



in accordance with ISO 14025 and EN 15804+A2

Light & Easy Chair 4594: Veneered seat and back in ash





1/12

General information

Product Light & Easy Chair 4594: Veneered seat and back in ash

Program operator:

The Norwegian EPD Foundation Post Box 5250 Majorstuen, 0303 Oslo, Norway Phone: +47 977 22 020 web: www.epd-norge.no

Declaration number:

NEPD-6917-6304-EN

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR NPCR 026:2022 Part B for Furniture

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 information, life cycle assessment data and evidences.

Declared unit:

1 pcs Light & Easy Chair 4594: Veneered seat and back in ash

Declared unit (cradle to gate) with option:

A1-A3,A4,A5,B2,B3,B4,C1,C2,C3,C4,D

Functional unit:

Production of one piece of Light & Easy (4594) chair maintained for a period of 15 years. At the product's end of life, it can be recycled or returned to Gärsnäs for reuse or refurbishment.

General information on verification of EPD from EPD tools:

Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4. Verification of each EPD is made according to EPD-Norway's guidelines for verification and approval requiring that tools are i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPD-Norway, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Norway's General Programme Instructions for further information on EPD tools

Verification of EPD tool:

Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPDNorway's procedures and guidelines for verification and approval of EPD tools.

Third party verifier:

Elisabet Amat, GREENIZE projects

(no signature required)

Owner of the declaration:

Gärsnäs AB Contact person: Phone: +46 414 530 00 e-mail: info@garsnas.se

Manufacturer:

Gärsnäs AB

Place of production:

Gärsnäs AB Malmövägen 16-18 272 61 Gärsnäs, Sweden

Management system:

ISO 14001

Organisation no:

SE556044474601

Issue date:

19.06.2024

Valid to:

19.06.2029

Year of study:

2023

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

Development and verification of EPD:

The declaration is created using EPD tool lca.tools ver EPD2022.03, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD Norway.

Developer of EPD: Victor af Wetterstedt

Reviewer of company-specific input data and EPD: Petra Mattsson

Approved:

Håkon Hauan Managing Director of EPD-Norway



Product

Product description:

Light & Easy chair 4594 is crafted in ash or oak and designed by the master chairmaker Åke Axelsson, perhaps his most popular chair inspired by Thonet. It is lightweight, graceful, and sturdy in its construction. Light & Easy simultaneously offers high seating comfort with generous back support and a softly contoured seat in veneer, alternatively upholstered in leather or fabric. The chair has the practical advantage of being stackable, and through an optional feature, it can also be made linkable. Light & Easy chair represents a timeless and beautiful chair with exquisite details suitable for any context and indoor environment, a chair that fits seamlessly into both classic architecture and contemporary modern interiors.

Product specification

This declaration is based on Light & Easy 4594, veneered seat and backrest in ash. The environmental indicators for the other variants and options of Light & Easy are on page 11.

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Stainless steel	0,09	2,69	0,02	21,89
Paint, water-based	0,24	7,16	0,00	0,00
Plastic - Polyethylene (HDPE)	0,01	0,30	0,00	0,00
Wood - Solid ash	3,01	89,85	0,00	0,00
Total	3,35	100,00	0,02	
Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Plastic	0,05	100,00	0,00	0,00
Total incl. packaging	3,40	100,00	0,02	

Technical data:

Width 450mm Depth 500 mm Seat height 440 mm Total height 820 mm

Chair in solid ash with back legs in solid bent wood. Seat in compression moulded veneer. Plastic glides.

Complies with Möbelfakta, visit www.mobelfakta.se for more information

For further product information, visit www.garsnas.se

Market:

Sweden

Reference service life, product

15 years

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs Light & Easy Chair 4594: Veneered seat and back in ash

Cut-off criteria:

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

Allocation:

The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

Data quality:

Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other LCA databases. The data quality of the raw materials in A1 is presented in the table below.

