THE INTERNATIONAL EPD® SYSTEM

Environmental Product Declaration

In accordance with ISO 14025 and EN 15804:2012 A2:2019/AC:2021 for:

Ground screws and accessories

from

Stavrex AB

STAVREX

Programme	The International EPD® System, www.environdec.com
Programme operator	EPD International AB
EPD registration number	EPD-IES-0019623
Version date	2025-06-09
Valid until	2030-06-09

This EPD is a trader EPD that covers multiple products based on average products, and the material composition per kg does not change within the range. The included products are described in product information. An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

General Information

Programme information	
Programme	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website	www.environdec.com
E-mail	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification	
Product Category Rules (PCR)	CEN standard EN 15804 serves as the Core Product Category Rules (PCR) *Construction products PCR 2019:14 version 1.3.4*
Life Cycle Assessment (LCA)	Carbonzero AB
Third-party verification:	Independent third-party verification of the declaration and data, according to ISO 14025:2006: ☒ EPD verification by individual verifier Vladimir Koci, LCA studio Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☑ No	

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information	
Owner of the EPD	Stavrex AB
Contact	Johan Hermansson, info@stavrex.se
Description of the organisation	Stavrex is your reliable partner in the construction industry. Since 2016, we have been providing innovative and sustainable screw foundations for both small and large projects. Stavrex is known for high quality, safety, and cost-effective ground screws. We offer the market's broadest range of ground screws and environmentally friendly alternatives that help our customers achieve their efficiency goals and sustainability. We work with everything from private residences to commercial buildings and public infrastructures. Through close collaboration with our clients, we ensure the right product in the right place for each project. ...
Product-related or management system-related certifications:	The products are CE marked according to EN1090-1:2009+A1:2011
Name and location of production site(s):	**Name of plant:** Production facility for ground screws **Location:** Shanghai, China

Product information	
Product name(s)	Ground screws and accessories
Product description:	Ground screws including extenders and tops and other accessories, used for anchoring different installations like wooden decks, fences and prefabricated buildings etc.
RSL	Not applicable
UN CPC code	412 - Products of iron or steel

Product name	Image	Application/intended use	Description
Pro Small screw tip flexible 25 mm Ø		Small fence, small pergola, garden trellis, wooden deck stair	Our Pro Small ground screws are available in 3 lengths and they are 25 mm Ø. These ground screws are the best option when you will do small projects and they are installed without special machines.
Pro Regular screw tip flexible 65 mm Ø		Wooden decks, huts	Our Pro Regular flexible ground screws are available in 4 lengths and they are 65 mm Ø. These ground screws are the best option when you will do projects as wooden decks, huts etc.
Pro Large screw tip flexible 76 mm Ø		Prefabricated buildings, barriers, fence panels, carport, pier	Our Pro Large flexible ground screw are available in 1 length and it is 76 mm Ø. This ground screw are the best option when you will do projects as prefabricated buildings, barriers, fence panels, carport and piers
Pro Regular extension flexible 65 mm Ø		Wooden decks, huts	Our Pro Regular flexible extensions are available in 2 lengths and they are 65 mm Ø. These extensions are used in softer ground and when you need to load the ground screw with more weight.
Pro Large extension flexible 76 mm Ø		Prefabricated buildings, barriers, fence panels, carport, pier	Our Pro Large flexible extensions are available in 4 lengths and they are 76 mm Ø. These extensions are used in softer ground and when you need to load the ground screw with more weight.
Pro Small post top		Small fence, garden trellis	Our Pro Small Post tops are available in 6 different sizes. These Post tops are used for square wooden posts. They are also adjustable laterally for easier assembly.
Pro Small eyelet M16		Anchoring	Our Pro Small Eyelet is available in 1 size. The Eyelet is used to anchor tents, trampolines, etc.
Pro Small L-angle		Garden trellis, wooden deck stair, wooden decks	Our Pro Small L-angle is available in 1 size. The L-angle is used to anchor timber in different dimensions.
Pro Small pole top		Small fence, garden trellis	Our Pro Small Pole tops are available in 4 different sizes. These Pole tops are used for round wooden poles. They are also adjustable laterally for easier assembly.

