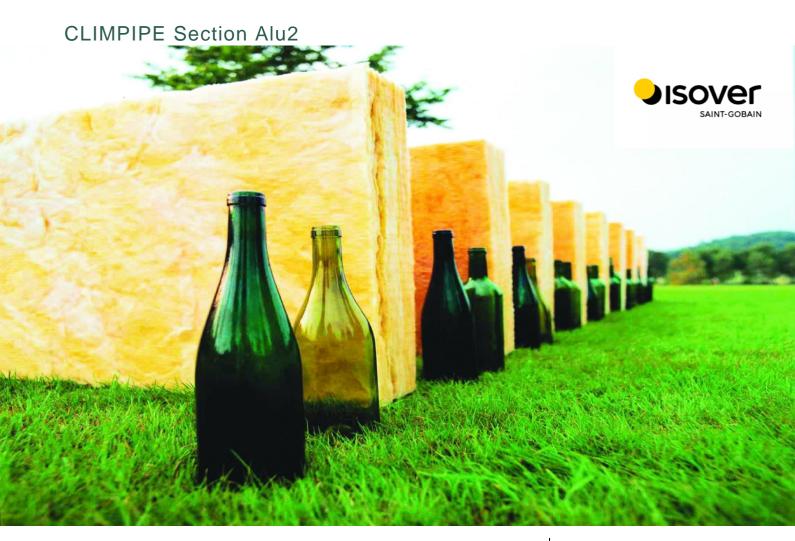




Environmental Product Declaration

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





The Norwegian **EPD Foundation**

Owner of the declaration:

Saint-Gobain Sweden AB, Isover

Product name:

CLIMPIPE Section Alu2

Functional unit:

1 m of product with a thermal resistance of 1 K.m².K/W and a thickness of 33 mm and inner diameter of 15 mm, with a reference service life of 60 years.

Product category /PCR: Core PCR EN 15804 :2012+A2:2019 NPCR 012:2022 Part B for thermal insulation products

Program holder and publisher:

The Norwegian EPD foundation

Declaration number:

NEPD-11381-11380

Registration number:

NEPD-11381-11380

Version 1

Issue date:

18.06.2025

Valid to:

18.06.2030

General information

Product:

CLIMPIPE Section Alu2

Program operator:

The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo, Norway

Tlf: +47 23 08 80 00 e-mail: post@epd-norge.no

Declaration number:

NEPD-11381-11380

This declaration is based on Product Category Rules:

Core PCR EN 15804 :2012+A2:2019 NPCR 012:2022 Part B for thermal insulation products

Statement of liability:

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

Declared unit:

1 m of mineral wool insulation with alu-facing

Functional unit:

1 m of product with a thermal resistance of 1 K.m².K/W, a thickness of 30 mm and inner diameter of 15 mm, with a reference service life of 60 years

Verification:

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

internal |

external X

Martin Erlandsson, CarbonZero Independent verifier approved by EPD Norway

Hearifecturiscon

Owner of the declaration:

Saint-Gobain Sweden AB, ISOVER Contact person: David Overton Holm

e-mail: UDKGEN-Nordic-PM-TI@saint-gobain.com

Manufacturer:

Saint-Gobain Sweden AB, ISOVER

Place of production:

Storgatan 29, 267 73 Billesholm, Sweden

Management system:

ISO 9001 (Certificate no. SE008631) ISO 14001 (Certificate no. SE008526) ISO 50001 (Certificate no. SE0085516)

Organisation no:

556241-2592

Valid from:

18.06.2025

Valid to:

18.06.2030

Year of study:

2023

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:

Päivi Pesu (Saint-Gobain Nordic) and Saint-Gobain LCA central team

Approved

Manager of EPD Norway

Product

Product description:

This Environmental Product Declaration (EPD®) describes the environmental impacts of 1 linear meter of Climpipe Section Alu2 with a thermal resistance of 1 K.m².K/W, a thickness of 33 mm and inner diameter of 15 mm. To calculate the impact of the range of commercial thicknesses and inner diameters, see table under Additional technical information section.

