

Environmental Product Declaration

In accordance with ISO14025:2006 and
EN15804:2012+A2:2019

Exterior cladding of Superwood, Fully impregnated



Owner of the declaration:
Superwood A/S

Product name:
Exterior cladding of Superwood, Fully
impregnated

Declared unit:
1 m2 produced exterior cladding of
Superwood, fully impregnated,
untreated surface

Product category /PCR:
NPCR Part A:202 Construction products
and services Ver 2
NPCR 015 Part B for wood and wood-
based products 4.0

Program holder and publisher:
The Norwegian EPD foundation

Declaration number:
NEPD-15239-18656

Registration number:
NEPD-15239-18656

Issue date: 25.03.2026

Valid to: 25.03.2031

General information

Product:

Exterior cladding of Superwood, Fully impregnated

Program operator:

EPD-Global
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Declaration number:

NEPD-15239-18656

This declaration is based on Product Category Rules:

NPCR Part A:2021 Construction products and services Ver 2

NPCR 015 Part B for wood and wood-based products 4.0

Statement of liability:

The owner of the declaration shall be liable for the underlying information and evidence. EPD-Global shall not be liable with respect to manufacturer, life cycle assessment data and evidences.

Declared unit:

1 m2 produced exterior cladding of Superwood, fully impregnated, untreated surface

Functional unit:

1 m2 exterior cladding of Superwood, fully impregnated, untreated surface, cradle to grave, reference service life 60 years

Verification:

Independent verification of the declaration and data, according to ISO14025:2010

internal ☐

external ☒

Sign

Independent verifier approved by EPD-Global

Owner of the declaration:

Superwood A/S
Contact person: Sofie Mora Kristensen
Phone: +45 7687 3200
e-mail: smk@superwood.dk

Manufacturer:

Superwood A/S
Palsgaardvej 3, DK-7362 Hampen, Denmark

Place of production:

Hampen, Denmark

Management system:

PEFC (SA-PEFC/COC-007725) valid 11.09.25-10.09.30

Organisation no:

26434602

Issue date:

25.03.2026

Valid to:

25.03.2031

Year of study:

Consumption data: 01.06.24 - 31.05.25.

Comparability:

EPD of construction products may not be able to compare if they do not comply with EN 15804 and are seen in a building context.

The EPD has been worked out by:

Oddbjørn Dahlstrøm Andvik, Asplan Viak AS

Approved

Manager of EPD-Global

Product

Product description:

Fully impregnated, planed wood from PEFC certified spruce (*Picea abies*), from Norway, Sweden and Finland, for outdoor use above the ground. The wood is impregnated without the use of heavy metals and organic solvents. The impregnation protects the tree completely into the core so that the tree is protected against rot and fungus. The process takes place without the use of water, so the wood is dry and can be used immediately after impregnation.

Product specification:

Main application area is outdoor cladding (in all known cladding profiles), but noise barriers, windscreens, railings, roofing tables and more are other natural applications. The cladding boards can be delivered with and without surface treatment from the factory. This EPD yields for impregnated cladding without surface treatment.

The EPD encompasses all dimensions and profiles of the exterior of Superwood, with an untreated surface.

Materials	Value	%
Woody of spruce, dry weight	8,67	81,9 %
Water, in wood, 18%	1,90	18,0 %
Impregnating, SC200	0,0074	0,1 %
Surface treatment (paint)	0,00	0,0%
Total, without surface treatment and packaging	10,6	100 %
Packaging, plastic 0,02 kg / m ²	0,02	

Technical data:

Superwood has a density of 470 kg/m³, with moisture content of 16-18%, ±2% (18% standard). Superwood is protected from rotting, fungus and blue mold according to DS / EN 335, user class 3: above ground contact. For Declaration of Performance (DoP), PEFC certificate and complementary information, see www.superwood.dk.

Standard dimension is 22,5 mm * 145 mm. Thickness of 22,5 mm is used in calculations. For 1 m² of covering cladding, 6,90 running meters of Superwood (dimension 0,145 m) is consumed.

Market:

The EPD includes transport to and sales in Denmark, Norway, Sweden and Germany.

Reference service life, product:

Reference service life is 60 years according to PCR. The actual service life depends on climatic conditions and external impacts, such as construction and maintenance.

