product.	As appropriate
Design application parameters	DS/EN 12467:2012+A2:2018 described in section 3.1.2 technical specifications and section 1.6 for the product use.	As appropriate
Assumed quality of work	DS/EN 12467:2012+A2:2018	As appropriate

	and described section 3.1.2 technical specifications of the product.	
Outdoor environment	50	years
Indoor environment	not to be used indoor	
Usage conditions	No conditions for usage of the declared unit of fiber cement panel and plank.	As appropriate
Maintenance	No maintenance is needed.	As appropriate

Use (B1-B7)

As there is no maintenance, repair, refurbishment or any operational water or energy consumption related to the use of the fiber cement plank during their reference service life, all modules in the use stage (B1-B7) are considered to have no environmental impact.

Scenario information	Value	Unit
B1 – Use		
B2 - Maintenance		
Maintenance process	Description or reference	-
Maintenance cycle	0	/year
Ancillary materials for maintenance (specify which)	0	kg/cycle
Waste materials resulting from maintenance (specify which)	0	kg
Net freshwater consumption during maintenance	0	m ³
Energy input during maintenance	0	kWh
B3 – Repair		
Repair process	Description or reference	-
Inspection process	Description or reference	-
Repair cycle	0	/year
Ancillary materials (specify which)	0	kg/cycle
Waste materials (specify which)	0	kg
Net freshwater consumption during repair	0	m ³
Energy input during repair	0	kg/cycle
B4 – Replacement		
Replacement cycle	0	/year
Energy input during replacement	0	kWh
Exchange of worn parts during products life cycle	0	kg
B5 - Refurbishment		
Refurbishment process		
Refurbishment cycle	0	/year
Energy input during refurbishment	0	kWh
Material input for refurbishment (specify which)	0	kg/cycle
Waste materials resulting from refurbishment	0	kg
Further assumptions for scenario development	0	As appropriate
B6 + B7 – Use of energy and water		
Ancillary materials specified by material	0	kg
Net freshwater consumption	0	m ³
Type of energy carrier	0	kWh
Power output of equipment	0	kW
Characteristic performance	0	As appropriate
Further assumptions for scenario development	0	As appropriate

End of life (C1-C4)

Scenario information	Value	Unit
Collected separately	11.96	kg
Collected with mixed waste	0	kg
For reuse	0	kg
For recycling	0	kg
For energy recovery	0	kg
For final disposal	11.96	kg
Assumptions for scenario development	Cellulose released as CO ₂ instead of CH ₄ at the final disposal due to assumption that sufficient oxygen is available.	

Re-use, recovery and recycling potential (D)

Scenario information/Materiel	Value	Unit
Displaced material	0.004	kg
Energy recovery from waste incineration	1.06	MJ

Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.1.

Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.2.

References

Publisher	 www.epddanmark.dk Template version 2023.2
Programme operator	Danish Technological Institute Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	<i>Cecilie Holm Arentoft</i> COWI A/S
LCA software / background data	GaBi professional database version 2023 and the Ecolnvent 3.10 database. <i>EN 15804 reference package 3.1</i>
3rd party verifier	<i>Linda Højbye</i> Life Cycle Assessment Consulting

General programme instructions

General Programme Instructions, version 2.0, spring 2020
www.epddanmark.dk

EN 15804

DS/EN 15804 + A2:2019 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

EN 15942

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Environmental Performance of household waste management in Europe – An example of 7 countries.

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Production of fiber cement plank

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DS/EN 12467:2012+A2:2018

Plane plader af fiber cement – Produktspecifikation og prøvningsmetoder

SWISSPEARL

Swisspearl Plank



Housing estate at the marina, Sweden





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Renovation & Material combination	8 – 11
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Product overview Plank Original	18 – 23

Add a natural look.
Add the strength
of fibre cement.
Add personality.



Swisspearl Plank is inspired by nature's own design – and created to keep your building safe from wear and tear, heat and cold.

Swisspearl Plank is now available as both traditional lap planks and the new tongue and groove click system.

The product series combines the natural wooden look with high-level durability, giving your building protection against natural elements.

Made from resilient, low-maintenance fibre cement, Swisspearl Plank is the clever, beautiful and long-lasting alternative to wood.

Made from natural materials, our planks are literally designed to last you a lifetime.



**The natural choice
– with exceptional durability**

Swisspearl Plank and Swisspearl Plank Connect are made from fibre cement, designed with typical Scandinavian thoroughness and an eye for detail, are built to last. They withstand everything from searing sunshine to blizzards and torrential rain. And all of this, with virtually no maintenance.

Fibre cement is a natural product made of cement, water, minerals and fibre – and it is changing the way we design and build facades around the world thanks to its long-lasting, expressive qualities.

Every Swisspearl Plank is designed to be:

- Durable – resilient to moisture, dirt and wear-and-tear
- Fire-safe – protecting people and assets
- Low-maintenance and hassle-free
- Surface-treated for resistance to mould and fungi

The ventilated facade

Swisspearl Plank not only adds personality and quality, it is the perfect match for a ventilated facade.

A ventilated facade helps minimise temperature variations in the wall throughout the year. Sunlight and heat are reflected away from the building in the summertime, and insulation behind the facade reduces heat loss at lower temperatures. At the same time, the natural ventilation passing through the structure minimises condensation.

Additional benefits

The ventilated facade has a range of additional benefits:

- Protects the underlying structure from weather conditions
- Drainage of rain water away from the structure
- Low weight facade enables energy-efficient design
- Thin wall structure resulting in more living space
- Flexibility in design with horizontal or vertical joints and board-orientation
- Low maintenance
- Long lifespan





Warranty

For more details about our Swisspearl warranty, please refer to your local Swisspearl website.

DIM – Design and Installation manual

Please download the latest version of the Swisspearl Plank Connect or Swisspearl Plank Original DIM -Design and Installation Manuals at swisspearl.com

Swisspearl Plank shields you from nature. Naturally.

Swisspearl Plank is the obvious choice for a classic facade solution. Inspired by nature's own design, you can choose between a wide range of colours with textured surface – all while enjoying the benefits of the strong fibre cement material.



With Swisspearl as a partner, you are guaranteed excellence in every step of the process: from a complete portfolio of solutions and accessories to a leading 15-year warranty. And from the quality of the paint layer and backside coating to how the protective foil is wrapped around the finished product.

A classic choice with benefits that will meet your expectations now and in the future.

Long-lasting natural look

Swisspearl Plank facade solutions offer the best of both worlds: a truly authentic natural wood look, combined with stability, resistance to the nature's elements and a long lifespan with an absolute minimum of maintenance.

"Natural wood must be refreshed every five to eight years to maintain its colour, whereas Swisspearl Plank Original does not require re-painting. Once the facade is fixed, the long-lasting boards will not change appearance — even in rough weather conditions. This is a considerable advantage."

