



Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Xpect Chair





EPD-Global

Kinnarps AB

Owner of the declaration:

Product:

Xpect Chair

Declared unit:

1 pcs

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

Program operator:

EPD-Global

Declaration number:

NEPD-14231-14581

Issue date:

25.11.2025

Valid to: 25.11.2030

25.11.2030

EPD software:

LCAno EPD generator ID: 1189437

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General information

Product

Xpect Chair

Program operator:

EPD-Global

Post Box 5250 Majorstuen, 0303 Oslo, Norway

Phone: +47 977 22 020 web: www.epd-global.com

Declaration number:

NEPD-14231-14581

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-Global shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Declared unit:

1 pcs Xpect Chair

Declared unit (cradle to gate) with option:

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

Functional unit:

Production of one chair, provided and maintained for a period of 15 years.

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-Global'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-Global, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Global'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 EPD-Global'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:

Kinnarps AB

Contact person: Johanna Ljunggren - Corporate Sustainability

Manager

Phone: +46 515 381 21

e-mail: johanna.ljunggren@kinnarps.se

Manufacturer:

Kinnarps AB

Place of production:

Kinnarps AB Industrigatan

521 88 Kinnarp, Sweden

Management system:

ISO 9001, ISO 14001, ISO 45001

Organisation no:

556256-6736

Issue date:

25.11.2025

Valid to:

25.11.2030

Year of study:

2024

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-Global.

Developer of EPD: Rickard Thil

Reviewer of company-specific input data and EPD: Johanna Ljunggren

Approved:

Håkon Hauan, CEO EPD-Global



Product

Product description:

Xpect 294 CFRAME, 440 mm seat height with laminate finish

With its embracing design, the Xpect education chair offers the user a sense of security and the possibility to vary their seating position. It's ideal in spaces such as classrooms, group rooms, squares or canteens. Xpect is a versatile family of chairs, which offers different functionality and areas of use depending on which version you choose. The different versions share a design language, which makes it easy to combine different chairs for a harmonious look. It's available in several different heights and with different types of underframe.

https://www.kinnarps.com/products/seating/education-chairs/xpect/

Product specification

The chair can be adjusted in two seat depths, and the higher versions come with an adjustable footrest so they can grow with the students. All versions are stackable for flexibility and suspendable for easy cleaning. Choose from a wide selection of colours and materials.

This EPD includes the following variants:

Xpect 294M CFRAME - 500 mm seat height

Xpect 294HV CFRAME - 620mm seat height

Xpect 294 - 440 mm seat height - Four legs, veneer finish

Xpect 294 HV - 620 mm seat height - Four legs, laminate finish

Xpect 294 CFRAME US - 440 mm seat height - Recycled polyester fabric

Xpect 294 CFRAME US - 440 mm seat height - Wool blend fabric

Included options are:

FGL - Felt gliders

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Steel	3.49	71.21	0.1164	3.33
Plastic - Melamine	0.233	4.75	0.00	0.00
Plastic - Polyethylene (HDPE)	0.02	0.4081	0.00	0.00
Plastic - Polypropylene (PP)	0.016	0.3265	0.00	0.00
Powder coating	0.017	0.3469	0.00	0.00
Wood - Plywood	1.13	22.95	0.00	0.00
Total	4.90	100.00	0.12	

Technical data:

Certifications:

Möbelfakta

Fulfilled technical standards:

EN1729-1 Chairs and tables for educational institutions - Part 1: Functional dimensions

EN 1729-2 Chairs and tables for educational institutions - Part 2: Safety requirements and test methods

EN 16139 Strength, durability and safety - Requirements for non-domestic seating.

Market:

Mainly Europe, but is available worldwide.

Reference service life, product

15 years.

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs Xpect Chair

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 - Steel	ecoinvent 3.6	Database	2019
Metal - Steel	S-P-01919	EPD	2020
Metal - Steel	S-P-02242	EPD	2020
Plastic - Melamine	ecoinvent 3.6	Database	2019
Plastic - Polyethylene (HDPE)	ecoinvent 3.6	Database	2019
Plastic - Polypropylene (PP)	ecoinvent 3.6	Database	2019
Powder coating	ecoinvent 3.6	Database	2019
Wood - Plywood	modified ecoinvent 3.6	Database	2019



