

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

## Humlan two-seater sofa with variants



The Norwegian EPD Foundation

**Owner of the declaration:**

NC Nordic Care AB

**Product:**

Humlan two-seater sofa with variants

**Declared unit:**

1 pcs

**This declaration is based on Product Category Rules:**

CEN Standard EN 15804:2012+A2:2019 serves as core PCR

OUTDATED NPCR 026:2018 Part B for furniture

**Program operator:**

The Norwegian EPD Foundation

**Declaration number:**

NEPD-7080-6475-EN

**Registration number:**

NEPD-7080-6475-EN

**Issue date:**

08.07.2024

**Valid to:**

08.07.2029

ver-111224

**EPD software:**

LCAno EPD generator ID: 420688



## General information

### Product

Humlan two-seater sofa with variants

### Program operator:

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

### Declaration number:

NEPD-7080-6475-EN

### This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR  
OUTDATED NPCR 026:2018 Part B for furniture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 Humlan two-seater sofa with variants

### Declared unit (cradle to gate) with option:

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

### Functional unit:

Humlan sofa - wooden frame with upholstered seat in 100% recycled polyester fabric, other fabrics available.

### 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:

NC Nordic Care AB  
Contact person: Moa Ulfsson  
Phone: +46 140 38 40 60  
e-mail: [moa.u@ncnordiccare.se](mailto:moa.u@ncnordiccare.se)

### Manufacturer:

NC Nordic Care AB

### Place of production:

NC Nordic Care AB  
Ydrevägen 23, Box 30  
SE 573 21 Tranås, Sweden

### Management system:

ISO 9001, ISO 14001, ISO 45001

### Organisation no:

556249-9177

### Issue date:

08.07.2024

### Valid to:

08.07.2029

### 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: Moa Ulfsson

Reviewer of company-specific input data and EPD: Per Wikström

### Approved:

Håkon Hauan, CEO EPD-Norge

## Product

### Product description:

Humlan is an inclusive and welcoming furniture family with sofas, armchairs and chairs in soft and rounded shapes that break up the square room and create a soft and inviting environment.

Humlan has removable upholstered on the seat, as well as a gap between the seat and the back which simplifies cleaning. Humlan is suitable for public environments such as waiting rooms and social rooms.

The Humlan family is designed to be long lasting, all components can be easily replaced, which makes it circular and sustainable in the long term. For more information please visit our webpage:

<https://www.ncnordicare.se/en/products/armchairs-sofas/humlan-374/>

### Product specification

Humlan

Sofa made of solid wood and upholstered seat. The Humlan family are available in a few different models and colours. This EPD is valid for the following options:

- Frame in solid wood, produced in oak or FSC®-certified birch.
- Clear lacquer, stained black or white. Other colours on request.

This EPD Includes the following variants:

Humlan 371 armchair - wooden frame, upholstered seat and back with 100 % recycled polyester fabric.

Humlan 371-1 armchair swivel stand - wooden frame, upholstered seat and back with 100 % recycled polyester fabric.

Humlan 372 armchair high back - wooden frame, upholstered seat and back with 100 % recycled polyester fabric.

Humlan 372-1 armchair high back swivel stand - wooden frame, upholstered seat and back with 100 % recycled polyester fabric.

Humlan 376 footrest - wooden frame, upholstered seat and back with 100 % recycled polyester fabric.

Humlan 377 three-seater sofa - wooden frame, upholstered seat and back with 100 % recycled polyester fabric.