Pro Regular flexible post shoe M16		Wooden decks, huts	Our Pro Regular flexible post shoes are available in 3 different sizes. They are adjustable laterally and vertically to fit most wooden dimensions.
Pro Regular hex top M16		Huts	Our Pro Regular Hex top is available in 1 size. This top has a 120 mm hexagonal plate which is also equipped with 6 pcs 11 mm holes to be able to anchor various structures. It also has an M16 thread to attach one of our flexible post shoes.
Pro Regular top M16		Wooden decks, huts	Our Pro Regular Top is available in 1 size. It has an M16 thread to attach one of our flexible post shoes.
Pro Regular L-top		Wooden decks	Our Pro Regular L-top is available in 1 size. The L-top is used to anchor timber in different dimensions.
Pro Regular concealed bracket		Wooden decks	Our Pro Regular concealed bracket is available in 1 size. The concealed bracket is used to anchor timber in different dimensions
Pro Large top M16		Prefabricated buildings, barriers, fence panels, carport, pier	Our Pro Large Top is available in 1 size. It has an M16 thread to attach one of our flexible post shoes.
Pro Large round top M16		Prefabricated buildings, barriers, fence panels, carport, pier	Our Pro Large round top is available in 1 size. This top has a 200 mm round plate which is also equipped with 11 mm holes to be able to anchor various structures. It also has an M16 thread to attach one of our flexible post shoes.
Pro Large post holder M20		Carport, barriers, fence panels	Our Pro Large Post holder is available in 1 size. The Post holder, used in structures where a visible Flexible post shoe is not wanted, drilled into the lower edge of the pole and secured with screws.
Pro Regular ground screw fence 65 mm Ø		Fence, pergola	Our Pro Regular fixed fence ground screws are available in 2 lengths, 2 different pole shoes measurements and they are 65 mm Ø. These ground screws are the best option when you will do projects as fence and pergola.

Pro Regular ground screw fixed 65 mm Ø		Wooden decks, huts	Our Pro Regular fixed ground screws are available in 3 lengths, 2 different pole shoes measurements and they are 65 mm Ø. These ground screws are the best option when you will do projects as wooden decks and huts.
Pro Large pipe screw 76 mm Ø		Signage, parks	Our Pro Large pipe ground screws are available in 2 lengths and they are 76 mm Ø. These ground screws are the best option when you will do projects as signage and park environments.
Pro Large ground screw round top 76 mm Ø		Prefabricated buildings, barriers, fence panels, carport	Our Pro Large round top ground screw are available in 5 length and they are 76 mm Ø. These ground screws are the best option when you will do projects as prefabricated buildings, barriers, fence panels and carports

Art.nr	Product name	Product name 2	Material thickness (mm)	Length (mm)	Outer diameter (mm)	Depth (mm)	Height (mm)	Weight (kg)	Compression capacity (kN)	Life span (years)
A0015	Pro Small screw tip flexible	445 mm Ø 25 mm M16	2	445	25	45	45	0,88		50-75
A0025	Pro Small screw tip flexible	595 mm Ø 25 mm M16	2	595	25	45	45	1,12		50-75
A0035	Pro Small screw tip flexible	700 mm Ø 25 mm M16	2	700	25	45	45	1,29		50-75
A1015	Pro Regular screw tip flexible	500 mm Ø 65 mm	2,6	500	65	95	95	2,68	3,2	75-100
A1035	Pro Regular screw tip flexible	700 mm Ø 65 mm	2,6	700	65	95	95	3,54	5,9	75-100
A1045	Pro Regular screw tip flexible	900 mm Ø 65 mm	2,6	900	65	95	95	4,44	9,7	75-100
A1055	Pro Regular screw tip flexible	1100 mm Ø 65 mm	2,6	1100	65	95	95	5,29	12,9	75-100
A4025	Pro Large screw tip flexible	1200 mm Ø 76 mm	3,6	1200	76	96	96	8,92	24,5	100-125
B1015	Pro Regular extension flexible	250 mm Ø 65 mm	2,6	325	65	65	65	1,39		75-100
B1025	Pro Regular extension flexible	500 mm Ø 65 mm	2,6	570	65	65	65	2,14		75-100
B4015	Pro Large extension flexible	500 mm Ø 76 mm	3,6	500	76	76	76	3,35		100-125
B4025	Pro Large extension flexible	1000 mm Ø 76 mm	3,6	1000	76	76	76	6,7		100-125