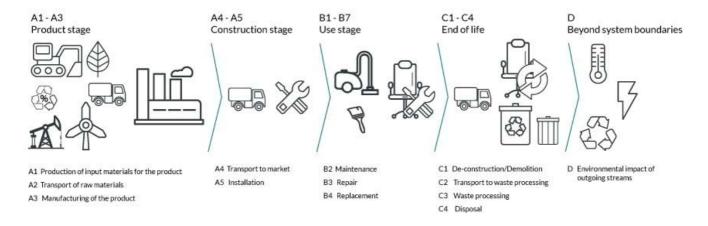
System boundaries (X=included, MND=module not declared, MNR=module not relevant)

	Pı	roduct stag	ge		uction ion stage					End of life stage			Beyond the system boundaries				
Raw	materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refu <i>r</i> b ishment	Operational energy use	Operational water use	De- construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery- Recycling-potential
Α	.1	A2	A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
X	<	Х	X	X	X	MND	Χ	Χ	Х	MND	MND	MND	X	Χ	X	Χ	X

System boundary:

The steel components are manufactured at Kinnarps' production site in Jönköping. The fabric is processed at Kinnarps' production site in Skillingaryd. The remaining components are purchased as pre-manufactured components. The product is then delivered to the customer from Kinnarps' production site in Kinnarp.

The flow chart below illustrates the system boundaries of the analysis.



Additional technical information:



LCA: Scenarios and additional technical information

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

The product is shipped to the consumer in Kinnarps' trucks with blankets and cardboard sheets as packaging material which is returned to the factory after delivery and reused. This method saves 270 kg of packaging material per container and enables 50% more products to be transported in each truck. Kinnarps' trucks have a load efficiency of approximately 87% and are run on a fuel with renewable content (HVO).

For more information about sustainability at Kinnarps, visit https://www.kinnarps.com/about-kinnarps/sustainability/

For variants without upholstering: The maintenance scenario includes wet-wiping once a week for the whole reference service life.

For upholstered variants: The maintenance scenario includes vacuum cleaning of textiles once a week for the whole reference service life.

In normal use, no repair or replacement is required during the product's referenced service life

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, HVO, EURO 6 (kgkm)	53.3 %	300.00	0.023	l/tkm	6.90
Maintenance (B2)	Unit	Value			
Water, tap water (m3)	m3	0.78			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 5 (km)	36.7 %	85.00	0.044	l/tkm	3.74
Waste processing (C3)	Unit	Value			
Waste, materials to recycling (kg)	kg	1.18			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	3.49			
Waste treatment per kg Polyethylene, PE, incineration with fly ash extraction - C3 (kg)	kg	0.02			
Waste treatment per kg Polypropylene (PP), incineration with fly ash extraction - C3 (kg)	kg	0.016			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	1.13			
Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg)	kg	0.25			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	2.31			
Landfilling of ashes from incineration of Polyethylene, PE, process per kg ashes and residues - C4 (kg)	kg	0.0007048			
Landfilling of ashes from incineration of Polypropylene, PP, process per kg ashes and residues - C4 (kg)	kg	0.0004762			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0.01294			
andfilling of ashes from incineration of Non-hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0.05932			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of primary steel with net scrap (kg)	kg	1.07			
Substitution of electricity, in Norway (MJ)	MJ	0.9957			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	15.06			