At Swisspearl, we continue to innovate so that building residents can enjoy the above benefits and contractors and carpenters can take pride in the quality of their work.

No way in for moisture

In these Swisspearl products, every single square millimetre of the fibre cement is coated so that moisture simply does not have a chance to find a way in, which helps to avoid deterioration and discolouration.

Unwavering appearance

Swisspearl Plank will not warp, deform, rot or discolour. No periodic repainting needed as they will exhibit the same natural properties that made owners or architects choose Swisspearl products in the first place.

Inspired by natural design

The plank boards get a pigmented primer in the same colour as the top coat to give a deep finish. The end result is a product that looks like natural wood with grooves and patterns in a high degree of variation, just as in wood.



Breathing new life into existing buildings

There are many reasons why Swisspearl Plank is frequently used when renovating houses or in urban regeneration projects.

Easy to work with

For a start, they are easy to work with – for both the DIY enthusiasts and the professionals. Surprisingly light-weight given their robust, durable nature, they are an obvious alternative to wood or composite material claddings, giving additional protection to the house while bringing a touch of long-lasting elegance. To further minimise potential hassle during installation, we offer plenty of accessories from various aluminium profiles and trims to screws (in matching colours), paint and even tools.



Alternative to wood

Swisspearl Plank is ideal for replacing high-maintenance wood as an alternative solution. As a weatherboard for example, or in soffits, gables, dormer windows, fascia boards, hanging eaves, garages, or as balcony skirting.

Energy efficiency

Energy efficiency is another area in which renovation with Swisspearl can make a difference. By using Swisspearl Plank as cladding on top of an existing brick wall, it becomes possible to introduce an extra layer of insulation between the two surfaces thereby reducing the energy bill.



Surface: Textured

Designed to mix-and-match – the new old trend

Combining different building materials has been a part of building traditions for centuries. The trend has developed continuously through the years and so have the materials and underlying reasons behind the combinations. Today, the combination of materials can be chosen for several reasons, it can merely be an aesthetic choice, an economical choice or a way to meet market standards of energy efficiency or sustainability which has gained ground in the last decade.



Swisspearl Plank, with its versatile application and design options, is the ideal product for renovation of older houses. Swisspearl Plank can be used to complement older brickwork, a modern render or glass facade.

Blending in while standing out

Architects design with Swisspearl Plank not only because it is visually attractive and combines perfectly with other cladding materials but also because of its technical performance and ease of installation. They are available with an authentic-looking textured finish.

The matte coating applied as protection results in a very natural, wood-like appearance. Additionally, there are 13 standard colours for Swisspearl Plank Original and 9 standard colours for Swisspearl Plank Connect. With such a wide range of design possibilities to choose from, it becomes possible to achieve precisely the kind of results that will leave homeowners talking about their home with pride for years to come. Whether people are looking for a modern look, a functional fix or an added touch of classic elegance, we have a solution that fits for every requirement.



PLANK CONNECT

Combining natural beauty with lasting durability and minimal maintenance. Allowing with its tongue & groove an elegant, concealed installation. Ensuring a strong and durable connection.





PLANK CONNECT



Swisspearl Plank Connect is a facade system consisting of tongue and groove planks and stainless steel clips. The planks are fire, mold, and fungi resistant fibre-cement planks. The Swisspearl Plank Connect clips allow for easy hidden fixing of the planks and guarantees a strong and long-lasting connection. In general we have a 15-years warranty on these products.



Technical data

Panels

The panel is coloured through in grey.
Coating: Opaque
Surface: Textured

Panel format

Swisspearl Plank Connect:
Maximum usable format 210 x 3000 mm,
panel thickness 11 mm (visible width 200 mm).

Colours

Textured surface:
9 standard colours.

Mounting

Invisible mounting system with connection clips.

Technical data

Detailed information can be found in the
"DIM Design and Installation Manual – Swisspearl Plank
Connect on Wood".



Inspiration, Swisspearl

Surface: Textured



CP 010
Agate Grey



CP 040
Granite Grey



CP 050
Bark Brown



CP 150
Anthracite Grey



CP 180
Signal Black



CP 210
Pure White



CP 370
Oxide Red



CP 410
Light Brown



CP 480
Dark Brown

Swisspearl Plank Connect – long-lasting beauty. Naturally.

Swisspearl Plank Connect is the obvious choice for a modern facade solution. It is the high-quality, low-maintenance solution delivered with an eye for detail.

As easy to install as it is to maintain

The Tongue & Groove system guarantees a smooth one-click installation. This strong and durable fibre cement cladding outperforms wooden alternatives. The straight contemporary profile and weather resistant coating all around are in a class of their own.

Every plank is developed to exceed expectations in every way: easy application, high-end aesthetics, fire safety and low maintenance.

Swisspearl Plank Connect is truly nature's design, connected with all the modern benefits.



Inspiration, Swisspearl



An ideal solution for your holiday home

When choosing Swisspearl Plank for your holiday home, the natural appearance and the durable nature of the Swisspearl Plank will offer you a unique appearance that naturally blends in with the surrounding area meanwhile withstanding the exposure of the rough weather, and most importantly, the limited maintenance needed will give you more time to spend with your family.