Art.nr	Product name	Product name 2	Material thickness (mm)	Length (mm)	Outer diameter (mm)	Depth (mm)	Height (mm)	Weight (kg)	Compression capacity (kN)	Life span (years)
B4035	Pro Large extension flexible	1500 mm Ø 76 mm	3,6	1500	76	76	76	10,04		100-125
B4045	Pro Large extension flexible	2000 mm Ø 76 mm	3,6	2000	76	76	76	13,39		100-125
C0015	Pro Small post top	47X47 mm M16	1,5	153	50	50	50	0,44		50-75
C0025	Pro Small post top	72X72 mm M16	1,5	153	75	75	75	0,71		50-75
C0035	Pro Small post top	97X97 mm M16	1,5	153	100	100	100	1,01		50-75
C0085	Pro Small post top	50X50 mm M16	1,5	153	53	53	53	0,47		50-75
C0095	Pro Small post top	75X75 mm M16	1,5	153	78	78	78	0,74		50-75
C0105	Pro Small post top	100X100 mm M16	1,5	153	103	103	03	1,05		50-75
C0065	Pro Small eyelet	Ø 35 mm M16	14	89	62	38	62	0,29		50-75
C0075	Pro Small l-angle	98X53X50 mm M16	6	98	50	50	53	0,38		50-75
C0045	Pro Small pole top	Ø 72 mm M16	1,5	153	75	75	75	0,56		50-75
C0055	Pro Small pole top	Ø 102 mm M16	1,5	153	105	105	105	0,86		50-75
C0115	Pro Small pole top	Ø 62 mm M16	1,5	153	65	65	65	0,49		50-75
C0125	Pro Small pole top	Ø 82 mm M16	1,5	153	85	85	85	0,68		50-75
C1065	Pro Regular post shoe flexible	70-110 mm M16	4	127	70	72	70	1,29		75-100
C1155	Pro Regular post shoe flexible	40-60 mm M16	4	127	70	55	70	1,17		75-100

Art.nr	Product name	Product name 2	Material thickness (mm)	Length (mm)	Outer diameter (mm)	Depth (mm)	Height (mm)	Weight (kg)	Compression capacity (kN)	Life span (years)
C1165	Pro Regular post shoe flexible	120-160 mm M16	4	127	70	116	112	1,49		75-100
C1085	Pro Regular hex top	Ø 65 mm M16	2,6	204	65	124	124	1,28		75-100
C1095	Pro Regular top	Ø 65 mm M16	2,6	124	65	75	75	0,7		75-100
C1105	Pro Regular L-top	Ø 65 mm	2,6	256	65	70	70	0,8		75-100
C1125	Pro Regular concealed bracket	Ø 65 mm	2	30	76	76	76	0,2		75-100
C4015	Pro Large top	100 mm Ø 76 mm M16	3,6	208	76	100	100	1,9		100-125
C4025	Pro Large round top	200 mm Ø 76 mm M16	3,6	228	76	200	200	3,25		100-125
C2025	Pro Large post holder	Ø 76 mm M20	5	256	130	191	130	2,2		100-125
D1145	Pro Regular ground screw fence	750 mm fence 3" Ø 65mm	2,6	979	65	95	95	4,92	6	75-100
D1155	Pro Regular ground screw fence	750 mm fence 4" Ø 65mm	2,6	979	65	95	95	5,01	6	75-100
D1165	Pro Regular ground screw fence	900 mm fence 3" Ø 65mm	2,6	1129	65	95	95	5,56	9,7	75-100

Art.nr	Product name	Product name 2	Material thickness (mm)	Length (mm)	Outer diameter (mm)	Depth (mm)	Height (mm)	Weight (kg)	Compression capacity (kN)	Life span (years)
D1175	Pro Regular ground screw fence	900 mm fence 4" Ø 65mm	2,6	1129	65	95	95	5,65	9,7	75-100
D1180	Pro Regular ground screw fixed	600 mm fixed 3" Ø 65mm	2,6	738	65	95	95	4,06	4,4	75-100
D1190	Pro Regular ground screw fixed	600 mm fixed 4" Ø 65mm	2,6	738	65	95	95	4,13	4,4	75-100
D1200	Pro Regular ground screw fixed	750 mm fixed 3" Ø 65mm	2,6	888	65	95	95	4,7	6	75-100
D1210	Pro Regular ground screw fixed	750 mm fixed 4" Ø 65mm	2,6	888	65	95	95	4,77	6	75-100
D1220	Pro Regular ground screw fixed	900 mm fixed 3" Ø 65mm	2,6	1038	65	95	95	5,35	9,7	75-100
D1230	Pro Regular ground screw fixed	900 mm fixed 4" Ø 65mm	2,6	1038	65	95	95	5,41	9,7	75-100
D3015	Pro Large pipe screw	800 mm Ø 76 mm 4XM16	3,6	800	76	96	96	5,83	13,7	100-125
D3025	Pro Large pipe screw	1000 mm Ø 76 mm 4XM16	3,6	1000	76	96	96	7,29	19,7	100-125
D7015	Pro Large ground screw round top	800 mm Ø 76 mm M16	3,6	800	76	96	96	7,38	13,7	100-125