LCA: Results

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

Environme	ental impact								
	Indicator		Unit		A1-A3	A4	A5	B2	В3
	GWP-total		kg CO ₂ -eq		1.10E+01	3.60E-02	0	2.69E-01	0
	GWP-fossil	GWP-fossil		eq	1.27E+01	3.59E-02	0	2.67E-01	0
	GWP-biogenic		kg CO ₂ -e	eq	-1.72E+00	5.34E-05	0	1.68E-03	0
	GWP-luluc		kg CO ₂ -e	eq	2.66E-02	4.09E-05	0	4.35E-04	0
٨	ODP		kg CFC11 -	-eq	6.31E-07	8.82E-09	0	2.37E-08	0
Œ	АР		mol H+ -	eq	5.03E-02	2.60E-04	0	1.56E-03	0
	EP-FreshWater		kg P -ec	1	2.18E-04	1.11E-06	0	2.14E-05	0
	EP-Marine		kg N -ed	7	1.10E-02	7.42E-05	0	2.48E-04	0
	EP-Terrestial		mol N -e	q	1.38E-01	8.26E-04	0	2.88E-03	0
	POCP		kg NMVOC	-eq	3.55E-02	3.16E-04	0	9.05E-04	0
	ADP-minerals&metals ¹		kg Sb-ed	7	8.55E-05	2.44E-06	0	7.48E-06	0
	ADP-fossil ¹		МЈ		1.90E+02	8.10E-01	0	4.57E+00	0
<u>%</u>	WDP ¹		m^3		3.16E+03	1.63E+00	0	8.18E+01	0
			111		3. TOE 1 03				
	Indicator		Unit	B4	C1	C2	C3	C4	D
				B4 0					
	Indicator		Unit		C1	C2	C3	C4	D
	Indicator GWP-total	I	Unit kg CO ₂ -eq	0	C1 0	C2 6.95E-02	C3 2.59E+00	C4 2.55E-02	D -1.27E+00
	Indicator GWP-total GWP-fossil	I	Unit kg CO ₂ -eq kg CO ₂ -eq	0	C1 0	C2 6.95E-02 6.94E-02	C3 2.59E+00 7.17E-01	C4 2.55E-02 2.55E-02	D -1.27E+00 -1.26E+00
	Indicator GWP-total GWP-fossil GWP-biogenic	1	Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0	C1 0 0	C2 6.95E-02 6.94E-02 2.83E-05	C3 2.59E+00 7.17E-01 1.88E+00	C4 2.55E-02 2.55E-02 1.91E-05	D -1.27E+00 -1.26E+00 -8.28E-04
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc	l l k	Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0 0	0 0 0 0	C2 6.95E-02 6.94E-02 2.83E-05 2.43E-05	C3 2.59E+00 7.17E-01 1.88E+00 1.68E-05	C4 2.55E-02 2.55E-02 1.91E-05 7.79E-06	D -1.27E+00 -1.26E+00 -8.28E-04 -3.54E-03
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP	l l k	Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g CFC11 -eq	0 0 0 0	0 0 0 0 0	C2 6.95E-02 6.94E-02 2.83E-05 2.43E-05 1.58E-08	C3 2.59E+00 7.17E-01 1.88E+00 1.68E-05 6.67E-09	C4 2.55E-02 2.55E-02 1.91E-05 7.79E-06 8.02E-09	D -1.27E+00 -1.26E+00 -8.28E-04 -3.54E-03 -6.36E-03
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP	l l k	Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g CFC11 -eq mol H+ -eq	0 0 0 0 0	0 0 0 0 0 0	C2 6.95E-02 6.94E-02 2.83E-05 2.43E-05 1.58E-08 2.84E-04	C3 2.59E+00 7.17E-01 1.88E+00 1.68E-05 6.67E-09 3.92E-04	C4 2.55E-02 2.55E-02 1.91E-05 7.79E-06 8.02E-09 1.83E-04	D -1.27E+00 -1.26E+00 -8.28E-04 -3.54E-03 -6.36E-03
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater	l l kı	Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g CFC11 -eq mol H+ -eq	0 0 0 0 0 0	0 0 0 0 0 0 0	C2 6.95E-02 6.94E-02 2.83E-05 2.43E-05 1.58E-08 2.84E-04 5.45E-07	C3 2.59E+00 7.17E-01 1.88E+00 1.68E-05 6.67E-09 3.92E-04 1.17E-06	C4 2.55E-02 2.55E-02 1.91E-05 7.79E-06 8.02E-09 1.83E-04 2.52E-07	D -1.27E+00 -1.26E+00 -8.28E-04 -3.54E-03 -6.36E-03 -6.56E-03 -8.01E-05
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine	l l k r	Wnit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g CFC11 -eq mol H+ -eq kg P -eq kg N -eq	0 0 0 0 0 0	0 0 0 0 0 0 0	C2 6.95E-02 6.94E-02 2.83E-05 2.43E-05 1.58E-08 2.84E-04 5.45E-07 8.42E-05	C3 2.59E+00 7.17E-01 1.88E+00 1.68E-05 6.67E-09 3.92E-04 1.17E-06 1.67E-04	C4 2.55E-02 2.55E-02 1.91E-05 7.79E-06 8.02E-09 1.83E-04 2.52E-07 6.52E-05	D -1.27E+00 -1.26E+00 -8.28E-04 -3.54E-03 -6.36E-03 -6.56E-03 -8.01E-05 -1.44E-03
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial	l l k r	Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g CFC11 -eq mol H+ -eq kg P -eq mol N -eq	0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0	C2 6.95E-02 6.94E-02 2.83E-05 2.43E-05 1.58E-08 2.84E-04 5.45E-07 8.42E-05 9.31E-04	C3 2.59E+00 7.17E-01 1.88E+00 1.68E-05 6.67E-09 3.92E-04 1.17E-06 1.67E-04 1.76E-03	C4 2.55E-02 2.55E-02 1.91E-05 7.79E-06 8.02E-09 1.83E-04 2.52E-07 6.52E-05 7.22E-04	D -1.27E+00 -1.26E+00 -8.28E-04 -3.54E-03 -6.36E-03 -6.56E-03 -8.01E-05 -1.44E-03 -1.49E-02
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial POCP	l l k r	Wnit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g CFC11 -eq mol H+ -eq kg N -eq mol N -eq	0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0 0	C2 6.95E-02 6.94E-02 2.83E-05 2.43E-05 1.58E-08 2.84E-04 5.45E-07 8.42E-05 9.31E-04 2.85E-04	C3 2.59E+00 7.17E-01 1.88E+00 1.68E-05 6.67E-09 3.92E-04 1.17E-06 1.67E-04 1.76E-03 4.62E-04	C4 2.55E-02 2.55E-02 1.91E-05 7.79E-06 8.02E-09 1.83E-04 2.52E-07 6.52E-05 7.22E-04 2.08E-04	D -1.27E+00 -1.26E+00 -8.28E-04 -3.54E-03 -6.36E-03 -6.56E-03 -8.01E-05 -1.44E-03 -1.49E-02 -6.59E-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