17

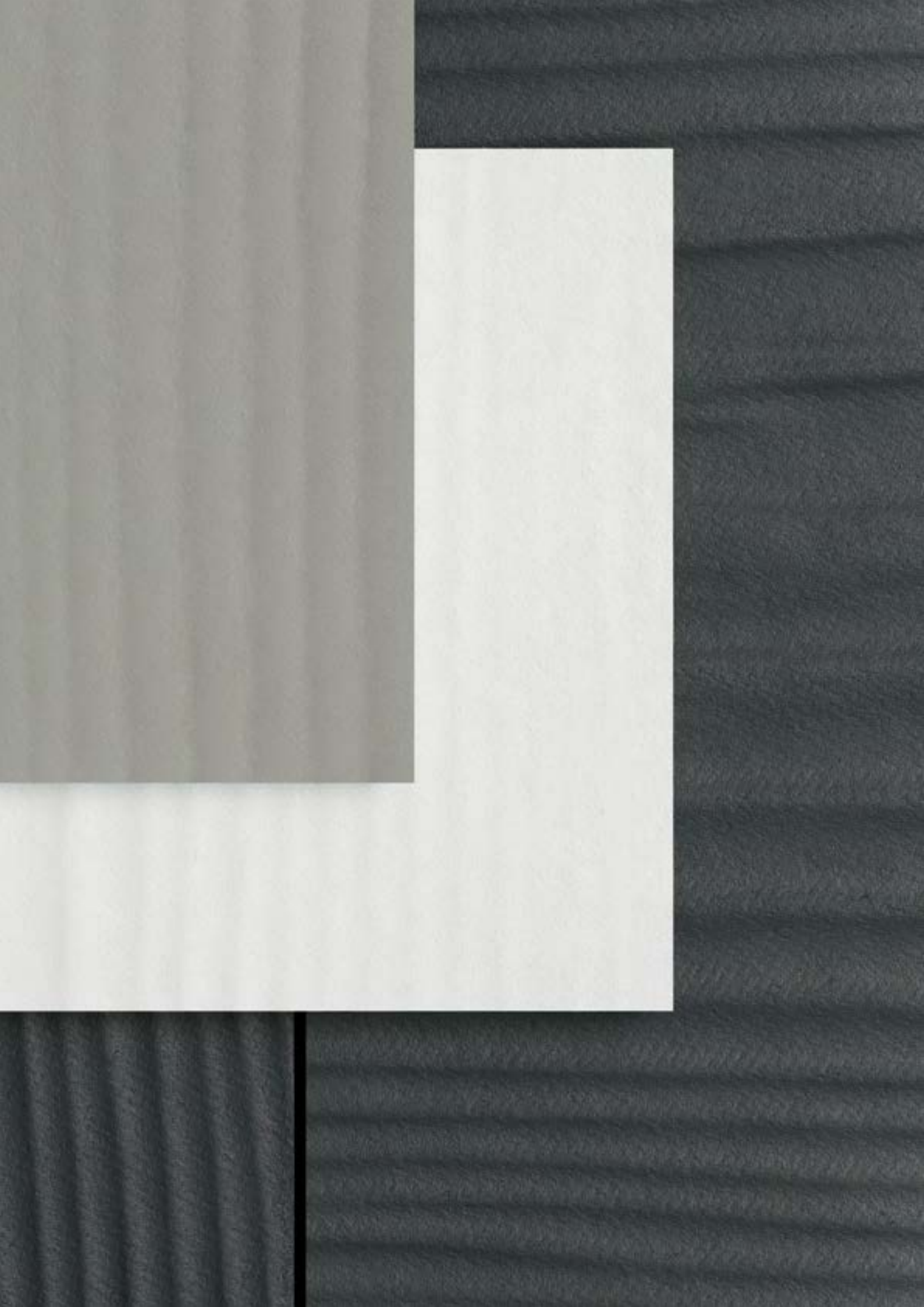


Surface: Textured

PLANK ORIGINAL

Natural aesthetics, durability, low maintenance.

Its textured surface create an authentic appearance,
no matter the weather conditions.



PLANK ORIGINAL



Swisspearl Plank is the ideal solution to replace the use of high-maintenance wood on your facade. It can be installed like any wooden facade alternatives. Because of the excellent properties of fibre cement, it does not rot, crack, warp or require repainting. In general we have a 15-years warranty on these products.

Technical data

Panels

The panel is coloured through in grey.

Coating: Opaque

Surface: Textured

Panel format

Swisspearl Plank Original:

Maximum usable format 180 x 3600 mm,
panel thickness 8 mm.

Colours

Textured surface:

13 standard colours.

Mounting

Visible on wooden substructure:

Installation on wood with invisible fixing top Plank or
with visible screws bottom plank with painted screws.

Technical data

Detailed information can be found in the "DIM Design
and Installation Manual – Swisspearl Plank Original".

Warranty

15 years



Inspiration, Swisspearl

Surface: Textured



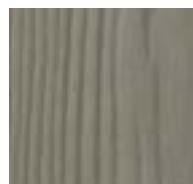
CP 010
Agate Grey



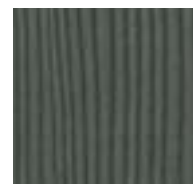
CP 030
Pebble Grey



CP 040
Granite Grey



CP 050
Bark Brown



CP 080
Basalt Grey



CP 150
Anthracite Grey



CP 180
Signal Black



CP 210
Pure White



CP 280
Silk Grey



CP 370
Oxide Red



CP 380
Red Brown



CP 410
Light Brown



CP 480
Dark Brown

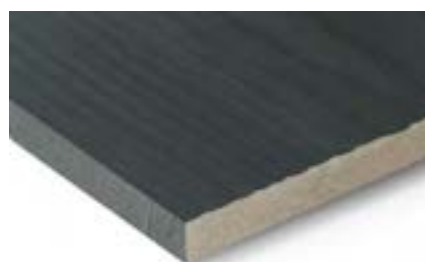
Tagholmen, Aalborg, Denmark

Swisspearl Plank Original – for an authentic facade

An authentic wood facade or a maintenance-free building is a frequent dilemma when it comes to industrial construction. In the Danish business park Tagholmen, however, the dilemma has been solved using the product Swisspearl Plank Original that combines a wooden aesthetic with a low-maintenance fibre cement material.

Located in the north of Denmark, the business park Tagholmen is strategically located near fjord, city and airport. In time, Tagholmen will consist of nine buildings creating a professional community for industrial technology companies. When the first 700 square metre structure was erected back in 2017, the builder was looking for a business environment with an inviting atmosphere:

“The owner of the property, who runs an industrial software company, was looking for a professional office space with a warm and welcoming atmosphere. Drawing inspiration from rustic industrial structures around the Holmen area in Copenhagen, we suggested an architectural design of Tagholmen. Besides the aesthetics, the level of maintenance was also important to the client because it is a commercial property”,



Surface: Textured



Tagholmen Business



says architect Claus Egerland from the Danish architectural firm Tegnestuen 3D and continues:

“To find the best possible solution, we consulted Swisspearl who suggested Swisspearl Plank Original. The Swisspearl Plank Original proved to be the perfect solution combining the look of a traditional wooden facade with the modern and practical function of fibre cement. The deep black colour of the facade boards highlighted the warm vibe of traditional Danish cottages at the same time giving it a strong industrial expression”.

Fixed in a traditional wooden pattern with overlapping planks, Tagholmen’s new facade leaves a vibrant and natural expression of natural wood. Before the construction of Tagholmen, Claus Egerland had only previously seen the facade material used for smaller constructions, e.g. cottages.

“I saw a great hidden potential in Swisspearl Plank Original and wanted to use it on a bigger scale – and the result was extremely satisfying”, Claus Egerland concludes.





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DIM Design & Installation Manual

Swisspearl Plank Original





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Product Information

Eliminate maintenance and moisture problems

Swisspearl Plank is made of materials which consists of non-toxic, inorganic raw materials. This means that they remain unaffected by the presence of moisture during and after installation. Swisspearl Plank products are fibre cement based planks and panels with associated trims. Fibre cement is a modern building material made from natural and environmentally friendly raw materials. With more than 90 years of experience within the manufacturing of fibre cement, Swisspearl ensures a sustainable product that has accumulated all the advantages of fibre cement.

