



Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Hug Chair



EDSBYN

Owner of the declaration:

AB Edsbyverken

Product:

Hug Chair

Declared unit:

1 pc

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:

The Norwegian EPD Foundation

Declaration number:

NEPD-11970-11945

Registration number:

NEPD-11970-11945

Issue date: 08.08.2025

Valid to: 08.08.2030

EPD software:

LCAno EPD generator ID: 1022114

The Norwegian EPD Foundation



General information

Product

Hug Chair

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-11970-11945

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 Hug Chair

Declared unit (cradle to gate) with option:

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

Functional unit:

Chair with steel frame, and back support in veneer - Hug Chair 20693F - seat and back in birch veneer.

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:

AB Edsbyverken

Contact person: Maria Olsson

Phone

e-mail: maria.olsson@edsbyn.com

Manufacturer:

AB Edsbyverken

Place of production:

AB Edsbyverken Karlsvägen 2 828 32 Edsbyn, Sweden

Management system:

ISO 14001, ISO 9001

Organisation no:

556040-0755

Issue date:

08.08.2025

Valid to:

08.08.2030

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 Norway.

Developer of EPD: Jonathan Liverstad

Reviewer of company-specific input data and EPD: Jon Kvarmans

Approved:

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Håkon Hauan, CEO EPD-Norge

Product

Product description:

The Hug chair is perfect for every occasion, every person and every place. It is easy to stack and can be suspended from a table by its frame, facilitating cleaning and making everyday life a little simpler.

This is a chair composed for comfort, accessibility and function. The challenge has been in working with the pressed veneer to achieve bold curves which are comfortable yet retain the clean lines and strength of the material.

Hug Chair either come with a back and seat in pressed veneer or with a soft upholstered pad for longer sitting.

Packaging Details:

Hug Chair are packaged in quantities of up to three chairs per cardboard box.

More information about Hug Chair can be found here: https://www.edsbyn.com/products/hug/chair/

Product specification

Hug Chair 20693F - back and seat in birch veneer.

Frame/stand: Powder-coated steel
Back support: Form pressed birch veneer
Seat: Form pressed birch veneer

Padding: No Upholstery: No

For the purpose of these EPD calculations, Capture by Gabriel Fabrics has been selected as the upholstery for all applicable textile variants. Consequently, the LCA results may differ slightly depending on your chosen upholstery.

Key environmental indicators of a selection of other variants of Hug Chair are presented on page 11.

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Stainless steel	0,023	0,4992	0,005022	21,83
Metal - Steel	2,69	58,30	0,00	0,00
Wood - Plywood	1,90	41,20	0,00	0,00
Total	4,61	100,00	0,01	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Cardboard	0,84	100,00	0,30	36,00
Total incl.	5,45	100,00	0,31	

Technical data:

Height: 74 cm Width: 54 cm Depth: 49 cm Seat height: 46 cm Seat depth: 45 cm

Möbelfakta-certified product.

Market:

Europe.

Reference service life, product

5 years warranty. The RSL is at least 10 years, depending on chosen surface material and maintenance.

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs Hug 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:

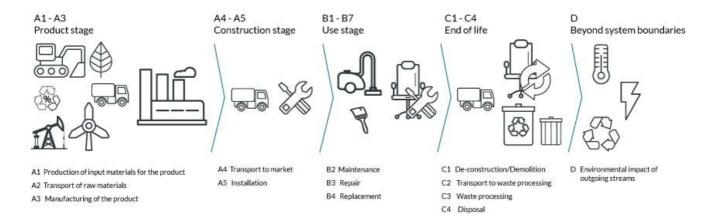
Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other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

Materials	Source	Data quality	Year
Metal - Stainless steel	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Cardboard	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)

Pi	roduct sta	je	Constr installati	uction on stage		Use stage End of life stage			Beyond the system boundaries							
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurb ishment	Operational energy use	Operational water use	De- construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery- Recycling-potential
A1	A2	A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
Χ	Χ	Χ	Χ	X	MND	X	Χ	Χ	MND	MND	MND	X	Χ	Χ	X	X

System boundary:



Additional technical information:

Edsbyn Care & Maintenance:

https://www.edsbyn.com/wp-content/uploads/2024/08/careedsbyn2024v240706.pdf



LCA: Scenarios and additional technical information

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

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, EURO 6 (km)	53,3 %	500	0,023	l/tkm	11,50
Assembly (A5)	Unit	Value			
Waste, packaging, corrugated board box, to average treatment (kg)	kg	0,839			
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 6 (km)	36,7 %	50	0,043	l/tkm	2,15
Waste processing (C3)	Unit	Value			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	1,90			
Waste, materials to recycling (kg)	kg	0,9192			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	2,71			
Disposal (C4)	Unit	Value			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0,02183			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	1,79			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of thermal energy, district heating, in Norway (MJ)	МЈ	19,97			
Substitution of electricity, in Norway (MJ)	MJ	1,32			
Substitution of primary steel with net scrap (kg)	kg	0,9175			