Reference service life, building:

Reference service life is 60 years according to PCR. The actual service life depends on climatic conditions and external impacts

LCA: Calculation rules

Declared unit:

1 m² produced exterior cladding of Superwood, fully impregnated, untreated surface

Cut-off criteria:

All major raw materials and all the essential energy is included. The production process for raw materials and energy flows that are included with very small amounts (<1%) are not included. This cut-off rule does not apply for hazardous materials or substances.

Allocation:

The allocation is made in accordance with the provisions of EN 15804+A2:2019. In forestry, economic allocation is used between saw logs and pulpwood. At sawmills, energy, water, waste, materials and internal transport are divided into sub-processes and then allocated according to income between the main and by-products. Environmental impact and resource consumption for the primary production of recycled materials are allocated to the original product system.

NB: Economic allocation is used in production processes throughout the value chain that are considered joint co-processes according to EN 15804 (2021), with the exception of wood consumption "school 1". Different interpretations of the regulations have led to different practical methodologies in Europe. This life cycle assessment follows "school 1" as described by EPD-Norway (2024). Changes in results may occur upon final harmonization of the regulations.

For the production of Superwood, all consumption and waste are mass-allocated for the production of impregnated wood. Primary production of recycled materials is allocated to the main product where the material was used.

Surplus electricity produced from the solar photovoltaic modules is not included, as this is allocated outside the system.

Data quality:

Production data is based on consumption data from 2024 to 2025. Wood is splitted, impregnated and profiled in Denmark. For sawn wood A1-A3 LCA impacts are based on EPD of sawn and planed timber (NEPD-12187-12243 used instead of EPD from Versowood due to allocation "school 1" as described by EPD-Norway (2024). Remaining data is based on Ecoinvent v3.11, allocation, cut-off by classification (March 2025) and SimaPro v 10.2.0.3. Characterization factors have been used from EN15804:2012 + A2: 2019. Ecoinvent processes are adjusted to improve representativeness (change of electricity mix).

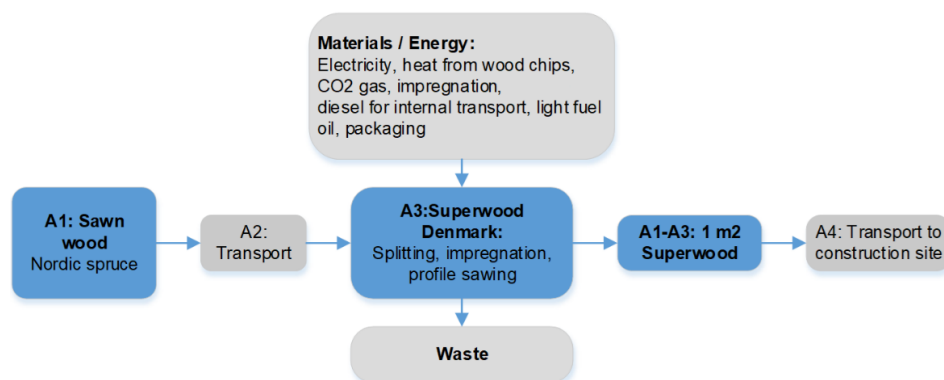
Superwood production site has installed photovoltaic modules. A1-A3 LCA impacts are based on NEPD-7031-6426-EN (PV modules) and MR-EPDITALY0075 (solar inverter).

System boundaries (X=included, MND=module not declared, MNR=module not relevant)

Product stage			Assembly stage		Use stage							End of life stage				Benefits & loads beyond system boundary
Raw materials	Transport	Manufacturing	Transport	Assembly	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	MND	MND	X	X	X	X	X

System boundary:

Flow sheet for manufacturing (A1-A3) and transport (A4) of Superwood is shown below.



Calculation of biogenic carbon content:

Sequestration and emissions of biogenic carbon is calculated according to NS-EN 16485: 2014. This approach is based on the modularity principle of EN 15804: emissions should be counted in the module in which it actually occurs. The calculation of biogenic carbon content and conversion to carbon dioxide is done according to the NS-EN 16449: 2014. The contribution to GWP from biogenic carbon is shown for each module under core environmental impact indicators GWP-biogenic.