Quality

All products are CE marked and manufactured to meet or exceed the specifications outlined in the EN 12467:2012+A1:2016 Fibre-cement flat sheets, Category A2.

Swisspearl fibre cement planks are vapour permeable products which are resilient to the toughest weather conditions experienced around the world. The products consist of grey cement and cellulose filler reinforced with a specially selected fibres. Fibre cement absorbs and releases moisture without affecting the durability, strength or performance of the product. All products resist both rot and fungal growth and can withstand considerable fluctuations in weather and climate conditions. Adding to this, Swisspearl Plank is non-combustible and offers a fire protection of A2-s1,d0 when installed with joints between boards to a maximum of 3mm, meaning they will never contribute to fire.

Paints

Swisspearl Plank comes with a painted surface. An automated painting process seals each piece for maximum resistance to exterior exposure which is backed by a Swisspearl 15 year warranty. We offer a broad spectrum of pre-finished design possibilities and special colours are available upon request.

Farbcode	Farbbezeichnung
CP 010	Agate Grey
CP 030	Pebble Grey
CP 040	Granite Grey
CP 050	Bark Brown
CP 080	Basalt Grey
CP 150	Anthracite Grey
CP 180	Signal Black
CP 210	Pure White
CP 280	Silk Grey
CP 370	Oxide Red
CP 380	Red Brown
CP 410	Light Brown
CP 480	Dark Brown

For RAL / NCS colours, go to www.Swisspearl.com
Please note that 100% colour matching is not possible, paint must be toned locally.

Notes

0 = Grey
1 = Black
2 = White
3 = Red
4 = Brown

Colour Gloss: Flat 5 - 10

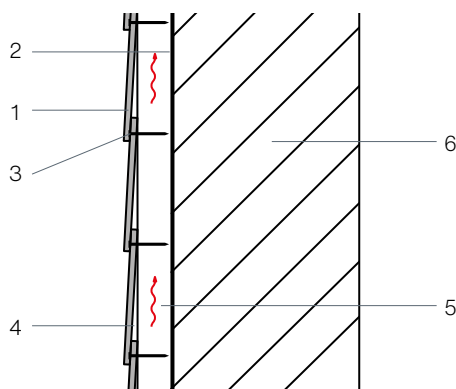
Rear ventilated rainscreen claddings

The self-ventilating facade is a physical construction which contributes to reducing temperature variations in the wall throughout the year. Sunlight is reflected in the summertime, and the dry insulation reduces heat loss in cold seasons. At the same time the construction ventilates interior condensation.

The cavity is ventilated by vent gaps at the bottom and top letting moisture evaporate naturally.

If the facade system is not ventilated, it does not allow any moisture to evaporate; which might lead to mould, fungi, etc. on systems without rear ventilation.

Cladding with Swisspearl products must always be carried out as a ventilated facade with min 25mm distance between the cladding and the sheathing or blockwork. However, in special situations (e.g. high rise buildings), local regulations may demand a larger ventilation gap. Inlet and outlet openings must have a cross section of least $100\text{cm}^2/\text{m}$.



- 1 Swisspearl Plank 8mm
- 2 Sheathing or weatherproof membrane if specified
- 3 Fixing
- 4 Batten min 25mm
- 5 Ventilated area
- 6 Main structure

It must be ensured that there is free passage for ventilation at the bottom and top of a structure as well as ventilation under and over windows/doors etc.



This passage must be a minimum of 15mm in the top and bottom or equal 150mm per m^2 . If grids or similar are used, the openings must equal 150cm^2 per linear meter.

Swisspearl offers several profiles that make it easy to create elegant solutions in the bottom and top of the cladding as well as around doors and windows.

Range

Swisspearl Plank



Properties	
Length	3600mm
Width	180mm
Thickness	8mm
Weight pcs	7.65kg
Surface	Textured
Coverage per square metre (Including overlap)	1.85 pcs
fixings per square metre (Framing fixing centres 600mm)	12.8 pcs



Accessories

**For a quick overview of profile use,
see the next pages**



Swisspearl 30 Stainless Steel Wood Screw

4.0 x 30mm A2 stainless steel - For hidden fixing on timber battens



Swisspearl 27 Steel Screw

3.9x27mm Zytex GX – For hidden fixing on steel battens. Also available for auto feed screwdrivers



Swisspearl Facade Wood Screws

4.5x41mm A2 – For visible fastening on timber battens. Available in all colours



Swisspearl Facade Steel Screws

4.8x35mm A2 – For visible fastening on steel battens



Swisspearl EPDM 45/95mm

To protect battens from water



Swisspearl Plank Acrylic Paint 0.5L

100% Acrylic Latex paint available in all colours



Swisspearl Mechanical Shear

Dust free cutting of fibre cement up to 30cm long and 8mm thick



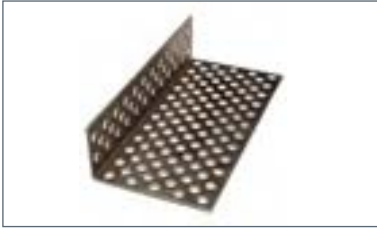
Swisspearl Plank Circular Blade

Fibre cement blade for circular saw
Ø160x2.2x20mm
Ø190x2.2x30mm



Swisspearl Gecko Gauge

Acting as a second set of hands to measure and support the next plank for fastening



1. Swisspearl Ventilated Profile
25x50mm aluminium start/end profile for panels and planks



2. Swisspearl Plank/Start Ventilation Profile
33x50mm aluminium start profile for planks (including 8mm kick out)



3. Swisspearl End Profile
19x40mm coloured aluminium profile for vertical finishing



4. Swisspearl External Corner Large
32x20x26mm coloured aluminium profile for 90° angle



5. Swisspearl Internal Corner Profile
36x23x23mm coloured aluminium profile for 90° angle



6. Swisspearl Window Sill Profile
25x130mm coloured aluminium external sill profile for horizontal finishing

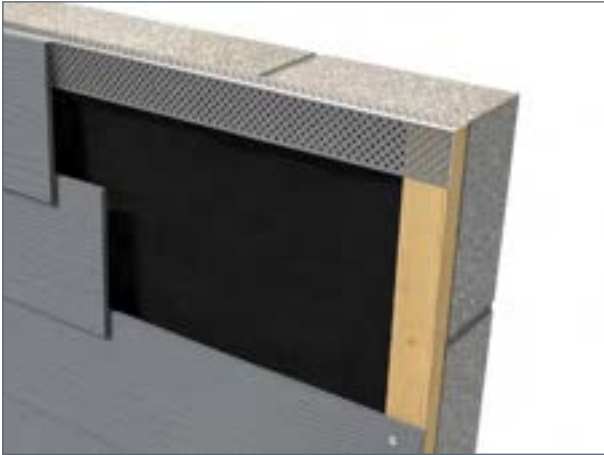


7. Swisspearl Vertical Trim Large
40x21x79mm coloured aluminium trim around doors and windows



8. Swisspearl Horizontal Trim Large
30x42x8x8mm coloured aluminium trim around doors and windows

Profile Use



1. Swisspearl Ventilation Profile

To keep a well-ventilated area behind Swisspearl products, use a ventilation profile for allowing air to pass from bottom to top of the cladding, whilst preventing insects, vermin and the build up of debris.