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	5,15E+00	2,38E-01	1,44E+00	2,69E-01	0
	GWP-fossil	GWP-fossil		kg CO ₂ -eq		2,37E-01	1,36E-02	2,67E-01	0
	GWP-biogenic		kg CO ₂ -	eq	-4,50E+00	1,02E-04	1,42E+00	1,68E-03	0
	GWP-luluc		kg CO ₂ -	eq	3,89E-02	7,23E-05	4,49E-06	4,35E-04	0
٨	ODP		kg CFC11	-eq	8,94E-07	5,72E-08	2,87E-09	2,37E-08	0
Œ.	AP		mol H+ -	eq	5,34E-02	7,64E-04	6,43E-05	1,56E-03	0
	EP-FreshWater		kg P -ed	7	5,98E-04	1,89E-06	1,11E-07	2,14E-05	0
	EP-Marine		kg N -ed	q	1,11E-02	1,67E-04	2,13E-05	2,48E-04	0
	EP-Terrestial		mol N -e	eq	1,29E-01	1,87E-03	2,30E-04	2,88E-03	0
	POCP		kg NMVOC	:-eq	4,66E-02	7,33E-04	6,61E-05	9,05E-04	0
	ADP-minerals&metals ¹		kg Sb-e	q	1,81E-04	4,23E-06	3,30E-07	7,48E-06	0
	ADP-fossil ¹		MJ		1,51E+02	3,86E+00	1,90E-01	4,57E+00	0
<u></u>	WDP ¹		3		4,53E+03	2,96E+00	2,41E-01	8,18E+01	0
(70)	WDF		m ³		4,33E+03	2,301+00	2,411-01	0, 101-01	O
70	Indicator		Unit	B4	4,33E+03	C2	C3	C4	D
				B4 0					
	Indicator		Unit		C1	C2	C3	C4	D
	Indicator GWP-total		Unit kg CO ₂ -eq	0	C1 0	C2 4,45E-02	C3 3,20E+00	C4 2,01E-02	D -1,13E+00
	Indicator GWP-total GWP-fossil		Unit kg CO ₂ -eq kg CO ₂ -eq	0	C1 0	C2 4,45E-02 4,45E-02	C3 3,20E+00 3,60E-02	C4 2,01E-02 2,01E-02	D -1,13E+00 -1,13E+00
P	Indicator GWP-total GWP-fossil GWP-biogenic		Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0	C1 0 0	C2 4,45E-02 4,45E-02 1,84E-05	C3 3,20E+00 3,60E-02 3,16E+00	C4 2,01E-02 2,01E-02 1,51E-05	D -1,13E+00 -1,13E+00 -7,96E-04
P P P P P P P P P P	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc		Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0 0 0	0 0 0 0	C2 4,45E-02 4,45E-02 1,84E-05 1,58E-05	C3 3,20E+00 3,60E-02 3,16E+00 7,23E-06	C4 2,01E-02 2,01E-02 1,51E-05 6,08E-06	D -1,13E+00 -1,13E+00 -7,96E-04 -4,44E-03
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP		Unit kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0 0 0	0 0 0 0 0	C2 4,45E-02 4,45E-02 1,84E-05 1,58E-05 1,01E-08	C3 3,20E+00 3,60E-02 3,16E+00 7,23E-06 3,15E-09	C4 2,01E-02 2,01E-02 1,51E-05 6,08E-06 6,24E-09	D -1,13E+00 -1,13E+00 -7,96E-04 -4,44E-03 -8,43E-03
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP		Unit kg CO ₂ -eq mol H+ -eq	0 0 0 0 0	0 0 0 0 0 0	C2 4,45E-02 4,45E-02 1,84E-05 1,58E-05 1,01E-08 1,28E-04	C3 3,20E+00 3,60E-02 3,16E+00 7,23E-06 3,15E-09 3,90E-04	C4 2,01E-02 2,01E-02 1,51E-05 6,08E-06 6,24E-09 1,43E-04	D -1,13E+00 -1,13E+00 -7,96E-04 -4,44E-03 -8,43E-03 -5,97E-03
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater		witk 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	C2 4,45E-02 4,45E-02 1,84E-05 1,58E-05 1,01E-08 1,28E-04 3,56E-07	C3 3,20E+00 3,60E-02 3,16E+00 7,23E-06 3,15E-09 3,90E-04 8,14E-07	C4 2,01E-02 2,01E-02 1,51E-05 6,08E-06 6,24E-09 1,43E-04 2,00E-07	D -1,13E+00 -1,13E+00 -7,96E-04 -4,44E-03 -8,43E-03 -5,97E-03 -7,24E-05
	Indicator GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine		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 0 0 0	C2 4,45E-02 4,45E-02 1,84E-05 1,58E-05 1,01E-08 1,28E-04 3,56E-07 2,53E-05	C3 3,20E+00 3,60E-02 3,16E+00 7,23E-06 3,15E-09 3,90E-04 8,14E-07 1,77E-04	C4 2,01E-02 2,01E-02 1,51E-05 6,08E-06 6,24E-09 1,43E-04 2,00E-07 5,08E-05	D -1,13E+00 -1,13E+00 -7,96E-04 -4,44E-03 -8,43E-03 -5,97E-03 -7,24E-05 -1,35E-03
	Indicator 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 0 0 0	C2 4,45E-02 4,45E-02 1,84E-05 1,58E-05 1,01E-08 1,28E-04 3,56E-07 2,53E-05 2,83E-04	C3 3,20E+00 3,60E-02 3,16E+00 7,23E-06 3,15E-09 3,90E-04 8,14E-07 1,77E-04 1,89E-03	C4 2,01E-02 2,01E-02 1,51E-05 6,08E-06 6,24E-09 1,43E-04 2,00E-07 5,08E-05 5,63E-04	D -1,13E+00 -1,13E+00 -7,96E-04 -4,44E-03 -8,43E-03 -5,97E-03 -7,24E-05 -1,35E-03 -1,40E-02
	Indicator 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 g NMVOC -eq	0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0	C2 4,45E-02 4,45E-02 1,84E-05 1,58E-05 1,01E-08 1,28E-04 3,56E-07 2,53E-05 2,83E-04 1,08E-04	C3 3,20E+00 3,60E-02 3,16E+00 7,23E-06 3,15E-09 3,90E-04 8,14E-07 1,77E-04 1,89E-03 4,88E-04	C4 2,01E-02 2,01E-02 1,51E-05 6,08E-06 6,24E-09 1,43E-04 2,00E-07 5,08E-05 5,63E-04 1,62E-04	D -1,13E+00 -1,13E+00 -7,96E-04 -4,44E-03 -8,43E-03 -5,97E-03 -7,24E-05 -1,35E-03 -1,40E-02 -5,99E-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"