Remarks to environmental impacts

[&]quot;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



Additional env	Additional environmental impact indicators												
	Indicator	Unit	A1-A3	A4	A5	B2	В3						
	PM	Disease incidence	7.13E-07	1.03E-08	0	1.31E-08	0						
	IRP ²	kgBq U235 -eq	1.19E+00	2.84E-03	0	3.16E-02	0						
4	ETP-fw ¹	CTUe	1.29E+02	1.03E+00	0	4.95E+00	0						
40.	HTP-c ¹	CTUh	1.64E-08	0.00E+00	0	7.39E-10	0						
48° B	HTP-nc ¹	CTUh	7.67E-08	1.47E-09	0	1.64E-08	0						
	SQP ¹	dimensionless	3.63E+02	2.22E+00	0	1.28E+00	0						

li li	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	5.00E-09	8.39E-09	3.36E-09	-1.41E-07
	IRP ²	kgBq U235 -eq	0	0	4.58E-03	1.11E-03	2.37E-03	-3.76E-03
40	ETP-fw ¹	CTUe	0	0	7.71E-01	3.11E+00	3.44E-01	-7.23E+01
44. *** <u>\$</u>	HTP-c ¹	CTUh	0	0	0.00E+00	2.53E-10	1.10E-11	-5.78E-09
₩ <u></u>	HTP-nc ¹	CTUh	0	0	8.33E-10	3.85E-09	3.22E-10	1.16E-07
	SQP ¹	dimensionless	0	0	7.22E-01	7.91E-02	1.28E+00	-9.09E+00

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)

[&]quot;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

^{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	В3
T D	PERE		MJ		2.76E-02	0	6.21E-01	0
	PERM		MJ	1.57E+01	0.00E+00	0	0.00E+00	0
T,	PERT		MJ	1.03E+02	2.76E-02	0	6.21E-01	0
3	PENRE		MJ	1.91E+02	8.10E-01	0	4.57E+00	0
Å	PENRM		МЈ	1.37E+00	0.00E+00	0	0.00E+00	0
IA	PENRT		МЈ	1.92E+02	8.10E-01	0	4.57E+00	0
	SM		kg	1.22E-01	0.00E+00	0	0.00E+00	0
2	RSF		MJ	1.37E-01	8.71E-04	0	4.98E-02	0
	NRSF		MJ		2.79E-03	0	4.91E-02	0
<u>%</u>	FW		m ³		2.92E-04	0	7.85E-01	0
	ndicator	Unit	B4	C1	C2	C3	C4	D
S S	PERE	MJ	0	0	1.48E-02	2.20E-02	1.08E-02	-8.52E+00
A	PERM	МЈ	0	0	0.00E+00	-1.57E+01	0.00E+00	0.00E+00
₩.	PERT	МЈ	0	0	1.48E-02	-1.57E+01	1.08E-02	-8.52E+00
	PENRE	МЈ	0	0	1.05E+00	4.10E-01	5.93E-01	-1.11E+01
Åg	PENRM	МЈ	0	0	0.00E+00	-1.37E+00	0.00E+00	0.00E+00
IA	PENRT	МЈ	0	0	1.05E+00	-9.64E-01	5.93E-01	-1.11E+01
	SM	kg	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2	RSF	МЈ	0	0	5.29E-04	4.96E-04	2.86E-04	4.11E-02
			0	0	1.89E-03	0.00E+00	1.72E-02	7.78E-01
	NRSF	MJ	0	U	1.032 03	0.00L+00	1.72L-02	7.70L-01