385 kg/m³ dry weight for Superwood has a carbon content converted to carbon dioxide of 706 kg CO₂ per m³ wood or 15,9 kg CO₂ per m² wood (22,5 mm thickness). The wood is from sustainable forestry and is PEFC certified.

LCA: Scenarios and additional technical information

The following information describes the scenarios in the different modules of the EPD. All numbers are pr m² Superwood.

Transport from production place to assembly/user (A4)

Transport from production place to assembly/user (A4)	Capacity utilisation (incl. return) [%]	Distance [km]	Fuel/Energy consumption	Unit	Value
Truck	53%	Lorry, >32t, EURO 6	200	0,017 l/tkm	3,4 l/t

Transport to	Distance truck	Distance boat	A4, GWP fossil, kg CO ₂ -eq/m ²
Denmark	200	0	0,176
Norway (Oslo)	340	160	0,316
Sweeden (Örebro)	590	160	0,536
Germany (Berlin)	500	0	0,439

All production normally takes place directly from Hampen to construction site or via retail. It is considered a scenario of 200 km on a truck > 32 t. The A4 distance is calculated as average distance for the Danish market. Additional distances estimated for other markets are given in the table below.

Assembly (A5)

	Unit	Value
Water consumption	m ³	0
Electricity consumption	kWh	0,00625
Other energy carriers	MJ	0
Material loss	kg	Scenario 1: 5%: 0,529 Scenario 2: 1,25%: 0,132
Plastic packaging	Kg	0,02

It is assumed 0,00625 kWh/m² energy consumption (1 MJ/m³) at construction site. Waste treatment of the packaging is included in A5.

Scenario 1: It is assumed 5% material loss at installation

Scenario 2: Superwood can be produced with end tongue and groove. Installation with end tongue and groove can reduce material loss during installation to 1,25%.

Use (B1)

This stage includes no activities or emissions related to the product.

Maintenance (B2)/Repair (B3)

	Unit	Value
Maintenance cycle	year	7
Paint	kg	0
Detergent	kg	0,018
Water consumption	litre	0,378
Electricity consumption	MJ	0
Other energy carriers	MJ	0
Material loss	Kg	5%: 0,529

For untreated Superwood there is a minimal need for maintenance besides regular cleaning (B2) during the building reference service life. The frequency of maintenance can be different and should always be considered in relation to the intended use, construction and climatic conditions.

5% replacement of cladding for repair (B3) is assumed during the building reference service life.

Replacement (B4)/Refurbishment (B5)

Reference service life is 60 years according to PCR. The actual service life depends on climatic conditions and external impacts, such as construction and maintenance. B4 and B5 include no activities or impacts related to the product.

Operational energy (B6) and water consumption (B7)

When used as an external cladding, the product has no operational energy or water use.

End of Life (C1, C3, C4)

	Unit	Scenario 1: Energy recovery	Scenario 2: Takeback for reuse
Hazardous waste disposed	kg	0	0
Collected as mixed construction waste	kg	10,6	10,6
Reuse	kg	0	8,48 (80%)
Recycling	kg	0	0
Energy recovery	kg	10,6	2,12 (20%)
To landfill	kg	0	0

The product is without heavy metals.

Scenario 1: The waste processing is assumed as wood waste treated with incineration with energy recovery.

Scenario 2: Superwood is implementing a takeback system to re-use dismantled cladding. If a customer wants to change their facade before the cladding reach end-of-life, Superwood takes back the existing cladding. The dismantled cladding can then be

used in new projects, creating a closed-loop system. It is assumed that 80% of takeback wood can be reused and 20% is waste (energy recovery) due to low quality.

Avoided emissions in module D is based on Superwood with untreated surface. The need for new surface treatment on reused wood has not been assessed and may need to be added manually to the calculations.

Transport to waste processing (C2)

Transport from production place to assembly/user (C2)	Capacity utilisation (incl. return) [%]	Distance [km]	Fuel/Energy consumption	Unit	Value
Truck	36,67 % (Ecoinvent)	Lorry 16-32t, Euro 5	50	0,045 l/tkm	2,3 l/t

The average distance for transport of wood waste is assumed to be 50 km.