2. Swisspearl Plank/Start Ventilation Profile

To maintain the correct distance outwards, the first plank should be 15mm below the profile. The bottom plank is mounted a minimum of 150mm from the terrain, and 50mm from roofing, balconies and other horizontal structures. We recommend painting the rear of the bottom plank, if distance is less than 150mm from terrain.



3. Swisspearl End Profile

The finish is easily obtained by using a Swisspearl End Profile. There must be a minimum of 5mm clearance from the plank to the profile, allowing proper water drainage.



4. Swisspearl External Corner Large

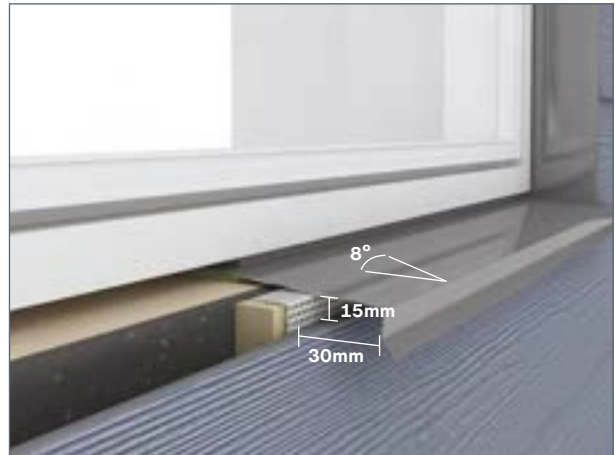
The finish is easily obtained by using a Swisspearl External Corner profile. There must be a minimum of 5mm clearance with an option of sealing between the plank and the profile.

Profile Use



5. Swisspearl Internal Corner Profile

The finish is easily obtained by using a Swisspearl Internal Corner Profile. There must be a minimum of 5mm clearance with an option of sealing between the plank and the profile.



6. Swisspearl Window Sill Profile

Using a Swisspearl alu profile below windows is a long lasting and durable solution. Do not install Swisspearl Plank horizontally in areas where they will be subjected to water for longer periods. For proper ventilation, keep a minimum of 15mm distance to plank installed below.

For window sills longer than 3 metres, cut a slit in the underlying profile and overlap by 25mm. If used with a Swisspearl Vertical Trim profile, cut a slit in the Swisspearl window ledge profile and bend upwards to form a 25mm overlap.



7. Swisspearl Vertical Trim Large

The finish around windows and doors is easily obtained by using a Swisspearl Vertical Trim profile. There must be a minimum of 5mm clearance with an option of sealing between the plank and the profile.



8. Swisspearl Horizontal Trim Large

The finish above windows and doors is easily obtained by using a Swisspearl Horizontal Trim profile. There must be a minimum of 15mm clearance from the planks and framing structure to horizontal profiles, allowing proper water drainage. If used with a sheathing board the joint between the trim and the sheathing board must be sealed with exterior grade sealant. We recommend using a high quality, exterior-grade sealant.

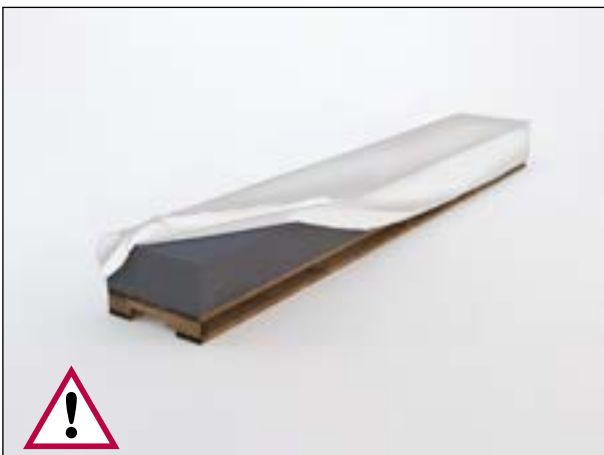
Storing and Handling



Store the pallets on a dry and level surface.



A maximum of 4 plank pallets can be stored on top of each other.



The original packaging may have sustained damage from transportation. Remove the plastic packaging immediately upon delivery at the building site, to avoid risk of efflorescence.



Important: Store materials under a dry and well-ventilated tarpaulin. If the product becomes damp, it should be placed on its vertical edge to allow rapid drying. Never install wet products.



If storing on site for more than 2-3 weeks, the product should be kept under a roof. A maximum of 4 plank pallets can be stored on top of each other.



Do not drag products from the pallet, as it may leave permanent scratch marks. Lift the product by its narrow edge as it may break if handled incorrectly.

Cutting and Sealing

When fibre cement is cut, dust is created. This dust may contain crystalline silica which can pose a health risk. To ensure adequate ventilation, always work outdoors and use cutting tools that minimise dust.

Or use a HEPA filter vacuum attachment for power saws equipped with a Swisspearl Plank Circular Blade to reduce exposure to below applicable exposure limits. Never use water when cutting.

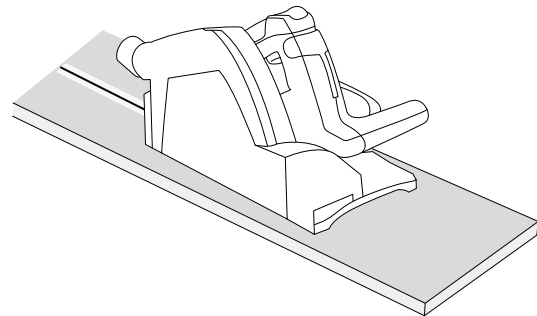
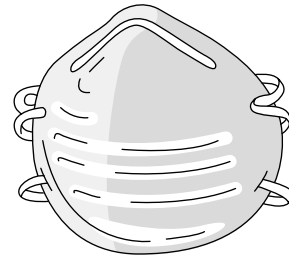
If ventilation is not adequate to limit exposure, wear a disposable respirator or air purifying cartridge respirator fitted with a Class P2 filter (European EN 143 standard). Cut the product by using a polycrystalline diamond-tipped blade. To reduce exposure to dust we recommend using Swisspearl Plank Circular Blade. For a non-ventilated and dust free environment, we recommend using Swisspearl Mechanical Shear.