This EPD applies for one specific product from one single plant of Saint-Gobain Sweden.

Climpipe Section Alu2 is non-combustible glass wool pipe section for insulation of hot and cold pipes. The product is easy and fast to install thanks to its low weight together with a tape that tacks directly.

GTINs and more information: www.isover.se/produkter/climpipe-section-alu2

UN CPC CODE: 37990 Non-metallic mineral products n.e.c. (including mineral wool, expanded mineral materials, worked mica, articles of mica, non-electrical articles of graphite or other carbon and articles of peat)

Product specification:

Description of the main components and/or materials for 1 linear meter of Climpipe Section Alu2 with a thermal resistance of 1 m².K/W, and a thickness of 33 mm and inner diameter of 15 mm.

Materials	Weight (%)
Mineral materials	25 – 40
Recycled glass (external cullet)	50 - 70
Binder	5 – 10
Facing & tape	5 - 10
Sum	100
Sum	100
Packaging	Weight (kg)
Packaging	Weight (kg)
Packaging Cardboard	Weight (kg) 0,03

Technical data:

For a thickness of 33 mm and inner diameter of 15 mm.

Parameter	Value	Unit
Thermal resistance	1	m²·K/W
Thermal conductivity	0,033	$W/(m \cdot K)$
Reaction to fire	$A2_L$ -s1,d0	
Density	75	kg/m3
Weight of product	0,41	kg/m
Material used for the installation*	none	-

^{*)} Adhesive tape is included in product to cover longitudinal opening.

Market:

The product is manufactured and sold in Sweden. It can also be distributed to, and sold in, other countries in the Nordics, the Baltic countries, UK and Ireland.

Reference service life, product:

The reference service life of the product is similar to the service life of the building.

Reference service life, building:

60 years.

Additional technical information

This EPD® includes a range of thicknesses and inner diameters by applying a conversion factor. All the results of this EPD® refer to Climpipe Section Alu2 with a thickness of 33 mm and inner diameter of 15 mm, for a functional unit of 1 meter with a thermal resistance of 1 m² K/W.

To convert the results of indicators GWP-total, GWP-IOBC/GHG and GWP-fossil of modules A1-A3 and A-C to other thicknesses and inner diameters, the results expressed in this EPD must be multiplied by its corresponding conversion factor in the table below.

Conversion to mass (kg) to convert the results per 1kg of product is 2,43.

Proc	luct	Conversion factor								
Inner diameter mm	Thickness mm		/ GWP-GHG P-fossil	GWP-total						
		A1-A3	A-C	A1-A3	A-C					
15-35	20-25	1,0	1,1	1,0	1,1					
15-35	30-40	1,8	1,8	1,7	1,8					
15-35	50-60	2,8	3,0	2,4	3,0					
15-35	80-120	4,5	4,8	3,5	4,8					
42-70	20-25	1,6	1,6	1,3	1,6					
42-70	30-40	2,5	2,7	2,1	2,7					
42-70	50-60	3,9	4,1	3,2	4,1					
42-70	80-120	9,4	9,4	8,9	9,5					
76-114	20-25	2,5	2,8	1,7	2,8					
76-114	30-40	3,5	3,7	2,9	3,7					
76-114	50-60	5,3	5,7	4,0	5,8					
76-114	80-120	11,6	11,6	10,5	11,7					
133-273	20-25	5,1	5,4	2,4	5,4					
133-273	30-40	4,5	4,6	3,4	4,6					
133-273	50-60	7,9	8,1	6,2	8,2					
133-273	80-120	16.8	16.7	14.4	16.9					