Art.nr	Product name	Product name 2	Material thickness (mm)	Length (mm)	Outer diameter (mm)	Depth (mm)	Height (mm)	Weight (kg)	Compression capacity (kN)	Life span (years)
D7025	Pro Large ground screw round top	1000 mm Ø 76 mm M16	3,6	1000	76	96	96	8,84	19,7	100-125
D7035	Pro Large ground screw round top	1200 mm Ø 76 mm M16	3,6	1200	76	96	96	10,66	24,5	100-125
D7045	Pro Large ground screw round top	1500 mm Ø 76 mm M16	3,6	1500	76	96	96	12,91	31,4	100-125
D7055	Pro Large ground screw round top	2000 mm Ø 76 mm M16	3,6	2000	76	96	96	16,74	37,8	100-125

LCA information	
Functional unit / declared unit	1 kg
Time representative-ness	Data obtained refers to the year 2024
System Boundary	Cradle to gate, with options. (A1-A3, A4-A5, C1-C4 & D)
Database(s) and LCA software used	Eando X version 1.01 & The characterization factors used in this study refer to PCR 2019:14 and EN 15804+A2 (based on EF 3.1).

Scenario descriptions for downstream stages

Transport to the building site (A4)

Scenario information	Unit (expressed per declared unit
Fuel type and consumption of vehicle or vehicle type used for transport e.g. long-distance truck, boat, etc.	Truck-trailer with 25t payload, 0.73MJ/ton*km diesel & Container ship with 28 000t payload, 0.11 MJ/ton*km HFO
Distance	20 300 km & 567 km
Capacity utilisation (including empty returns)	61% & 70%
Bulk density of transported products	As product density
Volume capacity utilisation factor (factor: =1 or <1 or ≥ 1 for compressed or nested packaged products)	1

Installation of the product in the building (A5)

Scenario information	Unit (expressed per declared unit)
Ancillary materials for installation (specified by material)	None
Water use	None
Other resource use	None
Quantitative description of energy type (regional mix) and consumption during the installation process	Not applicable
Waste materials on the building site before waste processing, generated by the product's installation (specified by type)	0.007 kg cardboard packaging 0.008 kg plastic packaging 0.849 wooden pallet packaging
Output materials (specified by type) as results of waste processing at the building site e.g. of collection for recycling, for energy recovery, disposal (specified by route)	0.007 kg cardboard packaging for energy recovery 0.0036 kg plastic packaging for energy recovery and 0.0044 plastic packaging for recycling 0.849 wooden pallet packaging for energy recovery
Direct emissions at ambient air, soil and water	None

End-of-Life (C1-C4)