When making cut-outs use a Jigsaw with a carbide blade for fibre cement. As an alternative for small tasks, use a rough woodcutting blade.

To keep edges from chipping, first test the saw on an off-cut to assess whether the plank is best cut face or rear up. Take care to remove dust from the surface after installation, as leftover cement particles will leave permanent marks if left sitting in the sun.

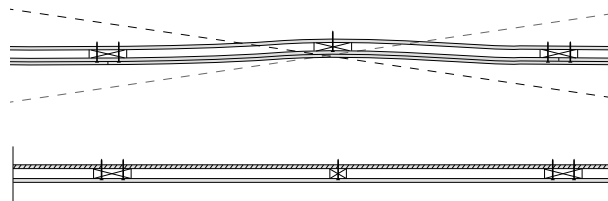
All on-site cuts (planks, panels, trim) must be resealed with 100% acrylic latex paint before installing. We recommend using Swisspearl Plank Acrylic Paint.

Be sure to apply sealant wherever the weatherboarding meets the trim and around all windows and doors. We recommend using a high quality, exterior-grade sealant.



Framing and Clearances

Swisspearl recommends installing Swisspearl Plank on a straight frame - any inconsistencies in the straightness will be noticeable on the finished surface. The rear of the planks and top of the wall should always be protected from rain/ water ingress to prevent efflorescence.



There must be a minimum of 150mm from the terrain to the bottom of the Swisspearl Plank. The clearance from balconies and other horizontal areas must be a minimum of 50mm from structures to the bottom of the products. Do not install product directly in contact with water or surfaces that collect water.

Swisspearl Plank can be installed together with a Swisspearl Windstopper.

It is important to allow air to flow freely behind the facade product. Keep a minimum distance of 25mm behind the product and a minimum of 10mm gap at the top and bottom of the weatherboarding.



There must be a minimum of 5mm (vertical) and 15mm (horizontal) clearance around windows/doors-/framing/ metal trim and other building materials to allow for structural movements and proper water drainage and ventilation.

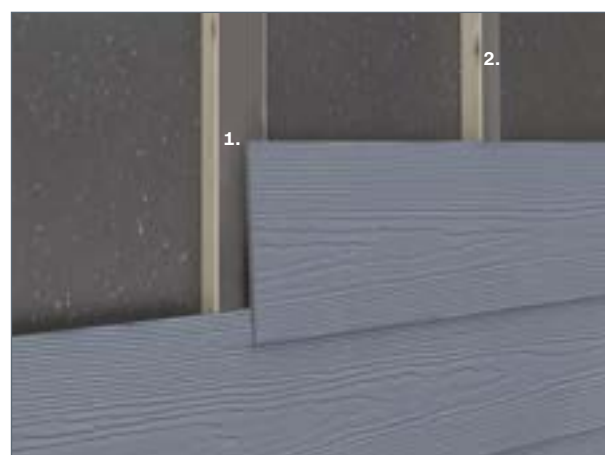


If using untreated timber battens, we recommend using Swisspearl EPDM 45/95mm to keep water out.

Installation options

1. Fix a ≈200mm Swisspearl EPDM 45/95mm strip on the batten centered above the butt joint, let it extend 20mm on the plank below.

2. Mount Swisspearl EPDM 45/95mm on the batten in full length. Use Swisspearl EPDM 45 for middle battens and Swisspearl EPDM 95 at butt joint battens.



Fixing

Timber battens				Steel	
				0.56 – 2.0mm Steel	0.7 – 1.25mm Steel
Swisspearl facade wood screw	Swisspearl 30 wood screw	Nailing by hand	Nail gun	Swisspearl facade steel screws	Swisspearl 27 steel screw
4.5x41mm stainless steel A2 – For visible fastening	4.0x30mm hardened steel – For hidden fixing	2.5x55mm Ring Nail galvanized steel – For hidden fixing	2.5x50mm Coil Nail galvanized steel – For hidden fixing	4.8x35mm stainless steel A2 – For visible fastening	3.9x27mm hardened steel ZYTEC GX – For hidden fixing

On wood

It may be necessary to pre-drill the holes at the corners to prevent the edges from breaking. Nails must penetrate a minimum of 30mm into the structural framing.

If using screws, a minimum of 20mm must penetrate the structural framing.

If using non-Swisspearl recommended screws, please be aware whether the screws require more than 20mm penetration to resist lateral loads.

All nails or screws must be corrosion resistant stainless steel, or double dipped galvanised.

On steel

For hidden fixing on steel, we recommend using Swisspearl 27 Steel Screw.

When using metal battens, Swisspearl screws must penetrate into the metal framing a minimum of 7mm.

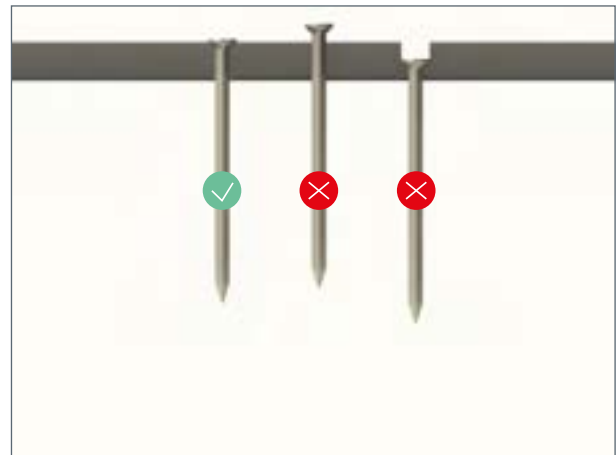
Distances

1. For hidden fixing, all fasteners must be a minimum of 25mm from top edges.

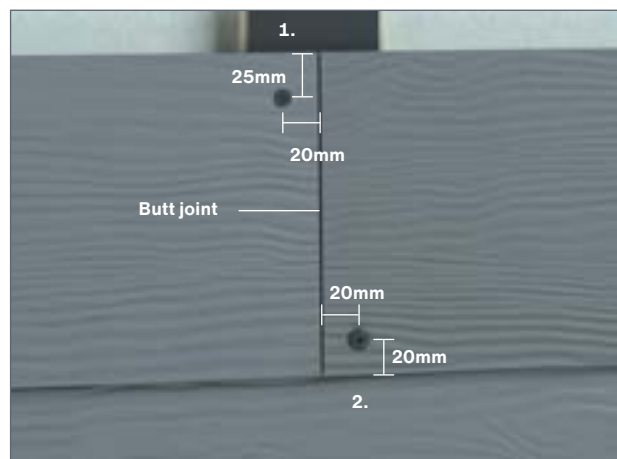
2. For visible fixing no closer than 20mm from other edges and planks corners.

Fixings must never be closer than 16mm to wood batten edges.