LCA: Calculation rules

Parameter	Value / Description									
Type of EPD	Cradle to grave and module D									
Functional unit	Providing a thermal insulation on 1 meter of product with a thermal resistance of 1 K.m ² .K/W, a thickness of 33 mm and inner diameter of 15 mm, with a reference service life of 60 years									
System boundaries	Cradle to grave and module D (A + B + C + D)									
Reference service life (RSL)	The Reference Service Life (RSL) of the insulation product is 60 years, provided that the product is installed correct into the building. This 60-year value is the amount of time that we recommend our products last for without refurbishment and corresponds to standard building design life.									
Cut-off rules	All data is available, no cut-off rules has been applied. In the case that there is not enough information, the process energy and materials representing less than 1% of the whole energy and mass used can be excluded (if they do not cause significant impacts). The addition of all the inputs and outputs excluded cannot be bigger than the 5% of the whole mass and energy used, as well of the emissions to environment occurred. Flows related to human activities such as employee transport are excluded. The construction of plants, production of machines and transportation systems are excluded since the related flows are supposed to be negligible compared to the production of the building product when compared at these systems lifetime level.									
Allocations	Allocation has been avoided when possible and when not possible a mass allocation has been applied. The polluter pays and the modularity principles as well have been followed.									
Geographical coverage And time period	Scope: Sweden, Nordic & Baltic countries, UK and Ireland, Data is collected from 1 production site located in Sweden. Data collected for the year 2023									
Background data source Software	The databases Sphera 2023.2 and ecoinvent v.3.9.1 Sphera LCA for experts (GaBi) 10									

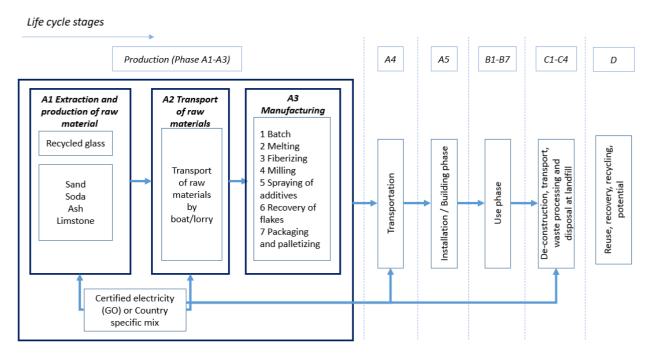
LCA: Scenarios and additional technical information

The following stages and modules have been included for this product.

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

Product stage Assembly Use stage										Er	nd of I	ife sta	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	ВЗ	B4	B5	В6	B6 B7		C2	C3	C4	D
Х	Х	X	X	Х	Х	Χ	Х	Х	Χ	Χ	Х	Х	Х	X	X	X

System boundary:



Product stage (A1-A3)

A1, Raw materials supply

This module includes the extraction and transformation of raw materials.

A2, Transport to the manufacturer

This module includes the transportation of raw materials and packaging materials to the manufacturing site. The modelling includes road, ship and/or train transportations.

A3, Manufacturing

This module includes the manufacturing of products (fusion, fiberizing, etc.) and the manufacturing of packaging materials. The processing of any waste arising from this stage is also included.

During the manufacturing process, electricity based on 100% renewable electricity bought with Guarantee of Origin (GO) has been used. The amount of electricity purchases with GO's correspond to 100% of the electricity consumed at the manufacturing site, leaving 0% to be covered by Swedish national grid mix.

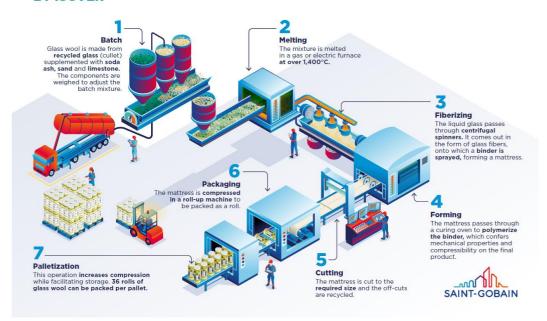
During the manufacturing process, biogas bought with Guarantee of Origin (GO) has been used. The amount of biogas purchases with GO's correspond to 72% of the gas consumed at the manufacturing site, leaving the rest 28% as location-based gas mix.