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Cardboard	1,50	5,30	0,00	0,00
Glue for wood	0,10	0,35	0,00	0,00
Paint, water-based	0,30	1,06	0,00	0,00
Plastic - Polypropylene (PP)	0,06	0,19	0,00	0,00
Plastic - Polyurethane (PUR)	4,17	14,72	0,00	0,00
Wood - Plywood	12,50	44,13	0,00	0,00
Wood - Solid beech/birch	5,00	17,65	0,00	0,00
Metal - Steel	1,45	5,12	0,29	20,00
Textile - Polyester	3,25	11,47	3,25	100,00
Total	28,33	100,00	3,54	

### Technical data:

Total weight: 28,13 kg (packaging excluded)

Gross weight: 29,93kg (packaging included)

### DIMENSIONS

Height: 82 cm

Width: 147 cm

Depth: 64 cm

Seat height: 47 cm

Seat depth: 47 cm

### Market:

Mainly Europe, but is available worldwide.

### Reference service life, product

15 years' service life, 5 years warrant if no other indicated.

### Reference service life, building

## LCA: Calculation rules

### Declared unit:



1 pcs Humlan two-seater sofa with variants

**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.

Specific data for the manufacturing processes (product stage A3) refers to the year 2023. All other specific data is from year of study.

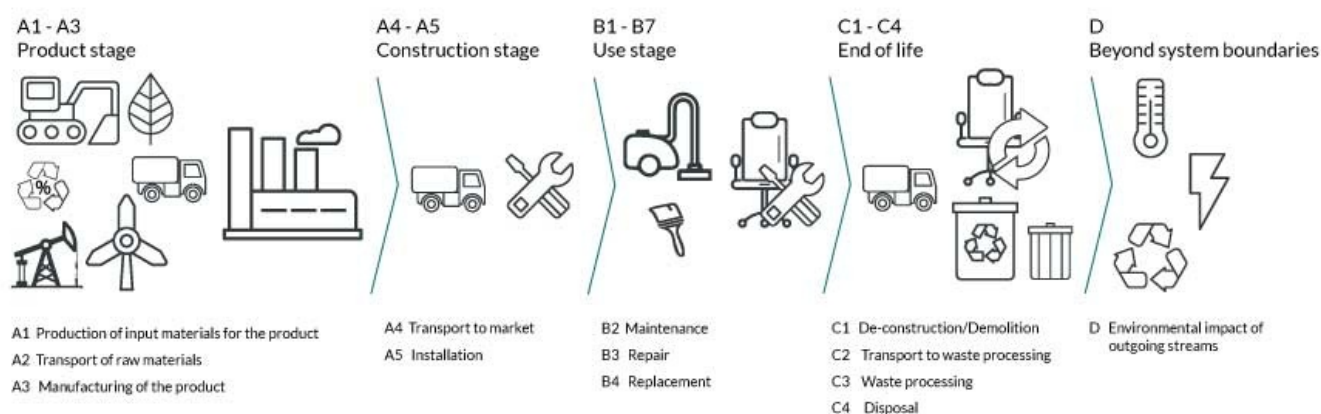
Materials	Source	Data quality	Year
Cardboard	Modified ecoinvent 3.6	Database	2019
Glue for wood	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Paint, water-based	ecoinvent 3.6	Database	2019
Plastic - Polypropylene (PP)	ecoinvent 3.6	Database	2019
Plastic - Polyurethane (PUR)	ecoinvent 3.6	Database	2019
Textile - Polyester	SCS-EPD-08784	EPD	2020
Wood - Plywood	modified ecoinvent 3.6	Database	2019
Wood - Solid beech/birch	modified ecoinvent 3.6	Database	2019

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

Product stage			Construction installation stage		Use stage						End of life stage				Beyond the system boundaries	
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
X	X	X	X	X	MND	X	X	X	MND	MND	MND	X	X	X	X	X

### System boundary:

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



### Additional technical information:

#### Certifications:

Humlan family is FSC®-certified (FSC®C010544) in birch.

Humlan is certified according to Swedish Möbelfakta requirements. Möbelfakta is a type 1 eco-label according to ISO 14024.

<https://www.mobelfakta.se/about.html>

#### Fulfilled technical standards:

Humlan chair is tested according to EN 16139:2013 Furniture – Strength, durability and safety – Requirements for non-domestic seating.