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; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

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



End of life - Waste											
	Indicator		Uı	nit	A1-A3	A4	A5	B2	В3		
	HWD	HWD		kg		1.04E-04	0	8.64E-04	0		
Ī	NHWD	NHWD		kg		1.82E-01	0	5.55E-02	0		
₩ ₩	RWD	kg		g	2.03E-03	3.78E-06	0	2.68E-05	0		
In	dicator		Unit	B4	C1	C2	C3	C4	D		
Ā	HWD		kg	0	0	5.34E-05	0.00E+00	2.35E+00	-6.17E-03		
Ū	NHWD		kg	0	0	5.00E-02	2.50E-01	2.53E-02	-5.10E-01		
3	RWD		kg	0	0	7.14E-06	0.00E+00	3.70E-06	-3.30E-06		

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"

End of life - Output flow												
Ind	Indicator				A4	A5	B2	В3				
@▷	CRU	kg		0.00E+00	0.00E+00	0	0.00E+00	0				
<₽>>	MFR	kg		1.18E+00	0.00E+00	0	0.00E+00	0				
Þ₹	MER	kg		1.41E-01	0.00E+00	0	0.00E+00	0				
₹ D	EEE	М	ı	8.84E-02	0.00E+00	0	0.00E+00	0				
DB.	EET	М	I	1.34E+00	0.00E+00	0	0.00E+00	0				
Indicato	or	Unit	B4	C1	C2	C3	C4	D				
∅>	CRU	kg	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00				
&₽	MFR	kg	0	0	0.00E+00	1.18E+00	0.00E+00	0.00E+00				
DF	MER	kg	0	0	0.00E+00	4.90E+00	0.00E+00	0.00E+00				
₹ >	EEE	МЈ	0	0	0.00E+00	9.44E-01	0.00E+00	0.00E+00				
DØ	EET	МЈ	0	0	0.00E+00	1.43E+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"

Biogenic Carbon Content										
Unit	At the factory gate									
kg C	5.11E-01									
kg C	0.00E+00									
	kg C									

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, Sweden (kWh)	ecoinvent 3.6	54.94	g CO2-eq/kWh

Dangerous substances

The product contains substances given by the REACH Candidate list that are less than 0,1 % by weight.

Indoor environment

The product is low-emitting and tested according to Swedish Möbelfakta.

Additional Environmental Information

Key Environmental Indicators

Key environmental performance indicators	Unit	Product stage	Construct	tion stage	Us	e sta	age End-of-life		•	Net benefits and loads from reuse, recovery, and/or recycling		
		A1-A3	A4	A5	B2	В3	B4	C1	C2	C 3	C4	D
GWPtotal	kg CO ₂ -eq	11.00	0.04	0.00	0.27	0.00	0.00	0.00	0.07	2.59	0.03	-1.27
Total energy consumption	MJ	278.46	0.84	0.00	5.29	0.00	0.00	0.00	1.06	0.43	0.62	-18.83
Share of recycled materials	%	2.36										

Additional environmental impact indicators required in NPCR Part A for construction products							
Indicator	Unit		A1-A3	A4	A5	B2	В3
GWPIOBC	kg CO ₂ -eq	kg CO ₂ -eq		3.60E-02	0	2.69E-01	0
Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO ₂ -eq	0	0	6.95E-02	7.17E-01	2.61E-02	-1.27E+00

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 (%)			
Xpect 294M CFRAME - 500 mm seat height	6.30	15.10	358.45	2.25			
Xpect 294HV CFRAME - 620mm seat height	6.70	16.22	376.89	2.28			
Xpect 294 - 440 mm seat height - Four legs, veneer finish	3.90	6.17	201.34	1.91			
Xpect 294 HV - 620 mm seat height - Four legs, laminate finish	5.10	11.67	301.50	2.26			
Xpect 294 CFRAME US - 440 mm seat height - Recycled polyester fabric	5.90	10.61	313.00	5.68			
Xpect 294 CFRAME US - 440 mm seat height - Wool blend fabric	6.00	28.65	410.93	1.95			

Key environment	al indicators (A1	-A3) for options for this E	PD	
Options	Weight (kg)	GWPtotal (kg CO ₂ -eq)	Total energy consumption (MJ)	Amount of recycled materials (%)
FGL - Felt aliders	0.02	0.07	1.29	0.00



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