Guarantees of origin of energy used in the manufacturing phase

Parameter	Consumption covered (%)	Value, GWP total	Description
Electricity mix (GO's)	100%	0,00458 kg CO ₂ eq. / kWh	100% Nuclear power – RER from Sphera
Gas mix (GO's)	72%	0,0573 kg CO ₂ eq. / kWh	100% Biogas – RER from Sphera

Manufacturing process flow diagram

GLASS WOOL MANUFACTURING BY ISOVER



Manufacturing in detail:

Glass wool is made from high-temperature molten glass that is blown away using centrifugal force to form fine cotton-like fibers. Then, a binder is sprayed on the material to form it, and the product is heated in an oven. Hereafter, the product is applied the facing, cut to size and packed.

Construction process stage (A4-A5)

A4, Transport from production place to building site

This module includes transport from the production gate to the building site. Transport is calculated based on a scenario with the parameters described in the following table.

Parameter	Value / Description
Fuel type and consumption of vehicle or vehicle type used for transport e.g., long distance truck, boat, etc.	Freight truck, maximum load weight of 27 t and consumption of 0,38 liters diesel per km.
	Real 4 t load.
Distance	325 km by truck,
	140 km by rail
Capacity utilization (including empty returns)	11% in weight (100% in volume)
	30% empty returns

A5, Installation in the building

This module includes the installation of the product manually and no additional accessories, nor energy are considered.

Parameter	Value / Description					
Wastage of materials on the building site before waste processing, generated by the product's installation (specified by type)	2% for product					
generated by the product's installation (specified by type)	100% for packaging					
Output materials (specified by type) as results of waste processing	Product waste: 0,008 kg, 100% landfill					
at the building site e.g., of collection for recycling, for energy recovering, disposal (specified by route)	Cardboard: 0,03 kg, 50% recycling + 50% energy recovery					
	LDPE: 0,02 kg, 90% energy recovery + 10% recycling					
	Wooden pallet: 0,06 kg, 50% recycling + 50% energy recovery					
	Other packaging: <0,001 kg, 100% landfill					
Distance to waste treatment facilities	50 km to landfill by truck					
	50 km to recycling by truck					
	50 km to incineration with energy recovery by truck					
Direct emissions to ambient air, soil, and water	None					

The transport of waste is modelled as in C2.

Use stage (B1-B7)

The use stage is divided into the following modules:

- B1: Use
- B2: Maintenance
- B3: Repair
- **B4:** Replacement
- **B5:** Refurbishment
- **B6:** Operational energy use
- **B7:** Operational water use

The product has a reference service life of 60 years. This assumes that the product will last in situ with no requirements for maintenance, repair, replacement, or refurbishment throughout this period. Therefore, it has no impact at this stage.

End of Life stage (C1-C4)

This stage includes the following modules:

- C1: The de-construction and/or dismantling of the product takes part of the demolition of the entire building. In the case of this product, the environmental impact is assumed to be very small and can be neglected.
- C2: Transport to waste processing.
- C3: Waste processing for reuse, recovery and/or recycling.
- **C4:** Waste disposal, including physical pre-treatment and site management.

Parameter	Value / Description								
Energy for demolition	none								
Collection process specified by type	The entire product 0,41 kg is collected with mixed construction waste								
Recovery system specified by type	There is no recovery, recycling or reuse of the product once it has reached its end-of-life phase.								
Disposal specified by type	0,41 kg of product is landfilled								
Assumption for scenario development (e.g., transportation)	The waste going to landfill is transported by truck with 24 t payload, consuming 0,38 liters diesel per km. Transport distance to landfill: 50 km								

Benefits and loads beyond the system boundaries (D)

Reuse, recycling and/or incineration with energy recovery is considered for the packaging. There is inclusion of secondary materials in the packaging. Therefore, benefits or loads reported on stage D are due to packaging.

LCA: Results

As specified in EN 15804:2012+A2:2019/AC:2021 and the Product Category Rules, the environmental impacts are declared and reported using the baseline characterization factors from the ILCD. Raw materials and energy consumption, as well as transport distances have been taken directly from the manufacturing plant. Characterization factors of EN15804 are based on EF 3.1.

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

All emissions to air, water, and soil, and all materials and energy used have been included.

The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, noncancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be taken when using the results of these indicators for decision-making purposes.

Since this EPD includes module C, we strongly advise not to use the results of modules A1-A3 without considering the results of module C.