TIP! When using visible nail fasteners on Swisspearl Planks, please refrain from using 2 nails on top of each other (inner and outer board), as the outer nail will work its way outwards over time.



Do not countersink or angle fixings. Surely fixings must not be proud the surface of the plank.



When butt jointing, make sure planks are loosely butt jointed.

Installation Methods

Swisspearl Plank horizontal

Swisspearl Plank installation on wood or steel

1. Swisspearl Windstopper or similar
2. Wood or Swisspearl Ventilated Wall Profile 70/100
3. Swisspearl Plank

Batten min. thickness: A distance of 25mm is needed for ventilation.

Minimum width: For middle battens 45mm

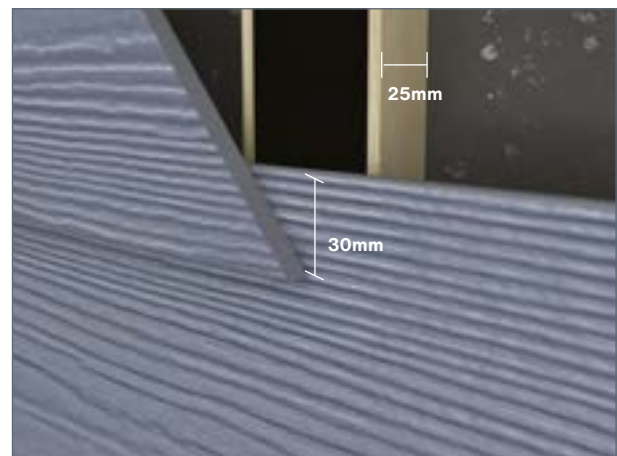
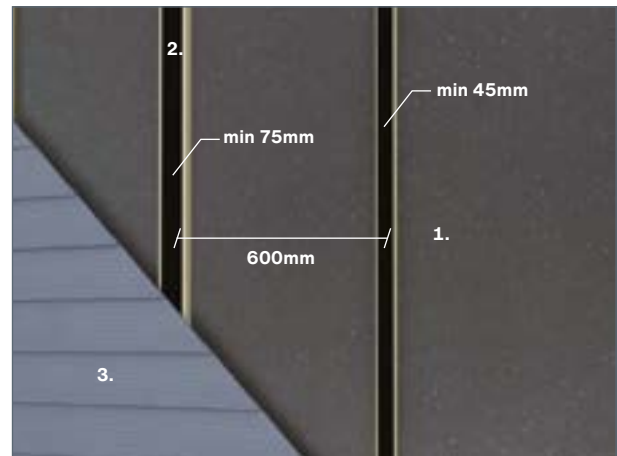
Minimum width: For butt joint battens 75mm

Maximum distance between battens fixing centres 600mm

Always install Swisspearl Plank from the bottom of the wall. Starting 1 cm below Swisspearl Plank/Start Ventilation Profile.

Use 30mm overlapping of each 180mm plank, by setting a mark for every 150mm upwards.

When butt jointing, make sure planks are loosely butt jointed and always over a batten to avoid warping.



For fast, easy and accurate installation, we recommend using a Swisspearl Gecko Gauge. The Geckos assist in creating the correct overlap and ensure proper location of the screw or nail. Using a Gecko Gauge set clamped to either end of the Planks, makes it possible for one man to install Swisspearl Planks.

NB! The Geckos do not scratch or leave marks on the painted planks.

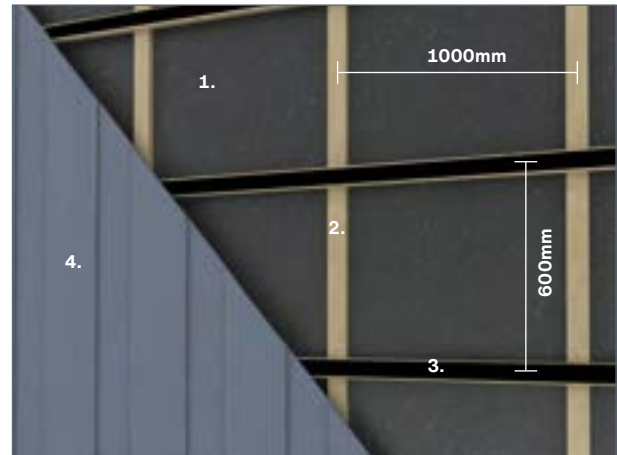


Installation Methods

Swisspearl Plank on ventilated wood framing

1. Swisspearl Windstopper or similar
2. Vertical batten min 25mm thickness, max o.c 1000mm.
3. Horizontal batten 38x56mm.
4. Swisspearl Plank

Maximum distance between horizontal battens o.c 600mm.



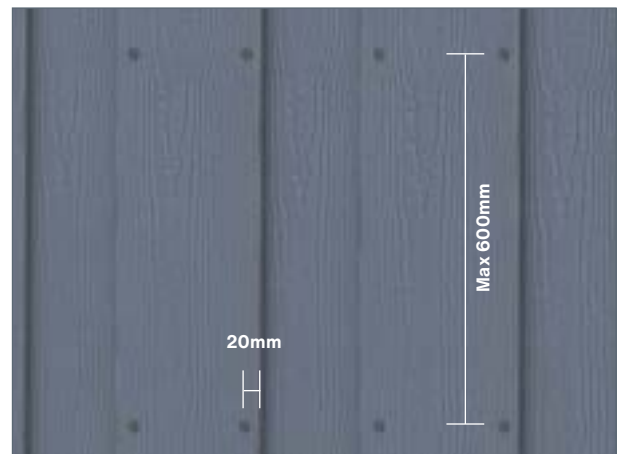
Fixing for visible fastening on steel or wood frame

The Upper plank overlaps the edge of the plank by at least 20mm on each edge. The underlying plank is fastened with nails or screws and the top plank with Swisspearl Facade Wood Screws 4.5x41mm on wood battens and Swisspearl Facade Steel Screws 4.8x35mm on steel profiles. The fastener is placed a minimum of 20mm from the edge and 20mm from the top and bottom corner.

Distance for the planks

Inner plank fixing centres 300mm distance
Outer plank fixing centres 300mm distance

To avoid efflorescence as a result of water ingress, it is recommended painting 50mm of the rear of the plank along each overlapping edge.



For visible fastening on timber battens, we recommend using Swisspearl Facade Screw.