Benefits and loads beyond the system boundaries (D)

Benefits and loads beyond the system boundaries (D)	Unit	Value (100% energy recovery)
Substitution of electricity, in Norway	MJ	3,82
Substitution of thermal energy, district heating, in Norway	MJ	118,2
Substitution of primary steel with net scrap	kg	0

The benefits of exported energy from energy recovery in a treatment facility is calculated with substitution of Norwegian electricity market mix and Norwegian district heating mix (SSB 2020). Conversion factors for efficiency and losses from waste to delivered energy are included.

LCA: Results

For The manufacturing process (A3 Superwood) 100% renewable electricity from Danish wind power is used in calculations (Guarantee of Origin certificates). LCA results (GWP) calculated without the use of Guarantee of Origin is provided under Additional Norwegian requirements.

The result tables are given using a market based for foreground system (A3). More information about transparent reporting of electricity in the additional requirements section.

Core environmental impact indicators

		1: Without end tongue and groove		2: With end tongue and groove									1: 100% energy recovery			2: 100% reuse (takeback)		
Indicator	Unit	A1-A3	A4	A5 (5% loss)	A5 (1,25% loss)	B2	B3	C1	C2	C3	C4	D	C3	C4	D			
GWP-total	kg CO2 eq.	-1,43E+01	1,76E-01	1,02E-01	2,54E-02	1,95E-03	1,05E-01	1,89E-03	1,76E-01	1,60E+01	6,69E-04	-1,27E+00	(1,59E+1)*	1,33E-04	MND			
GWP-fossil	kg CO2 eq.	1,60E+00	1,76E-01	1,00E-01	2,50E-02	3,86E-04	1,04E-01	1,17E-03	1,76E-01	1,03E-01	6,66E-04	-7,30E-01	2,06E-02	1,33E-04	-1,42E+00			
GWP-biogenic	kg CO2 eq.	-1,59E+01	3,55E-04	4,92E-04	1,23E-04	1,55E-03	-1,64E-04	7,17E-04	4,19E-04	1,59E+01	3,59E-06	-5,41E-01	(1,59E+1)*	7,19E-07	MND			
GWP-LULUC	kg CO2 eq.	2,02E-02	6,09E-05	1,02E-03	2,56E-04	9,78E-06	1,07E-03	4,51E-06	5,72E-05	2,95E-05	1,69E-07	-2,42E-03	5,90E-06	3,39E-08	-1,67E-02			
ODP	kg CFC11 eq.	2,15E-07	3,77E-09	1,12E-08	2,79E-09	1,20E-11	1,17E-08	2,66E-11	3,73E-09	1,50E-09	2,35E-11	-1,80E-08	3,01E-10	4,69E-12	-1,76E-07			
AP	mol H ⁺ eq.	1,53E-02	4,31E-04	9,70E-04	2,42E-04	1,44E-06	1,01E-03	7,16E-06	5,49E-04	3,26E-03	3,78E-06	-7,28E-03	6,51E-04	7,57E-07	-1,37E-02			
EP-freshwater	kg P eq.	2,89E-04	1,18E-05	1,98E-05	4,95E-06	9,41E-08	1,98E-05	1,02E-06	1,17E-05	6,82E-05	4,65E-08	-2,88E-04	1,36E-05	9,31E-09	-2,89E-04			
EP-marine	kg N eq.	5,60E-03	1,22E-04	3,72E-04	9,29E-05	3,57E-07	3,89E-04	1,42E-06	1,85E-04	1,63E-03	1,54E-06	-2,42E-03	3,26E-04	3,07E-07	-4,97E-03			
EP-terrestrial	mol N eq.	6,28E-02	1,33E-03	4,13E-03	1,03E-03	3,00E-06	4,32E-03	1,72E-05	2,01E-03	1,76E-02	1,68E-05	-2,73E-02	3,52E-03	3,36E-06	-5,57E-02			
POCP	kg NMVOC eq.	1,77E-02	7,45E-04	1,18E-03	2,94E-04	2,28E-06	1,23E-03	3,94E-06	8,33E-04	4,62E-03	6,69E-06	-7,43E-03	9,24E-04	1,34E-06	-1,56E-02			
ADP-M&M ²	kg Sb eq.	3,23E-05	3,59E-07	1,69E-06	4,23E-07	3,19E-09	1,75E-06	3,10E-08	5,77E-07	2,73E-07	1,12E-09	-2,32E-05	5,46E-08	2,25E-10	-3,04E-05			
ADP-fossil ²	MJ	1,54E+01	2,00E-01	8,14E-01	2,03E-01	1,45E-03	8,42E-01	1,36E-02	1,91E-01	2,69E-01	9,03E-04	-3,35E+00	5,39E-02	1,81E-04	-1,30E+01			
WDP ²	m ³	4,10E+01	1,14E-02	2,05E+00	5,13E-01	5,47E-04	2,15E+00	1,90E-04	9,22E-03	1,70E-02	8,58E-05	-2,06E-01	3,40E-03	1,72E-05	-3,28E+01			