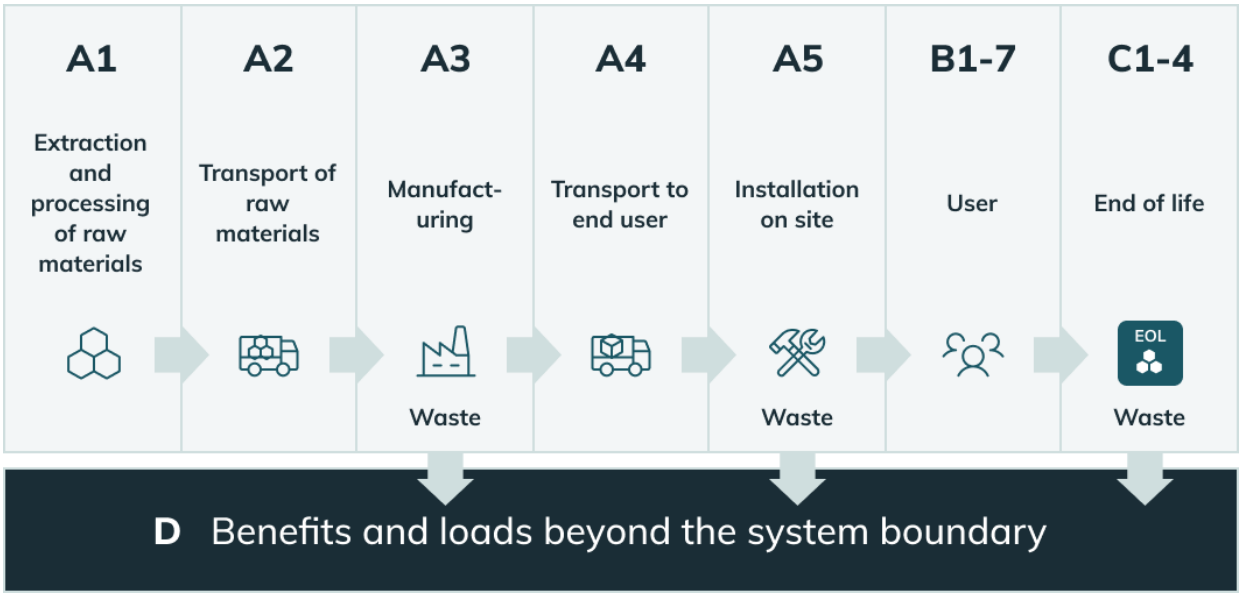
Process	Unit (expressed per declared unit)
Collection process specified by type	1 kg collected separately
	0 kg collected with mixed construction waste
Recovery system specified by type	0 kg for re-use
	0.9 kg galvanised steel for recycling
	0 kg for energy recovery
Disposal specified by type	0.1 kg galvanised steel for final deposition
Assumptions for scenario development, e.g. transportation	The transportation is modelled with the same specifications as the truck transportation in module A4, except the transportation distance is assumed to be 50 km to the waste processing.

Allocation

Allocation criteria are based on mass. It was assumed that the manufacturing data is evenly distributed throughout the products, therefore all the inputs and outputs in module A3 are divided by the total weight of the products produced during the reference year.

Co-product allocation was applied for the steel scrap during production, and a conservative approach was used meaning that all impact was assigned to the main product.

System diagram



A1	Raw material supply	This module considers the extraction and processing of all raw materials, energy, and transportation which occur upstream to the studied manufacturing process, including packaging material.
A2	Transport to the manufacturer	The raw materials are transported to the manufacturing site. Specific information from the manufacturer was obtained regarding the transportation distance between the suppliers to the manufacturing factory.
A3	Manufacturing*	This module includes all resources used during the production of the ground screws and accessories, mainly electricity and it also includes the production of packaging material in which the products are transported to costumers. The manufacturer has collected data from the production year of 2024.
A4	Transport	This module includes transportation from the manufacturing site in Shanghai, China to Stavrex AB in Borås, which corresponds to 159 km by truck and 20 300 km by boat. An additional 408 km, is considered for transport to the building site or costumers who are located within Sweden, Denmark, Norway and Finland.
	Transport Scenario	truck: 567km boat: 20300km
A5	Construction installation	For the regular and large ground screws, installation in the ground is taking place with a special tool driven on electricity, however the impact of this action is negligible. In addition, the packaging waste treatment is included.
B1-B7	Use stage	These modules are not declared.
C1	Deconstruction/Demolition	This module includes deconstructing the product when it is no longer in use. In this study the deconstruction is manual and the impact is considered negligigible.
C2	Transport	This module represents the transport distance to the waste processing facility, 50 km.
C3	Waste processing	This module includes any waste treatment needed.
	EOL Scenario	Landfill 10.00%. Incineration 0.00%. Recycling 90.00%.
C4	Final disposal	This module includes any material that is landfilled.
D	Benefits	Emission credits obtained from recycling of steel

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Assembly stage		Use stage							End of life stage				Benefits & loads beoyond 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
Declared	X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	CN	CN	CN	NC	NC	-	-	-	-	-	-	-	NC	NC	NC	NC	NC
Specific data used	28%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation-Products	0% *			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation-Sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

NC: Nordic countries (Sweden, Denmark, Finland, Norway)
* there is no variation within the product range since the material composition is the same per kg