Results refer to a functional unit of 1 linear meter of insulation product with thermal resistance of 1 K.m².K/W for a thickness of 33 mm and inner diameter 15 mm. To obtain results with different commercial thicknesses and diameters, see Additional technical information section (p.4).

Core environmental impact indicators

		PRODUCT STAGE	CONSTRUC	CTION STAGE			ı	USE S	TAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE			
Environmental indicators		A1/A2/A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	Climate Change (total) [kg CO2 eq.]	6,62E-01	3,38E-02	2,02E-01	0	0	0	0	0	0	0	0	2,12E-04	0	1,47E-03	-7,26E-02
(CD ₂	Climate Change (fossil) [kg CO2 eq.]	7,54E-01	3,34E-02	6,53E-02	0	0	0	0	0	0	0	0	2,10E-04	0	9,01E-04	-7,37E-02
	Climate Change (biogenic) [kg CO2 eq.]	-9,25E-02	8,94E-05	1,37E-01	0	0	0	0	0	0	0	0	5,62E-07	0	5,71E-04	1,01E-03
	Climate Change (land use change) [kg CO2 eq.]	8,55E-04	3,09E-04	2,26E-05	0	0	0	0	0	0	0	0	1,93E-06	0	2,71E-06	4,44E-05
	Ozone depletion [kg CFC-11 eq.]	1,24E-07	9,00E-12	2,23E-09	0	0	0	0	0	0	0	0	2,72E-17	0	8,29E-13	-1,47E-09
3	Acidification terrestrial and freshwater [Mole of H+ eq.]	5,05E-03	4,90E-05	1,21E-04	0	0	0	0	0	0	0	0	2,66E-07	0	6,29E-06	-3,08E-04
	Eutrophication freshwater [kg P eq.]	9,93E-05	5,79E-07	2,04E-06	0	0	0	0	0	0	0	0	7,63E-10	0	7,01E-09	-2,91E-05
AY.e	Eutrophication marine [kg N eq.]	1,08E-03	1,79E-05	2,97E-05	0	0	0	0	0	0	0	0	9,31E-08	0	2,11E-06	-4,22E-05
	Eutrophication terrestrial [Mole of N eq.]	1,52E-02	2,07E-04	3,98E-04	0	0	0	0	0	0	0	0	1,09E-06	0	1,79E-05	-6,15E-04
	Photochemical ozone formation - human health [kg NMVOC eq.]	2,69E-03	4,35E-05	7,85E-05	0	0	0	0	0	0	0	0	2,33E-07	0	4,93E-06	-2,12E-04
	Resource use, mineral and metals [kg Sb eq.] ¹	1,70E-05	3,15E-09	3,12E-07	0	0	0	0	0	0	0	0	1,38E-11	0	8,57E-11	-2,91E-08
(Car	Resource use, energy carriers [MJ] ¹	3,02E+01	4,65E-01	5,94E-01	0	0	0	0	0	0	0	0	2,84E-03	0	1,19E-02	-9,86E-01
(Water deprivation potential [m³ world equiv.] ¹	3,45E-01	7,60E-04	1,88E-02	0	0	0	0	0	0	0	0	2,52E-06	0	1,06E-04	-7,86E-03