* Biogenic carbon leaving the system. 1,27E+01 kg CO2 eq. not released to air (no combustion) due to reuse.

GWP-total: Global Warming Potential; **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:** Depletion potential of the stratospheric ozone layer; **AP:** Acidification potential, Accumulated Exceedance; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-marine:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial:** Eutrophication potential, Accumulated Exceedance; **POCP:** Formation potential of tropospheric ozone; **ADP-M&M:** Abiotic depletion potential for non-fossil resources (minerals and metals); **ADP-fossil:** Abiotic depletion potential for fossil resources; **WDP:** Water deprivation potential, deprivation weighted water consumption

Reading example: $9.0 \text{ E-}03 = 9.0 \times 10^{-3} = 9.0 \times \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10} = 0.009$ $9.0 \text{ E+}03 = 9.0 \times 10^3 = 9.0 \times 10 \times 10 \times 10 = 9000$

Additional environmental impact indicators

Additional environmental impact indicators				1: Without end tongue and groove	2: With end tongue and groove					1: 100% energy recovery			2: 100% reuse (takeback)		
Indicator	Unit	A1-A3	A4	A5 (5% loss)	A5 (1,25% loss)	B2	B3	C1	C2	C3	C4	D	C3	C4	D
PM	Disease incidence	4,38E-07	1,61E-08	2,44E-08	6,09E-09	1,12E-11	2,55E-08	4,53E-11	1,11E-08	2,60E-08	8,80E-11	-4,46E-07	5,21E-09	1,76E-11	-4,39E-07
IRP	kBq U235 eq.	1,40E-01	3,23E-03	7,80E-03	1,95E-03	3,93E-05	7,82E-03	3,86E-04	2,89E-03	3,23E-03	2,08E-05	-1,12E-01	6,45E-04	4,16E-06	-1,34E-01
ETP-fw ²	CTUe	5,10E+01	5,79E-01	2,72E+00	6,80E-01	2,81E-03	2,84E+00	1,27E-02	5,30E-01	2,30E+00	2,12E-03	-5,95E+00	4,60E-01	4,23E-04	-4,20E+01
HTP-c ²	CTUh	5,88E-09	2,67E-11	2,34E-09	5,86E-10	9,60E-14	2,46E-09	5,74E-13	2,90E-11	4,09E-08	9,04E-14	-7,35E-10	8,19E-09	1,81E-14	-4,85E-09
HTP-nc ²	CTUh	7,82E-08	2,34E-09	4,57E-09	1,14E-09	3,93E-12	4,77E-09	3,61E-11	1,94E-09	9,11E-09	4,55E-12	-4,79E-08	1,82E-09	9,10E-13	-7,21E-08
SQP ²	Dimensionless	3,26E+01	3,22E+00	1,88E+00	4,70E-01	1,91E-03	1,94E+00	3,27E-02	1,43E+00	2,67E-01	4,67E-02	-1,48E+02	5,33E-02	9,35E-03	-5,57E+01

PM: Particulate matter emissions; **IRP:** Ionising radiation, human health; **ETP-fw:** Ecotoxicity (freshwater); **ETP-c:** Human toxicity, cancer effects; **HTP-nc:** Human toxicity, non-cancer effects; **SQP:** Land use related impacts / soil quality

¹ 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.