Content Information

Product Components	Weight, kg	Post-consumer material, weight-%	Biogenic material, kg C / declared unit
Galvanised steel	1.000	Unknown	0.000
Total	1.000	Unknown	0.000

Packaging Materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Cardboard	0.007	0.658	0.003
Plastic	0.008	0.768	0.000
Wooden pallet	0.849	84.940	0.500
Total	0.864	86.366	0.502

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
-	-	-	0.000

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 does the packaging, following the European REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals)

Environmental Information

Potential environmental impact – indicators according to EN 15804+A2

Results per functional unit: 1 kg									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	2.84E+0	2.65E-1	1.85E+0	0.00E+0	4.52E-3	6.66E-2	2.09E-3	-2.45E+0
GWP-fossil	kg CO2 eq	4.68E+0	2.64E-1	1.22E-2	0.00E+0	4.46E-3	5.00E-2	2.07E-3	-2.45E+0
GWP-biogenic	kg CO2 eq	-1.84E+0	2.42E-4	1.84E+0	0.00E+0	1.10E-5	1.66E-2	6.96E-6	0.00E+0
GWP-luluc	kg CO2 eq	2.63E-3	5.48E-4	1.34E-6	0.00E+0	4.75E-5	1.32E-4	9.06E-6	-4.88E-4
ODP	kg CFC-11 eq	7.64E-9	4.70E-14	1.21E-11	0.00E+0	7.65E-16	6.90E-10	6.48E-15	-1.42E-12
AP	mole H+ eq	1.17E-2	4.31E-3	8.45E-6	0.00E+0	2.89E-5	3.51E-4	1.30E-5	-5.70E-3
EP-freshwater*	kg P eq	1.05E-4	1.84E-7	2.14E-7	0.00E+0	1.25E-8	1.06E-5	4.21E-9	-1.25E-6
EP-marine	kg N eq	2.57E-3	1.85E-3	3.25E-6	0.00E+0	1.43E-5	1.25E-4	3.14E-6	-1.13E-3
EP-terrestrial	mole N eq	2.67E-2	2.02E-2	3.23E-5	0.00E+0	1.56E-4	1.21E-3	3.45E-5	-1.17E-2
POCP	kg NMVOC eq	9.46E-3	4.92E-3	8.80E-6	0.00E+0	2.74E-5	3.79E-4	9.88E-6	-4.18E-3
ADP-minerals & metals**	kg Sb eq	2.12E-5	1.59E-8	5.64E-9	0.00E+0	3.06E-10	4.52E-7	1.40E-10	-1.42E-5
ADP-fossil**	MJ	5.36E+1	3.23E+0	2.12E-2	0.00E+0	5.90E-2	6.70E-1	3.45E-2	-2.72E+1
WDP**	m3	1.01E+0	7.63E-4	2.37E-3	0.00E+0	2.11E-5	8.21E-3	2.55E-4	-5.96E-1
Acronyms	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 marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption								

** The results in kg PO4 eq. can be obtained by multiplying the results in kg P eq. by a factor of 3,07.*

*** 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 experience with the indicator.*

Use of resources

Results per functional unit: 1 kg									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1.24E+1	6.55E-2	1.56E+1	0.00E+0	4.45E-3	3.00E-2	5.13E-3	-2.48E+0
PERM	MJ	1.56E+1	0.00E+0	-1.56E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PERT	MJ	2.80E+1	6.55E-2	1.88E-3	0.00E+0	4.45E-3	3.00E-2	5.13E-3	-2.48E+0
PENRE	MJ	3.93E+1	3.23E+0	3.61E-1	0.00E+0	5.90E-2	6.70E-1	3.45E-2	-2.59E+1
PENRM	MJ	3.40E-1	0.00E+0	-3.40E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PENRT	MJ	3.96E+1	3.23E+0	2.12E-2	0.00E+0	5.90E-2	6.70E-1	3.45E-2	-2.59E+1
SM	kg	5.00E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	4.50E-4
RSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	m3	3.11E-2	4.63E-5	5.56E-5	0.00E+0	2.20E-6	1.91E-4	7.71E-6	-2.02E-2
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water								

The energy indicators are balanced according to the option A in the PCR.