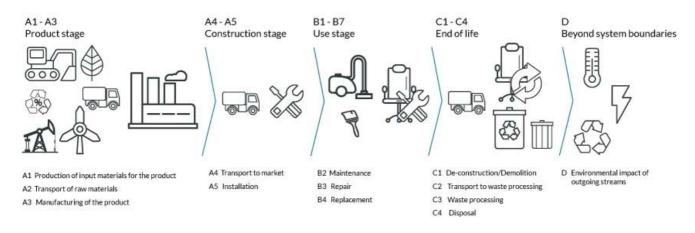
Materials	Source	Data quality	Year
Metal - Stainless steel	ecoinvent 3.6	Database	2019
Packaging - Plastic	ecoinvent 3.6	Database	2019
Paint, water-based	ecoinvent 3.6	Database	2019
Plastic - Polyethylene (HDPE)	ecoinvent 3.6	Database	2019
Wood - Solid ash	modified ecoinvent 3.6	Database	2019

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

P	Product stag	ge		uction on stage	Use stage End of life stage				Beyond the system boundaries							
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Mainten an ce	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
Х	Х	Х	Х	Х	MND	Х	Х	Х	MND	MND	MND	Х	Х	Х	Х	Х

System boundary:

A cradle-to-cradle, A1-D, analysis with a few excluded B-stages, see the chart above. Modules A1-A4 include extraction and production of raw materials, transportation to the factory in Gärsnäs, the production process itself, and an estimated transport distance to the market. A5 includes the generated waste from transport packaging after the assembly at the customer. Module B2 includes water usage from cleaning with a damp cloth. Modules C2-D include the transport to waste management, the waste processes, disposal of materials unable to be processed, and the potential of reuse, recovery, and recycling.



Additional technical information:

Gärsnäs AB is certified according to ISO 14001:2015. Visit our website for more information about our sustainability efforts: www.garsnas.se. On our website, you can also find our care instructions. Taking care of your product is essential to reduce the product's environmental footprint and prolong service life.

LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

The transport distance in A4 is calculated on our most frequent delivery route, Gärsnäs-Stockholm. We cooperate with a local transportation company on this route. Therefore, all packaging material except for a small amount of plastic is excluded.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (km)	36,7 %	655	0,043	l/tkm	28,17
Assembly (A5)	Unit	Value			
Waste, packaging, plastic film (LDPE), to average treatment - A5 (kg)	kg	0,05			
Maintenance (B2)	Unit	Value			
Water, tap water (kg)	kg/DU	0,03			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (km)	36,7 %	85	0,043	l/tkm	3,66
Waste processing (C3)	Unit	Value			
Waste treatment per kg Polyethylene, PE, incineration with fly ash extraction - C3 (kg)	kg	0,01			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	0,09			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	3,01			
Waste, materials to recycling (kg)	kg	0,03			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	0,06			
Landfilling of ashes from incineration of Polyethylene, PE, process per kg ashes and residues - C4 (kg)	kg	0,00			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0,03			
Benefits and loads beyond the system boundaries (D)	Unit	Value			_
Substitution of electricity (MJ)	MJ	2,11			
Substitution of primary steel with net scrap (kg)	kg	0,02			
Substitution of thermal energy, district heating (MJ)	MJ	31,96			

LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

	ental impact							
-	Indicator		Unit	A1-A3	A4	A5	B2	B3
Þ	GWP-total	kg	kg CO ₂ -eq		3,64E-01	3,96E-03	1,04E-05	0
P	GWP-fossil	kg	kg CO ₂ -eq		3,64E-01	3,96E-03	1,03E-05	0
P	GWP-biogenic	kg	CO ₂ -eq	-3,45E+00	1,51E-04	5,47E-07	6,48E-08	0
P	GWP-luluc	kg	CO ₂ -eq	5,42E-01	1,29E-04	3,04E-07	1,68E-08	0
Ò	ODP	kg (FC11 -eq	8,10E-07	8,24E-08	2,38E-10	1,00E-12	0
Ê	АР	mc	l H+ -eq	1,06E-01	1,05E-03	4,88E-06	6,01E-08	0
	EP-FreshWater	k	g P -eq	8,86E-04	2,91E-06	8,15E-09	8,23E-10	0
	EP-Marine	k	ј N -eq	3,33E-02	2,07E-04	4,47E-06	9,53E-09	0
	EP-Terrestial	m	ol N -eq	3,71E-01	2,31E-03	1,75E-05	1,11E-07	0
	POCP	kg N	MVOC -eq	1,10E-01	8,86E-04	5,75E-06	3,49E-08	0
Ð	ADP-minerals&metals ¹	k	kg Sb-eq		1,00E-05	2,11E-08	2,88E-10	0
F	ADP-fossil ¹		MJ		5,50E+00	1,63E-02	1,76E-04	0
%	WDP ¹		m ³		5,32E+00	5,77E-02	3,13E-03	0
	Indicator							
		Unit	B4	C1	C2	C3	C4	D
P	GWP-total	Unit kg CO ₂ -eq	В4 0	C1 0	C2 4,72E-02	C3 5,08E+00	C4 2,15E-03	D -2,18E-01
P								
-	GWP-total	kg CO ₂ -eq	0	0	4,72E-02	5,08E+00	2,15E-03	-2,18E-01
P	GWP-total GWP-fossil	kg CO ₂ -eq kg CO ₂ -eq	0	0 0	4,72E-02 4,72E-02	5,08E+00 6,75E-02	2,15E-03 2,14E-03	-2,18E-01 -2,12E-01
P	GWP-total GWP-fossil GWP-biogenic	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0 0	0 0 0	4,72E-02 4,72E-02 1,95E-05	5,08E+00 6,75E-02 5,02E+00	2,15E-03 2,14E-03 1,30E-06	-2,18E-01 -2,12E-01 -3,97E-04
P P	GWP-total GWP-fossil GWP-biogenic GWP-luluc	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0 0	0 0 0 0	4,72E-02 4,72E-02 1,95E-05 1,68E-05	5,08E+00 6,75E-02 5,02E+00 5,78E-06	2,15E-03 2,14E-03 1,30E-06 4,40E-07	-2,18E-01 -2,12E-01 -3,97E-04 -6,40E-03
P P P	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq	0 0 0 0 0	0 0 0 0 0	4,72E-02 4,72E-02 1,95E-05 1,68E-05 1,07E-08	5,08E+00 6,75E-02 5,02E+00 5,78E-06 3,14E-09	2,15E-03 2,14E-03 1,30E-06 4,40E-07 3,82E-10	-2,18E-01 -2,12E-01 -3,97E-04 -6,40E-03 -1,35E-02
P P P Ø	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq mol H+ -eq	0 0 0 0 0 0 0	0 0 0 0 0 0	4,72E-02 4,72E-02 1,95E-05 1,68E-05 1,07E-08 1,36E-04	5,08E+00 6,75E-02 5,02E+00 5,78E-06 3,14E-09 4,78E-04	2,15E-03 2,14E-03 1,30E-06 4,40E-07 3,82E-10 1,02E-05	-2,18E-01 -2,12E-01 -3,97E-04 -6,40E-03 -1,35E-02 -1,66E-03
P P P 0 C	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	4,72E-02 4,72E-02 1,95E-05 1,68E-05 1,07E-08 1,36E-04 3,77E-07	5,08E+00 6,75E-02 5,02E+00 5,78E-06 3,14E-09 4,78E-04 6,33E-07	2,15E-03 2,14E-03 1,30E-06 4,40E-07 3,82E-10 1,02E-05 2,63E-08	-2,18E-01 -2,12E-01 -3,97E-04 -6,40E-03 -1,35E-02 -1,66E-03 -1,81E-05
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq	 0 0	0 0 0 0 0 0 0 0	4,72E-02 4,72E-02 1,95E-05 1,68E-05 1,07E-08 1,36E-04 3,77E-07 2,68E-05	5,08E+00 6,75E-02 5,02E+00 5,78E-06 3,14E-09 4,78E-04 6,33E-07 2,29E-04	2,15E-03 2,14E-03 1,30E-06 4,40E-07 3,82E-10 1,02E-05 2,63E-08 3,43E-06	-2,18E-01 -2,12E-01 -3,97E-04 -6,40E-03 -1,35E-02 -1,66E-03 -1,81E-05 -5,26E-04
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq	 0 0<	0 0 0 0 0 0 0 0 0 0	4,72E-02 4,72E-02 1,95E-05 1,68E-05 1,07E-08 1,36E-04 3,77E-07 2,68E-05 3,00E-04	5,08E+00 6,75E-02 5,02E+00 5,78E-06 3,14E-09 4,78E-04 6,33E-07 2,29E-04 2,43E-03	2,15E-03 2,14E-03 1,30E-06 4,40E-07 3,82E-10 1,02E-05 2,63E-08 3,43E-06 3,84E-05	-2,18E-01 -2,12E-01 -3,97E-04 -6,40E-03 -1,35E-02 -1,66E-03 -1,81E-05 -5,26E-04 -5,67E-03
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial POCP	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq kg NMVOC -eq	 0 0	0 0 0 0 0 0 0 0 0 0 0 0	4,72E-02 4,72E-02 1,95E-05 1,68E-05 1,07E-08 1,36E-04 3,77E-07 2,68E-05 3,00E-04 1,15E-04	5,08E+00 6,75E-02 5,02E+00 5,78E-06 3,14E-09 4,78E-04 6,33E-07 2,29E-04 2,43E-03 5,97E-04	2,15E-03 2,14E-03 1,30E-06 4,40E-07 3,82E-10 1,02E-05 2,63E-08 3,43E-06 3,84E-05 1,08E-05	-2,18E-01 -2,12E-01 -3,97E-04 -6,40E-03 -1,35E-02 -1,66E-03 -1,81E-05 -5,26E-04 -5,67E-03 -1,62E-03