Installation Methods

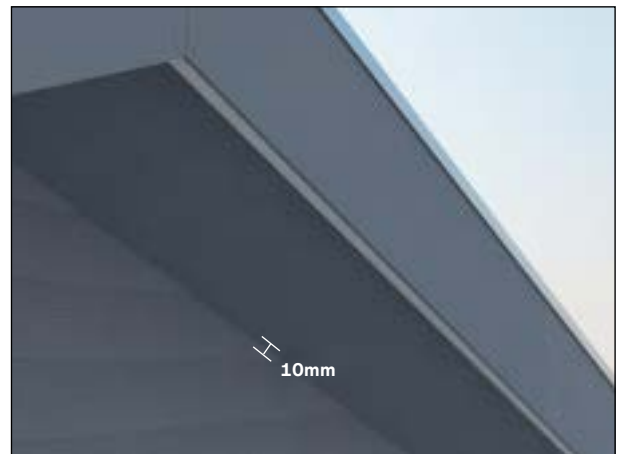
Swisspearl Plank used as roof trim or dormer

Swisspearl Plank can be used as roof trim or dormer. Maximum width of Swisspearl Plank without ventilation is 400mm.



Swisspearl Panel used as soffit

Swisspearl Panel can also be used as soffit when cut to the correct size. Always make sure there is proper ventilation. Maximum distance between battens fixing centres 400mm.



Swisspearl Panel used on dormer

Swisspearl Panel may also be applied on dormer and other large surfaces where the use of planks can be difficult. Swisspearl Panel can be installed either in large format or cut in to size.

NB! For more information about the fastening and sub constructions, see page 14. If applying the Swisspearl Plank and Swisspearl Panel on soffits or dormers, remember to leave a gap of min 10mm along the edge for a well-ventilated construction. All on-site cuts must be resealed with 100% acrylic latex paint before installing.





Care & Maintenance

Annual Inspection

Normally a Swisspearl facade cladding does not require any maintenance to keep up its strength, properties and function. Weathering impacts may however influence the visual appearance of the facade. Therefore, an annual inspection of the ventilation gaps, joints and fixings is a good idea.

Detection and repair of possible damage secures a prolonged lifetime for the facade.

Cleaning

Swisspearl claddings can be cleaned with cold or lukewarm water if necessary with the addition of a mild household cleaning agent not containing solvents. Always start from below with well-defined areas.

Rinse with plenty of clean water until the facade is perfectly clean.

Before cleaning full scale, it is recommended to test the chosen cleaning method on a smaller area to make sure it answers its purpose.

High Pressure Cleaning

Warning! High Pressure Cleaning is a severe treatment for fibre cement cladding. Exaggerated or wrong use of a high pressure cleaner may damage the surface. Therefore, High Pressure Cleaning is not recommended.

Moss & algae

Moss and algae growth can be removed with common agents available on the market. Examples are hypochlorite (e.g. trademark: Klorin) that has no long-term effect or benzialconiumchloride (e.g. trademark: Rodalon) 2.5% active that has a long term effect preventing new growth.

After wetting the facade with clean water, the agent is applied according to the supplier's instructions. Do not leave the agent to dry completely. Rinse with lots of clean water.

Efflorescence

Efflorescence is a naturally occurring, white, powdery deposit that can appear on cement-based building materials (including bricks, cement walls, grout, and fibre cement). It is the result of a process in which moisture draws salt crystals to the surface, evaporates, and leaves a chalky substance behind. Efflorescence occurs when all three of the following conditions exist:

1. Water-soluble salts are present in the building material.
2. There is enough moisture in the wall to turn the salts into a soluble solution.
3. There is a path for the soluble salts to get to the surface.

Efflorescence may also be a sign of water intrusion behind the weatherboarding. Make certain that all openings are properly covered and there is no water intrusion due to over-driven nails.

While some efflorescence may weather away naturally on its own, it is best to take steps to treat it. Efflorescence can be removed with household white vinegar and water. For most cases of efflorescence, Step 1 - 3 works well. But for substantial deposits of efflorescence go to Step 4.

For best results, follow these cleaning instructions: Protect areas that are not to be cleaned. Rinse all plants and vegetation around the facade with water before and after application of the vinegar.

Generously coat the entire surface area with vinegar. Allow the solution to sit on the surface for 10 minutes. Rinse the treated area thoroughly with water from the top down and allow the area to air dry.

For extra tough efflorescence:

Use a 10% acetic acid solution (E.g. 1 part Vinegar Acid 32% and 2 parts Water) and apply to affected area with a cotton cloth. A light scrubbing with the cotton cloth may be required. After about 20 seconds rinse with water.

Painting

All Swisspearl Planks, Panels & Trim are factory sealed. Reseal cut edges with a high-quality 100 % acrylic latex paint before installation.

Use only top quality, exterior type, acrylic latex paints. Confirm the compatibility of your paint to fibre cement with your paint supplier. Swisspearl recommends a 100 % acrylic latex paint using only the highest-grade paints.

Use a high-quality 100 % acrylic latex paint. Before applying the finish coat, always follow the paint manufacturer's recommendation for surface preparation and paint application.

NOTE: Never apply oil-based paints to Swisspearl Planks, Panels or Trim. Always paint out of direct sunlight and with a 100 % clean and dry surface, above 10° Celsius. Take care to paint entire planks before stopping, as drying lines will show.

Swisspearl is not responsible for surface paints and workmanship.

Health and Safety

Avoid breathing silica dust

As for all other building materials, adherence to local building rules and regulations when working with Swisspearl products is required. Working with crystalline silica containing products should be conducted in well-ventilated conditions by use of simple and effective precautions.

When cutting, grinding or drilling, respirable crystalline silica is released. Breathing large amounts of dust may cause irritation to respiratory functions, eyes and/or skin.

Therefore wear personal protection equipment (Safety goggles, safety suit and a respiratory mask - P2 marked) See safety data sheet for full and final information.

Ensure adequate ventilation at workstation. For best practice use Swisspearl Mechanical Shear.

Remove dust after installation with water to suppress airborne dust particles.

Warranty

Warranty

Warranty conditions can be commissioned at your local Swisspearl representative.

Disclaimer

The information contained in this publication and otherwise supplied to users of Swisspearl products is based on Swisspearl's general experience, best knowledge and belief. However, due to factors which fall beyond Swisspearl's knowledge and control, which can affect the use of the products, no warranty is given expressed or implied with respect to fitness for particular purpose or otherwise.

Swisspearl's policy is one of continuous improvement. Swisspearl therefore reserves the right to alter specifications at any time and without notice. Colours and textures may vary according to light and weather conditions. Owing to this and limitations of the printing process, colours in this brochure may vary.

Please, ensure that you have the latest version of this publication by checking that the publication date corresponds with the downloadable version from our website. In case of doubt, please contact your local Swisspearl representative.



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17
DoP: 045/DoP

EN 12467:2012+A2:2018

Fibre cement flat sheet
for internal and external walls and ceilings

NT

Mechanical resistance: A2

Reaction to fire: ≤ 8 mm joints: A2-s1, d0

Water impermeability: No water drops

Dimensional variations: Pass

Dangerous substances: NPD

Durability: Pass