Additional mandatory indicators

Results per functional unit: 1 kg									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	4.68E+0	2.65E-1	1.24E-2	0.00E+0	4.52E-3	6.66E-2	2.09E-3	-2.45E+0
Acronyms	GWP-GHG global warming potential - greenhouse gases								

The GWP-GHG indicator is identical to GWP-total except that the characterisation factor (CF) for biogenic CO2 is set to zero. This means that the uptake and emissions of biogenic CO2 are "balanced out" already in modules A1-A3, instead of in modules A1-A5 (for packaging) or modules A-C (for product). In the context of Norwegian public procurement legislation, GWP-GHG is also referred to as GWP-IOBC.

Waste flows

Results per functional unit: 1 kg									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2.22E-7	2.05E-10	2.39E-12	0.00E+0	2.37E-12	0.00E+0	8.23E-12	-1.71E-7
NHWD	kg	4.67E-2	2.50E-4	0.00E+0	0.00E+0	8.25E-6	0.00E+0	1.00E-1	-3.12E-2
RWD	kg	8.81E-6	5.14E-6	2.17E-7	0.00E+0	1.11E-7	0.00E+0	4.69E-7	-8.93E-27
Acronyms	HW Hazardous waste disposed; NHW Non-hazardous waste disposed; RW Radioactive waste disposed								

Output flows

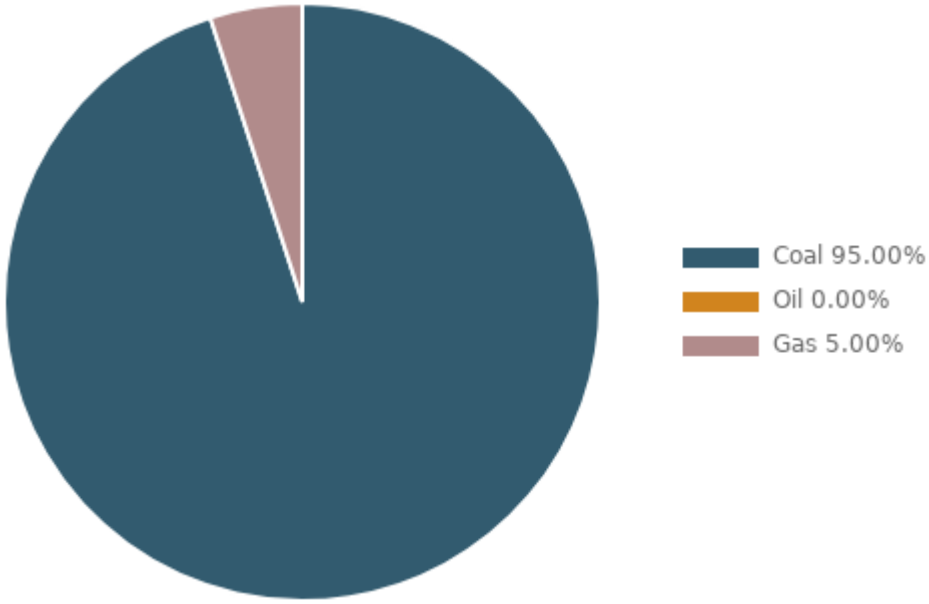
Results per functional unit: 1 kg									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
CRU	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	kg	0.00E+0	0.00E+0	4.22E-3	0.00E+0	0.00E+0	9.00E-1	0.00E+0	0.00E+0
MER	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EEE	MJ	0.00E+0	0.00E+0	1.62E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EET	MJ	0.00E+0	0.00E+0	2.89E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Acronyms	CRU Components for reuse; MFR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy								

Energy Breakdown

Electricity used in the manufacturing

Name	Data source	GWP excl. biogenic [kg CO2-eq/kWh]
Electricity Residual Mix - China (2022)	AIB	8.17E-2

Breakdown of electricity usage



References

EN15804:2012+A2	Sustainability of construction works: Environmental product declaration – Core rules for the product category of construction products
EPD International (2024)	General Programme Instructions of the International EPD® System, version 4.0
ISO 14020:2022	International Standard ISO 14020 – Environmental statements and programmes for products – Principles and general requirements
ISO 14025:2006	International Standard ISO 14025 – Environmental labels and declarations — Type III environmental declarations — Principles and procedures
ISO 14040:2006	International Standard ISO 14040: Environmental Management – Life cycle assessment – Principles and framework. Second edition 2006-07-01.
ISO 14044:2006	International Standard ISO 14044: Environmental Management – Life cycle assessment – Requirements and Guidelines.
PCR 2019:14	Construction products v1.3.4

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