#### Fulfilled fire requirements, for upholstered variants:

EN 1021-1 Assessment of the ignitability of upholstered furniture – Part 1: Ignition source smouldering cigarette, with Möbelfakta certified fabrics,

EN 1021-2 Assessment of the ignitability of upholstered furniture – Part 2: Ignition source match flame equivalent, with Möbelfakta certified fabrics.

## LCA: Scenarios and additional technical information

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

NC Nordic Care AB, at our site in Tranås, we only use electricity from renewable sources such as bioenergy 49 %, hydroelectricity 27 %, wind 23 %, 1 % sun and 100 % bioenergy for local heating (figures from 2023).

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 diesel with renewable content. For more information about sustainability at Kinnarps, visit <https://www.kinnarps.com/about-kinnarps/sustainability/>.

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, 16-32 tonnes, HVO, EURO 6 (kgkm)	36,7 %	300	0,043	l/tkm	12,90
Maintenance (B2)		Unit	Value		
Electricity, European average (kWh)		kWh	11,70		
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 %	55	0,043	l/tkm	2,37
Waste processing (C3)		Unit	Value		
Waste treatment per kg Textile, incineration with fly ash extraction (kg)		kg	3,25		
Waste treatment per kg Polyurethane (PU), incineration (kg)		kg	4,17		
Waste treatment per kg Wood, incineration with fly ash extraction (kg)		kg	17,50		
Waste treatment per kg Hazardous waste, incineration (kg)		kg	0,10		
Waste, materials to recycling (kg)		kg	0,49		
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)		kg	1,45		
Waste treatment per kg Polypropylene (PP), incineration with fly ash extraction - C3 (kg)		kg	0,06		
Waste treatment per kg Paperboard, incineration with fly ash extraction - C3 (kg)		kg	1,50		
Disposal (C4)		Unit	Value		
Landfilling of ashes from incineration of Textile, soiled, process per kg ashes and residues (kg)		kg	0,16		
Landfilling of ashes from incineration of Polyurethane (PU), process per kg ashes and residues - C4 (kg)		kg	0,16		
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)		kg	0,20		
Landfilling of ashes from incineration of Hazardous waste, from incineration (kg)		kg	0,02		
Landfilling of ashes and residues from incineration of Scrap steel (kg)		kg	0,96		
Landfilling of ashes from incineration of Polypropylene, PP, process per kg ashes and residues - C4 (kg)		kg	0,00		
Landfilling of ashes from incineration of Paperboard, process per kg ashes and residues - C4 (kg)		kg	0,03		
Benefits and loads beyond the system boundaries (D)		Unit	Value		
Substitution of electricity, in Norway (MJ)		MJ	22,29		
Substitution of thermal energy, district heating, in Norway (MJ)		MJ	337,28		
Substitution of primary steel with net scrap (kg)		kg	0,39		

## LCA: Results

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

Environmental impact							
Indicator	Unit	A1-A3	A4	A5	B2	B3	
GWP-total	kg CO <sub>2</sub> -eq	5,28E+01	3,28E-01	0	5,01E+00	0	
GWP-fossil	kg CO <sub>2</sub> -eq	8,28E+01	3,27E-01	0	4,96E+00	0	
GWP-biogenic	kg CO <sub>2</sub> -eq	-3,05E+01	5,55E-04	0	3,49E-02	0	
GWP-luluc	kg CO <sub>2</sub> -eq	5,71E-01	5,10E-04	0	1,15E-02	0	
ODP	kg CFC11 -eq	7,78E-06	6,75E-08	0	4,20E-07	0	
AP	mol H+ -eq	4,72E-01	2,30E-03	0	2,90E-02	0	
EP-FreshWater	kg P -eq	1,37E-02	1,20E-05	0	5,30E-04	0	
EP-Marine	kg N -eq	1,02E-01	6,07E-04	0	3,68E-03	0	
EP-Terrestrial	mol N -eq	1,01E+00	6,79E-03	0	4,53E-02	0	
POCP	kg NMVOC -eq	3,11E-01	2,49E-03	0	1,15E-02	0	
ADP-minerals&metals <sup>1</sup>	kg Sb-eq	1,15E-03	3,98E-05	0	3,64E-05	0	
ADP-fossil <sup>1</sup>	MJ	1,19E+03	6,93E+00	0	1,02E+02	0	
WDP <sup>1</sup>	m <sup>3</sup>	5,08E+03	2,05E+01	0	1,54E+03	0	