Reading example: 9.0 E-03 = 9.0*10-3 = 0.009

¹ 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

		PRODUCT STAGE	CONSTRUCTION STAGE				US	SE ST	AGE			E		BENEFITS AND LOADS BEYOND THE LIFE CYCLE		
Res	ources Use indicators	A1/A2/A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
*	Use of renewable primary energy (PERE) [MJ] ²	1,04E+01	3,42E-02	1,92E-01	0	0	0	0	0	0	0	0	2,07E-04	0	1,89E-03	-4,20E-01
*	Primary energy resources used as raw materials (PERM) [MJ] ²	1,38E+00	0	-9,58E-01	0	0	0	0	0	0	0	0	0	0	0	0
*	Total use of renewable primary energy resources (PERT) [MJ] ²	1,18E+01	3,42E-02	-7,66E-01	0	0	0	0	0	0	0	0	2,07E-04	0	1,89E-03	-4,20E-01
O	Use of non-renewable primary energy (PENRE) [MJ] ²	2,85E+01	4,66E-01	5,65E-01	0	0	0	0	0	0	0	0	2,86E-03	0	1,19E-02	-9,86E-01
O	Non-renewable primary energy resources used as raw materials (PENRM) [MJ] ²	1,90E+00	0	-3,25E-01	0	0	0	0	0	0	0	0	0	0	0	0
O	Total use of non-renewable primary energy resources (PENRT) [MJ] ²	3,04E+01	4,66E-01	2,41E-01	0	0	0	0	0	0	0	0	2,86E-03	0	1,19E-02	-9,86E-01
(5)	Input of secondary material (SM) [kg]	2,49E-01	0	4,42E-03	0	0	0	0	0	0	0	0	0	0	0	0
*	Use of renewable secondary fuels (RSF) [MJ]	1,86E-29	0	3,31E-31	0	0	0	0	0	0	0	0	0	0	0	0
O	Use of non-renewable secondary fuels (NRSF) [MJ]	2,18E-28	0	3,88E-30	0	0	0	0	0	0	0	0	0	0	0	0
0	Use of net fresh water (FW) [m3]	1,03E-02	4,40E-05	4,83E-04	0	0	0	0	0	0	0	0	2,27E-07	0	3,17E-06	-1,83E-04

² For this study, both the product and its packaging energy content is considered in the indicators "use of renewable primary energy resources used as raw materials" (PERM) and "use of non-renewable primary energy resources used as raw materials" (PENRM). PERM and PENRM are reported as negative values when materials are reused, recycled, or recovered for energy, but not when they are landfilled.

End of life – Waste & output flow

	PRODUCT STAGE		RUCTION AGE	USE STAGE								BENEFITS AND LOADS BEYOND THE LIFE CYCLE			
Waste Category & Output Flows	A1/A2/A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
Hazardous waste disposed (HWD) [kg]	6,13E-05	1,46E-08	1,23E-06	0	0	0	0	0	0	0	0	8,84E-15	0	1,02E-09	-3,02E-06
Non-hazardous waste disposed (NHWD) [kg]	2,16E-01	2,27E-04	1,52E-02	0	0	0	0	0	0	0	0	4,35E-07	0	5,85E-02	-4,04E-02
Radioactive waste disposed (RWD) [kg]	6,53E-03	6,69E-07	1,17E-04	0	0	0	0	0	0	0	0	5,34E-09	0	1,32E-07	-1,66E-06
Components for re-use (CRU) [kg]	0	0	2,91E-02	0	0	0	0	0	0	0	0	0	0	0	0
Materials for Recycling (MFR) [kg]	2,65E-03	0	4,68E-02	0	0	0	0	0	0	0	0	0	0	0	0
Material for Energy Recovery (MER) [kg]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported electrical energy (EEE) [MJ]	0	0	2,03E-01	0	0	0	0	0	0	0	0	0	0	0	0
Exported thermal energy (EET) [MJ]	0	0	3,63E-01	0	0	0	0	0	0	0	0	0	0	0	0

Additional environmental impact indicators required for construction products

	PRODUCT STAGE		RUCTION AGE	USE STAGE			END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE				
Environmental indicators	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
GWP-IOBC / GWP-GHG [kg CO2 eq.] ²	8,12E-01	3,38E-02	6,68E-02	0	0	0	0	0	0	0	0	2,13E-04	0	9,36E-04	-7,25E-02

Information describing the biogenic carbon content at the factory gate

		PRODUCT STAGE
Bioge	nic Carbon Content	A1 / A2 / A3
9	Biogenic carbon content in product [kg]	2,44E-03
(P)	Biogenic carbon content in packaging [kg]	3,69E-02

Note: 1kg biogenic carbon is equivalent to 44/12 kg CO₂.

The product contains biogenic carbon due to paper in the covering tape. Packaging contains biogenic carbon due to wooden pallet and cardboard.

² The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake, emissions and biogenic carbon stored in the product.