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 = 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

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009" *INA Indicator Not Assessed

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

Remarks to environmental impacts

Additional er	vironmental impa	ct indicators						
	Indicator	Unit		A1-A3	A4	A5	B2	B3
	PM	Disease incidence		5,98E-06	2,23E-08	8,80E-11	1,00E-12	0
	IRP ²	kgBq U235 -eq		8,53E-01	2,40E-02	7,38E-05	1,22E-06	0
	ETP-fw ¹	CTUe		1,02E+03	4,08E+00	1,56E-02	1,90E-04	0
	HTP-c ¹	CTUh		2,90E-08	0,00E+00	0,00E+00	0,00E+00	0
4 <u>8</u>	HTP-nc ¹	CTUh		4,36E-07	4,45E-09	1,50E-11	1,00E-12	0
	SQP ¹	dimensionless		2,42E+03	3,85E+00	2,85E-02	4,91E-05	0
h	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	2,89E-09	5,09E-09	1,58E-10	-9,47E-08
	IRP ²	kgBq U235 -eq	0	0	3,12E-03	5,87E-04	1,29E-04	-1,68E-02
	ETP-fw ¹	CTUe	0	0	5,29E-01	6,26E-01	3,34E-02	-1,59E+01
****	HTP-c ¹	CTUh	0	0	0,00E+00	1,10E-10	1,00E-12	-3,90E-10
8° E	HTP-nc ¹	CTUh	0	0	5,78E-10	5,24E-09	5,30E-11	-1,11E-08
	SQP ¹	dimensionless	0	0	4,99E-01	4,49E-02	7,93E-02	-1,77E+01

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)

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009" *INA Indicator Not Assessed

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

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.

Resource use								
	Indicator		Unit	A1-A3	A4	A5	B2	B3
i. B	PERE		MJ	1,01E+03	7,87E-02	4,12E-04	2,39E-05	0
æ	PERM		MJ		0,00E+00	0,00E+00	0,00E+00	0
° ≓ ,	PERT		MJ	1,05E+03	7,87E-02	4,12E-04	2,39E-05	0
Ð	PENRE		MJ	1,34E+02	5,50E+00	1,63E-02	1,76E-04	0
Les	PENRM		MJ	2,55E+00	0,00E+00	-2,12E+00	0,00E+00	0
IA	PENRT		MJ	1,36E+02	5,50E+00	-2,11E+00	1,76E-04	0
	SM		kg	1,97E-02	0,00E+00	0,00E+00	0,00E+00	0
	RSF		MJ		2,82E-03	1,08E-05	1,92E-06	0
Ū.	NRSF		MJ		1,01E-02	2,83E-05	1,89E-06	0
۲	FW		m ³	4,09E-01	5,88E-04	8,63E-06	3,02E-05	0
	ndicator	Unit	B4	C1	C2	C3	C4	D
i. S	PERE	MJ	0	0	1,02E-02	9,98E-03	1,06E-03	-1,64E+01
1 E	PERM	MJ	0	0	0,00E+00	-4,21E+01	0,00E+00	0,00E+00
	PERT	MJ	0	0	1,02E-02	-4,21E+01	1,06E-03	-1,64E+01
B	PENRE	MJ	0	0	7,14E-01	3,00E-01	2,99E-02	-2,87E+00
A)	PENRE	MJ	0	0	7,14E-01 0,00E+00	3,00E-01 -4,25E-01	2,99E-02 0,00E+00	-2,87E+00 0,00E+00
.le	PENRM	MJ	0	0	0,00E+00	-4,25E-01	0,00E+00	0,00E+00
Â:	PENRM PENRT	MJ	0	0	0,00E+00 7,14E-01	-4,25E-01 -1,24E-01	0,00E+00 2,99E-02	0,00E+00 -2,87E+00
	PENRM PENRT SM	MJ MJ kg	0	0 0 0	0,00E+00 7,14E-01 0,00E+00	-4,25E-01 -1,24E-01 0,00E+00	0,00E+00 2,99E-02 0,00E+00	0,00E+00 -2,87E+00 0,00E+00