² The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Resource use

Parameter	Unit	A1-A3	A4	1: Without end tongue and groove	2: With end tongue and groove	B2	B3	C1	C2	100% energy recovery			2: 100% reuse (takeback)		
				A5 (5% loss)	A5 (1,25% loss)					C3	C4	D	C3	C4	D
PERE	MJ	6,54E+01	4,17E-02	3,30E+00	8,25E-01	8,34E-04	3,44E+00	2,42E-02	3,95E-02	5,05E-02	4,60E-04	-6,52E+01	1,01E-02	9,20E-05	-6,54E+01
PERM	MJ	2,16E+02	0,00E+00	1,08E+01	2,70E+00	0,00E+00	1,13E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,73E+02
PERT	MJ	2,81E+02	4,17E-02	1,41E+01	3,52E+00	8,34E-04	1,47E+01	2,42E-02	3,95E-02	5,05E-02	4,60E-04	-6,52E+01	1,01E-02	9,20E-05	-2,38E+02
PENRE	MJ	1,50E+01	2,00E-01	7,91E-01	1,98E-01	1,46E-03	8,18E-01	1,36E-02	1,91E-01	2,69E-01	9,03E-04	-3,36E+00	5,39E-02	1,81E-04	-1,26E+01
PENRM	MJ	1,62E+00	0,00E+00	8,10E-02	2,03E-02	0,00E+00	8,51E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,30E+00
PENRT	MJ	1,56E+01	2,00E-01	8,25E-01	2,06E-01	1,46E-03	8,53E-01	1,36E-02	1,91E-01	2,69E-01	9,03E-04	-3,36E+00	5,39E-02	1,81E-04	-1,32E+01
SM	kg	2,89E-05	0,00E+00	1,44E-06	3,61E-07	0,00E+00	1,51E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,31E-05
RSF	MJ	8,75E+00	0,00E+00	4,37E-01	1,09E-01	0,00E+00	4,59E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-7,00E+00
NRSF	MJ	3,74E-03	0,00E+00	1,87E-04	4,67E-05	0,00E+00	1,96E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,99E-03
FW	m ³	9,88E-02	3,37E-04	5,24E-03	1,31E-03	1,39E-05	5,47E-03	3,63E-05	2,81E-04	4,80E-03	2,14E-05	-1,92E-01	9,59E-04	4,28E-06	-1,17E-01

PERE Renewable primary energy resources used as energy carrier; **PERM** Renewable primary energy resources used as raw materials; **PERT** Total use of renewable primary energy resources; **PENRE** Nonrenewable primary energy resources used as energy carrier; **PENRM** Nonrenewable primary energy resources used as materials; **PENRT** Total use of non-renewable primary energy resources; **SM** Use of secondary materials; **RSF** Use of renewable secondary fuels; **NRSF** Use of non-renewable secondary fuels; **FW** Use of net fresh water.

End of life – Waste

Parameter	Unit	A1-A3	A4	1: Without end tongue and groove	2: With end tongue and groove	B2	B3	C1	C2	1: 100% energy recovery			2: 100% reuse (takeback)		
				A5 (5% loss)	A5 (1,25% loss)					C3	C4	D	C3	C4	D
HW	kg	1,58E-02	7,24E-05	3,69E-03	9,22E-04	3,72E-07	3,87E-03	3,17E-06	6,12E-05	8,33E-04	5,69E-02	-7,75E-03	1,67E-04	1,14E-02	-1,42E-02
NHW	kg	9,19E-01	2,81E-01	6,70E-02	1,67E-02	2,37E-05	7,00E-02	1,78E-04	1,16E-01	3,58E-02	2,91E-02	-3,03E-01	7,16E-03	5,83E-03	-7,96E-01
RW	kg	1,03E-04	7,96E-07	5,34E-06	1,33E-06	1,00E-08	5,52E-06	8,80E-08	7,13E-07	8,08E-07	4,89E-09	-2,53E-05	1,62E-07	9,78E-10	-8,74E-05

HWD Hazardous waste disposed; **NHWD** Non-hazardous waste disposed; **RWD** Radioactive waste disposed.