Additional requirements

Energy information in the manufacturing phase

Market-based approach is used in the manufacturing phase (A3) for electricity and gas that are covered by GOs. The approach for the remaining quantity of electricity and gas is location-based mixes.

The table below presents the location-based mix for electricity:

Type of information	Description					
Share of residual mix	0%					
	National production mix, Sweden					
Type of dataset	Cradle to gate from Sphera					
Source	Dataset Sphera SE: Electricity grid mix					
CO2 emission kg CO2 eq. / kWh	0,0616 kg CO2 eq. / kWh – Climate Change – total indicator					

Note: Amount of electricity in the core process is not reported as it is business sensitive and therefore confidential.

The table below presents the location-based mix for gas:

Type of information	Description				
Share of residual mix	28%				
Location based conservative mix	Natural gas				
Type of dataset	Cradle to gate from Sphera				
Source	Dataset Sphera: Thermal energy from natural gas, RER				
CO2 emission kg CO2 eq. / kWh	0,2415 kg CO2 eq. / kWh - Climate Change - total indicator				

Note: Amount of energy in the core process is not reported as it is business sensitive and therefore confidential.

Hazardous substances

At the date of issue of this declaration, there is no "Substance of Very High Concern" (SVHC) in concentration above 0,1% by weight, and neither do their packaging, following the European REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals).

There are no substances of the Norwegian List of Priority Substances in concentration above 0,1% by weight, and neither do their packaging.

The verifier and the program operator do not make any claim nor have any responsibility of the legality of the product.

Carbon footprint

The GWP-IOBC result can be found under "Additional environmental impact indicators required for construction products"

Additional information

Transport to other countries

The main results of stage A4 declared refer to Sweden. As the product is exported to other countries, additional sets of results for each country have been provided.

Country	Transport and distance			
Norway	Truck (575 km)			
Denmark	Truck (310 km)			
Finland	Truck (955 km), Ship (125 km)			
Iceland	Truck (75 km), ship (2289 km)			
Estonia	Truck (819 km), ship (405 km)			
Latvia	Truck (478 km), ship (405 km)			
Lithuania	Truck (508 km), ship (405 km)			
UK	Truck (120 km), ship (1224 km)			
Ireland	Truck (612 km), ship (1334 km)			