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; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy resources; SM = Use of secondary materials; PERT = Total use of non renewable primary energy resources; SM = Use of secondary materials; REF = Use of renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of non-renewable primary energy resources; SM = Use of non-renewable primary energy ener

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009" *INA Indicator Not Assessed

End of life - Waste									
	Indicator		Unit		A1-A3	A4	A5	B2	B3
Â	HWD		kg		1,26E-01	2,84E-04	0,00E+00	3,32E-08	0
Ū	NHWD	kg		g	4,39E+00	2,67E-01	5,00E-02	2,14E-06	0
æ	RWD		kg		6,20E-04	3,75E-05	0,00E+00	1,03E-09	0
In	dicator		Unit	B4	C1	C2	C3	C4	D
à	HWD		kg	0	0	3,68E-05	0,00E+00	8,46E-02	-2,61E-04
Ū	NHWD		kg	0	0	3,47E-02	0,00E+00	9,98E-03	-7,33E-02
8	RWD		kg	0	0	4,86E-06	0,00E+00	1,66E-07	-1,38E-05

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009" *INA Indicator Not Assessed

End of life - Output flow									
Indie	cator		Unit		A1-A3	A4	A5	B2	B3
$\otimes \triangleright$	CRU		kg		0,00E+00	0,00E+00	0,00E+00	0,00E+00	0
	MFR		kg		3,48E-01	0,00E+00	2,55E-02	0,00E+00	0
DF	MER		kg		5,66E-01	0,00E+00	2,50E-06	0,00E+00	0
₹D	EEE		МЈ		3,95E-01	0,00E+00	3,84E-06	0,00E+00	0
DI	EET		MJ		5,97E+00	0,00E+00	5,81E-05	0,00E+00	0
Indicator	r	Unit		B4	C1	C2	C3	C4	D
$\otimes $	CRU	kg		0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
430	MFR	kg		0	0	0,00E+00	3,05E-02	0,00E+00	0,00E+00
Þ₽	MER	kg		0	0	0,00E+00	3,11E+00	0,00E+00	0,00E+00
۶D	EEE	MJ		0	0	0,00E+00	2,12E+00	0,00E+00	0,00E+00
	EET	MJ		0	0	0,00E+00	3,20E+01	0,00E+00	0,00E+00

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009" *INA Indicator Not Assessed

<u>Biogenic Carbon</u> Content

Indicator	Unit	At the factory gate							
Biogenic carbon content in product	kg C	1,78E+00							
Biogenic carbon content in accompanying packaging	kg C	0,00E+00							

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

Additional requirements

Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

Electricity mix	Source	Amount	Unit
Electricity, Denmark (kWh)	ecoinvent 3.6	338,20	g CO2-eq/kWh
Electricity, Sweden (kWh)	ecoinvent 3.6	54,94	g CO2-eq/kWh
Electricity, medium voltage mix, guarantee of origin (01.2023-12.2023), Garnaps AB, Sweden (kWh)	Ecoinvent 3.6	18,86	g CO2-eq/kWh

Dangerous substances

The product contains no substances given by the REACH Candidate list.

Indoor environment

The product has no emissions to indoor environment.

Additional Environmental Information

Key Environmental Indicators

Key environmental indicators	Unit	A1-A3	A4	A1-C4	A1-D
GWPtotal	kg CO ₂ -eq	9,00	0,36	14,50	14,28
Total energy consumption	MJ	1144,42	5,59	1151,11	1130,91
Amount of recycled materials	%	0,58			

Additional environmental impact indicators required in NPCR Part A for construction products									
Indicator	Unit		A1-A3	A4	A5	B2	B3		
GWPIOBC	kg CO ₂ -eq	kg CO ₂ -eq		3,64E-01	3,96E-03	1,04E-05	0		
Indicator	Unit	B4	C1	C2	C3	C4	D		
GWPIOBC	kg CO ₂ -eq	0	0	4,72E-02	6,78E-02	2,20E-03	-2,29E-01		

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

Variants and Options

Key environmental indicators (A1-A3) for variants of this EPD									
Variants	Weight (kg)	GWPtotal (kg CO ₂ -eq)	Total energy consumption (MJ)	Amount of recycled materials (%)					
Light & Easy Armchair 4596: Veneered seat and back in ash	3,71	11,57	1264,21	0,53					
Light & Easy Armchair 4596: Veneered seat and back in oak	3,71	11,57	1265,18	0,53					
Light & Easy chair 4594: Veneered seat and back in oak	3,40	9,00	1145,37	0,58					



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