Indicator	Unit	B4	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> -eq	0	0	2,53E-01	4,82E+01	4,32E-02	-2,46E+00
GWP-fossil	kg CO <sub>2</sub> -eq	0	0	2,53E-01	1,19E+01	4,31E-02	-2,39E+00
GWP-biogenic	kg CO <sub>2</sub> -eq	0	0	1,05E-04	3,63E+01	4,37E-05	-4,28E-03
GWP-luluc	kg CO <sub>2</sub> -eq	0	0	8,99E-05	1,66E-04	7,58E-06	-6,76E-02
ODP	kg CFC11 -eq	0	0	5,72E-08	1,06E-07	6,10E-09	-1,42E-01
AP	mol H+ -eq	0	0	7,26E-04	1,36E-02	1,73E-04	-1,83E-02
EP-FreshWater	kg P -eq	0	0	2,02E-06	1,32E-05	5,17E-07	-2,00E-04
EP-Marine	kg N -eq	0	0	1,44E-04	7,21E-03	5,63E-05	-5,71E-03
EP-Terrestrial	mol N -eq	0	0	1,61E-03	7,07E-02	6,35E-04	-6,15E-02
POCP	kg NMVOC -eq	0	0	6,16E-04	1,69E-02	1,78E-04	-1,79E-02
ADP-minerals&metals <sup>1</sup>	kg Sb-eq	0	0	6,98E-06	3,97E-06	3,22E-07	-2,69E-05
ADP-fossil <sup>1</sup>	MJ	0	0	3,82E+00	7,69E+00	4,89E-01	-3,16E+01
WDP <sup>1</sup>	m <sup>3</sup>	0	0	3,70E+00	2,17E+01	3,80E+00	-3,26E+02

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<sup>-3</sup> = 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 environmental impact indicators

Indicator	Unit	A1-A3	A4	A5	B2	B3
 PM	Disease incidence	8,46E-06	7,60E-08	0	7,60E-08	0
 IRP <sup>2</sup>	kgBq U235 -eq	3,90E+00	2,26E-02	0	8,97E-01	0
 ETP-fw <sup>1</sup>	CTUe	2,67E+03	1,01E+01	0	7,17E+01	0
 HTP-c <sup>1</sup>	CTUh	1,22E-07	0,00E+00	0	2,00E-09	0
 HTP-nc <sup>1</sup>	CTUh	1,48E-06	1,69E-08	0	6,91E-08	0
 SQP <sup>1</sup>	dimensionless	3,70E+03	1,29E+01	0	2,47E+01	0

Indicator	Unit	B4	C1	C2	C3	C4	D
 PM	Disease incidence	0	0	1,55E-08	7,38E-08	2,46E-09	-1,01E-06
 IRP <sup>2</sup>	kgBq U235 -eq	0	0	1,67E-02	1,55E-02	2,19E-03	-1,77E-01
 ETP-fw <sup>1</sup>	CTUe	0	0	2,83E+00	4,06E+01	6,64E-01	-1,76E+02
 HTP-c <sup>1</sup>	CTUh	0	0	0,00E+00	1,79E-09	3,20E-11	-4,87E-09
 HTP-nc <sup>1</sup>	CTUh	0	0	3,09E-09	7,18E-08	1,12E-09	-1,01E-07
 SQP <sup>1</sup>	dimensionless	0	0	2,67E+00	1,20E+00	1,28E+00	-1,87E+02