A4 Transport	Norway	Denmark	Finland	Iceland	Estonia	Latvia	Lithuania	UK	Ireland	
Environmental indicators										
Climate Change (total) [kg CO₂eq.]	5,86E-02	3,16E-02	9,79E-02	1,81E-02	8,53E-02	5,06E-02	5,36E-02	1,78E-02	6,85E-02	
Climate Change (fossil) [kg CO₂eq.]	5,79E-02	3,12E-02	9,68E-02	1,80E-02	8,44E-02	5,00E-02	5,30E-02	1,77E-02	6,77E-02	
Climate Change (biogenic) [kg CO₂ eq.]	1,53E-04	8,23E-05	2,54E-04	2,82E-05	2,19E-04	1,28E-04	1,36E-04	3,63E-05	1,67E-04	
Climate Change (land use change) [kg CO ₂ eq.]	5,42E-04	2,92E-04	9,00E-04	7,09E-05	7,72E-04	4,51E-04	4,79E-04	1,13E-04	5,77E-04	
Ozone depletion [kg CFC-11 eq.]	5,12E-15	2,76E-15	8,55E-15	1,38E-15	7,42E-15	4,39E-15	4,65E-15	1,45E-15	5,87E-15	
Acidification terrestrial and freshwater [Mole of H+ eq.]	7,90E-05	4,26E-05	1,51E-04	3,76E-04	1,77E-04	1,30E-04	1,34E-04	2,12E-04	2,97E-04	
Eutrophication freshwater [kg P eq.]	2,13E-07	1,15E-07	3,55E-07	3,02E-08	3,04E-07	1,78E-07	1,89E-07	4,58E-08	2,29E-07	
Eutrophication marine [kg N eq.]	2,93E-05	1,58E-05	5,33E-05	8,98E-05	5,69E-05	3,96E-05	4,11E-05	5,21E-05	8,13E-05	
Eutrophication terrestrial [Mole of N eq.]	3,40E-04	1,84E-04	6,17E-04	9,86E-04	6,52E-04	4,50E-04	4,67E-04	5,75E-04	9,11E-04	
Photochemical ozone formation - human health [kg NMVOC eq.]	7,00E-05	3,78E-05	1,30E-04	2,54E-04	1,43E-04	1,02E-04	1,05E-04	1,46E-04	2,17E-04	
Resource use, mineral and metals [kg Sb eq.]	3,80E-09	2,05E-09	6,32E-09	5,91E-10	5,43E-09	3,18E-09	3,38E-09	8,44E-10	4,10E-09	
Resource use, energy carriers [MJ]	7,96E-01	4,29E-01	1,33E+00	2,31E-01	1,16E+00	6,84E-01	7,26E-01	2,34E-01	9,21E-01	
Water deprivation potential [m³ world equiv.]	6,75E-04	3,64E-04	1,12E-03	1,05E-04	9,64E-04	5,64E-04	5,99E-04	1,50E-04	7,28E-04	
	Resou	rce Use Indicate	ors							
Use of renewable primary energy (PERE) [MJ]	5,63E-02	3,04E-02	9,36E-02	7,90E-03	8,03E-02	4,69E-02	4,99E-02	1,21E-02	6,03E-02	
Use of renewable primary energy resources used as raw materials (PERM) [MJ]	0	0	0	0	0	0	0	0	0	
Total use of renewable primary energy resources (PERT) [MJ]	5,63E-02	3,04E-02	9,36E-02	7,90E-03	8,03E-02	4,69E-02	4,99E-02	1,21E-02	6,03E-02	
Use of non-renewable primary energy (PENRE) [MJ]	7,98E-01	4,30E-01	1,33E+00	2,32E-01	1,16E+00	6,86E-01	7,28E-01	2,35E-01	9,24E-01	
Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	0	0	0	0	0	0	0	0	0	
Total use of non-renewable primary energy resources (PENRT) [MJ]	7,98E-01	4,30E-01	1,33E+00	2,32E-01	1,16E+00	6,86E-01	7,28E-01	2,35E-01	9,24E-01	
Input of secondary material (SM) [kg]	0	0	0	0	0	0	0	0	0	
Use of renewable secondary fuels (RSF) [MJ]	0	0	0	0	0	0	0	0	0	
Use of non-renewable secondary fuels (NRSF) [MJ]	0	0	0	0	0	0	0	0	0	
Use of net fresh water (FW) [m³]	6,21E-05	3,35E-05	1,03E-04	8,83E-06	8,85E-05	5,17E-05	5,50E-05	1,33E-05	6,65E-05	
Waste category & Output flows										
Hazardous waste disposed (HWD) [kg]	2,95E-12	1,59E-12	4,93E-12	7,87E-13	4,28E-12	2,53E-12	2,68E-12	8,31E-13	3,38E-12	
Non-hazardous waste disposed (NHWD) [kg]	1,15E-04	6,20E-05	1,92E-04	2,67E-05	1,66E-04	9,77E-05	1,04E-04	3,02E-05	1,29E-04	
Radioactive waste disposed (RWD) [kg]	1,03E-06	5,56E-07	1,72E-06	2,85E-07	1,50E-06	8,84E-07	9,38E-07	2,96E-07	1,19E-06	
Components for re-use (CRU) [kg]	0	0	0	0	0	0	0	0	0	
Materials for Recycling (MFR) [kg]	0	0	0	0	0	0	0	0	0	
Material for Energy Recovery (MER) [kg]	0	0	0	0	0	0	0	0	0	

Exported electrical energy (EEE) [MJ]	0	0	0	0	0	0	0	0	0
Exported thermal energy (EET) [MJ]	0	0	0	0	0	0	0	0	0
	Add	litional Indicator	•						
GWP-GHG / GWP-IOBC [kg CO₂ eq.]	5,86E-02	3,16E-02	9,80E-02	1,81E-02	8,54E-02	5,06E-02	5,37E-02	1,78E-02	6,85E-02

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