End of life – output flow

				1: Without end tongue and groove	2: With end tongue and groove								1: 100% energy recovery			2: 100% reuse (takeback)		
Parameter	Unit	A1-A3	A4	A5 (5% loss)	A5 (1,25% loss)	B2	B3	C1	C2	C3	C4	D	C3	C4	D			
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	8,48E+00	0,00E+00	0,00E+00			
MFR	kg	9,68E-03	0,00E+00	2,05E-02	5,12E-03	0,00E+00	1,51E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-7,74E-03			
MER	kg	7,52E-03	0,00E+00	5,30E-01	1,33E-01	0,00E+00	5,57E-01	0,00E+00	0,00E+00	1,06E+01	0,00E+00	0,00E+00	2,12E+00	0,00E+00	-6,02E-03			
EEE	MJ	5,77E-03	0,00E+00	1,91E-01	4,78E-02	0,00E+00	2,01E-01	0,00E+00	0,00E+00	3,82E+00	0,00E+00	0,00E+00	7,64E-01	0,00E+00	-4,61E-03			
ETE	MJ	8,36E-02	0,00E+00	5,92E+00	1,48E+00	0,00E+00	6,21E+00	0,00E+00	0,00E+00	1,18E+02	0,00E+00	0,00E+00	2,36E+01	0,00E+00	-6,69E-02			

CRU Components for reuse; **MFR** Materials for recycling; **MER** Materials for energy recovery; **EEE** Exported electric energy; **EET** Exported thermal energy.

Information describing the biogenic carbon content at the factory gate

Biogenic carbon content	Unit	Value
Biogenic carbon content in product	kg C	4,33
Biogenic carbon content in the accompanying packaging	kg C	0

Note: 1 kg biogenic carbon is equivalent to 44/12 (approx. 3.67) kg CO₂

Additional requirements

Transparent reporting of energy

The EPD provides in the main result tables environmental impact categories based on a market based approach. The information below is provided so EPD users are able to understand the effect of these methodological choices.

The table below shows calculation of GWP-total for energy resources used in the manufacturing process (A3) for each approach.

Energy source	Data source	Amount*	Unit	GWP _{total} [kg CO ₂ - eq/unit]	SUM [kg CO ₂ - eq]
Location based approach					
Electricity, low voltage {DK} market for Cut-off, U – Ecoinvent (A5, C1)	Simapro/ecoinvent	2,95	kWh	0,187	0,55
Market based approach					
Guarantees of origin. Electricity, low voltage {DK, Guarantee of Origin: wind power, KlimaEl wind } market for Cut-off, U – Ecoinvent (A3 Superwood)	Simapro/ecoinvent	2,95	kWh	0,021	0,06

The electricity guarantee of origin utilized in this EPD is provided by Miljøvenlig EI, Energi Danmark, 100% vind turbines. Guarantee of Origin is valid throughout the validity period of the EPD. Documentation on certificate is provided upon request to Superwood A/S.

Additional environmental impact indicators required for construction products

In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

Parameter	Unit	A1-A3	A4	A5 (5%)	A5 (1,25%)	B2	B3	C1
GWP-IOBC	kg CO ₂ -eq.	1,62E+00	1,76E-01	1,00E-01	2,50E-02	3,86E-04	1,04E-01	1,17E-03

		1: 100% energy recovery				2: 100% reuse (takeback)		
Parameter	Unit	C2	C3	C4	D	C3	C4	D
GWP-IOBC	kg CO ₂ -eq.	1,76E-01	1,03E-01	6,66E-04	-7,30E-01	2,06E-02	1,33E-04	-1,42E+00

GWP-IOBC Global warming potential calculated according to the principle of instantaneous oxidation.

Hazardous substances

The declaration is based upon reference to threshold values and/or test results and/or material safety data sheets provided to EPD verifiers. Documentation available upon request to EPD owner.

- ☒ The product contains no substances given by the REACH Candidate list
- ☐ The product contains substances given by the REACH Candidate list that are less than 0,1 % by weight.
- ☐ The product contains dangerous substances, more than 0,1% by weight, given by the REACH Candidate List, see table.
- ☐ The product contains no substances given by the REACH Candidate list or
- ☐ The product is classified as hazardous waste, see table.

Name	CAS no.	Amount

Indoor environment

Superwood is intended for external use and will not affect indoor environment.

Carbon footprint

While a carbon footprint analysis has not been conducted for the product separately, the results section does include an evaluation of Global Warming Potential (GWP) with such an analysis. The GWP total results presented in this EPD document represents the carbon footprint of the product studied

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SSB (2020) Table 09469	Net production of district heating, by heating system

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