^{*}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



Additional env	vironmental impact i	dicators	cators						
	Indicator	Unit	A1-A3	A4	A5	B2	В3		
	PM	Disease incidence	1,26E-06	2,18E-08	9,48E-10	1,31E-08	0		
	IRP ²	kgBq U235 -eq	1,74E+00	1,68E-02	8,12E-04	3,16E-02	0		
42	ETP-fw ¹	CTUe	5,17E+02	2,82E+00	2,53E-01	4,95E+00	0		
40.*	HTP-c ¹	CTUh	6,44E-08	0,00E+00	8,00E-12	7,39E-10	0		
4° £	HTP-nc ¹	CTUh	2,92E-07	2,73E-09	3,18E-10	1,64E-08	0		
	SQP ¹	dimensionless	5,10E+02	4,42E+00	1,27E-01	1,28E+00	0		
Ind	licator	Unit B4	C1	C2	C3	C4	D		

li li	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	2,73E-09	7,78E-09	2,61E-09	-1,42E-07
	IRP ²	kgBq U235 -eq	0	0	2,94E-03	7,39E-04	1,85E-03	-6,95E-03
3	ETP-fw ¹	CTUe	0	0	4,99E-01	1,41E+00	2,71E-01	-6,53E+01
40.* *** <u>*</u>	HTP-c ¹	CTUh	0	0	0,00E+00	1,94E-10	1,00E-11	-5,02E-09
48° E	HTP-nc ¹	CTUh	0	0	5,45E-10	3,90E-09	2,57E-10	9,69E-08
	SQP ¹	dimensionless	0	0	4,71E-01	6,00E-02	1,01E+00	-1,17E+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)

[&]quot;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		U	nit	A1-A3	A4	A5	B2	В3
	PERE		N	۷J	1,05E+02	4,85E-02	3,13E-03	6,21E-01	0
	PERM		N	۷J	3,34E+01	0,00E+00	-6,88E+00	0,00E+00	0
₽.	PERT		N	NJ	1,38E+02	4,85E-02	-6,88E+00	6,21E-01	0
	PENRE		N	۷J	1,52E+02	3,86E+00	1,90E-01	4,57E+00	0
Å	PENRM		N	۷J	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0
IA	PENRT		N	۷J	1,52E+02	3,86E+00	1,90E-01	4,57E+00	0
	SM		k	¢g	3,07E-01	0,00E+00	0,00E+00	0,00E+00	0
2	RSF		N	۷J	1,23E-01	1,70E-03	1,04E-04	4,98E-02	0
	NRSF		N	۷J	2,58E-01	5,69E-03	4,27E-04	4,91E-02	0
%	FW		n	n ³	1,27E-01	4,39E-04	8,96E-05	7,85E-01	0
	Indicator	ı	Unit	B4	C1	C2	C3	C4	D
	PERE		MJ	0	0	9,63E-03	1,26E-02	8,54E-03	-1,09E+01
	PERM		MJ	0	0	0,00E+00	-2,66E+01	0,00E+00	0,00E+00
₽	PERT		MJ	0	0	9,63E-03	-2,65E+01	8,54E-03	-1,09E+01
	PENRE		MJ	0	0	6,73E-01	3,15E-01	4,61E-01	-1,01E+01
Å	PENRM		MJ	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
IA	PENRT		MJ	0	0	6,73E-01	3,15E-01	4,61E-01	-1,01E+01
	SM		kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
2	RSF		MJ	0	0	3,45E-04	2,67E-04	2,26E-04	3,47E-02
	NRSF		MJ	0	0	1,23E-03	0,00E+00	1,69E-02	4,55E-01
8	FW		m ³	0	0	7,20E-05	5,21E-04	4,16E-04	-1,44E-02

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" *INA Indicator Not Assessed



End of life - Waste								
	Indicator	Uı	nit	A1-A3	A4	A5	B2	В3
	HWD	k	g	5,18E-02	2,11E-04	0,00E+00	8,64E-04	0
	NHWD	k	9	3,72E+00	3,35E-01	8,39E-01	5,55E-02	0
<u>.</u>	RWD	k	g	9,68E-04	2,63E-05	0,00E+00	2,68E-05	0
In	dicator	Unit	B4	C1	C2	C3	C4	D
ā	HWD	kg	0	0	3,47E-05	0,00E+00	1,80E+00	-5,33E-03
Ū	NHWD	kg	0	0	3,27E-02	0,00E+00	1,59E-02	-4,52E-01
8	RWD	kg	0	0	4,58E-06	0,00E+00	2,82E-06	-5,88E-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" *INA Indicator Not Assessed

End of life - Output flow								
Ind	icator	Unit		A1-A3	A4	A5	B2	В3
@>	CRU	kg		0,00E+00	0,00E+00	0,00E+00	0,00E+00	0
&▷	MFR	kg		0,00E+00	0,00E+00	7,80E-01	0,00E+00	0
DF	MER	kg		0,00E+00	0,00E+00	5,87E-02	0,00E+00	0
70	EEE	МЈ		0,00E+00	0,00E+00	4,80E-02	0,00E+00	0
	EET	МЈ		0,00E+00	0,00E+00	7,26E-01	0,00E+00	0
Indicato	r	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	9,19E-01	0,00E+00	0,00E+00
DØ	MER	kg	0	0	0,00E+00	4,61E+00	0,00E+00	0,00E+00
₹ D	EEE	MJ	0	0	0,00E+00	1,40E+00	0,00E+00	0,00E+00
D	EET	MJ	0	0	0,00E+00	2,11E+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

Biogenic Carbon Content							
Unit	At the factory gate						
kg C	8,63E-01						
kg C	3,88E-01						
	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-eg/kWh

Dangerous substances

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

Indoor environment

No effect on indoor environment.

Additional Environmental Information

Key Environmental Indicators

Key environmental performance indicators	Unit	Product stage Construction		Construction stage Use stage		oduct stage Construction stage Use stage 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	5,15	0,24	1,44	0,27	0,00	0,00	0,00	0,04	3,20	0,02	-1,13
Total energy consumption	MJ	256,55	3,91	0,19	5,29	0,00	0,00	0,00	0,68	0,33	0,49	-20,57
Share of recycled materials	%	5,64										

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		9,73E+00	2,38E-01	1,36E-02	2,69E-01	0	
Indicator	Unit	B4	C1	C2	C3	C4	D	
GWPIOBC	kg CO ₂ -eq	0	0	4,45E-02	3,62E-02	2,02E-02	-1,63E+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 (%)				
Hug Chair 20693K - upholstered seat (textile) - back in birch veneer	5,62	10,10	288,04	5,47				
Hug Chair 20693K - upholstered seat (leather) - back in birch veneer	5,70	8,68	281,73	5,39				

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