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<sup>-3</sup> = 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	
	PERE	MJ	7,33E+02	3,14E-01	0	1,98E+01	0	
	PERM	MJ	2,76E+02	0,00E+00	0	0,00E+00	0	
	PERT	MJ	1,01E+03	3,14E-01	0	1,98E+01	0	
	PENRE	MJ	1,09E+03	6,93E+00	0	1,03E+02	0	
	PENRM	MJ	3,14E+02	0,00E+00	0	0,00E+00	0	
	PENRT	MJ	1,40E+03	6,93E+00	0	1,03E+02	0	
	SM	kg	3,54E+00	0,00E+00	0	0,00E+00	0	
	RSF	MJ	2,61E+00	1,02E-02	0	1,45E+00	0	
	NRSF	MJ	1,52E+00	3,51E-02	0	3,44E-01	0	
	FW	m <sup>3</sup>	1,64E+00	2,83E-03	0	8,69E-02	0	

Indicator		Unit	B4	C1	C2	C3	C4	D
	PERE	MJ	0	0	5,47E-02	3,70E-01	2,22E-02	-1,73E+02
	PERM	MJ	0	0	0,00E+00	-2,76E+02	0,00E+00	0,00E+00
	PERT	MJ	0	0	5,47E-02	-2,76E+02	2,22E-02	-1,73E+02
	PENRE	MJ	0	0	3,82E+00	7,74E+00	4,89E-01	-3,16E+01
	PENRM	MJ	0	0	0,00E+00	-1,30E+02	0,00E+00	0,00E+00
	PENRT	MJ	0	0	3,82E+00	-1,22E+02	4,89E-01	-3,16E+01
	SM	kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	RSF	MJ	0	0	1,96E-03	8,48E-03	5,27E-04	-1,46E-02
	NRSF	MJ	0	0	7,00E-03	0,00E+00	9,03E-02	-9,78E+00
	FW	m <sup>3</sup>	0	0	4,09E-04	2,34E-02	4,78E-04	-2,09E-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 used as raw materials; PENRT = Total 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<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

End of life - Waste							
Indicator		Unit	A1-A3	A4	A5	B2	B3
	HWD	kg	2,08E+00	9,72E-04	0	1,54E-02	0
	NHWD	kg	5,39E+01	1,03E+00	0	3,47E-01	0
	RWD	kg	2,09E-02	2,77E-05	0	7,32E-04	0

Indicator		Unit	B4	C1	C2	C3	C4	D
	HWD	kg	0	0	1,97E-04	0,00E+00	1,25E+00	-3,57E-03
	NHWD	kg	0	0	1,86E-01	1,00E-01	2,22E-01	-8,38E-01
	RWD	kg	0	0	2,60E-05	0,00E+00	2,65E-06	-1,45E-04

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

"Reading example: 9,0 E-03 = 9,0\*10<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

End of life - Output flow							
Indicator		Unit	A1-A3	A4	A5	B2	B3
	CRU	kg	0,00E+00	0,00E+00	0	0,00E+00	0
	MFR	kg	1,40E+00	0,00E+00	0	0,00E+00	0
	MER	kg	1,64E+00	0,00E+00	0	0,00E+00	0
	EEE	MJ	1,06E+00	0,00E+00	0	0,00E+00	0
	EET	MJ	1,61E+01	0,00E+00	0	0,00E+00	0

Indicator		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	4,92E-01	0,00E+00	0,00E+00
	MER	kg	0	0	0,00E+00	2,80E+01	0,00E+00	0,00E+00
	EEE	MJ	0	0	0,00E+00	2,16E+01	0,00E+00	0,00E+00
	EET	MJ	0	0	0,00E+00	3,28E+02	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<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

Biogenic Carbon Content		
Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	8,61E+00
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>

## 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, European average (kWh)	ecoinvent 3.6	428,03	g CO <sub>2</sub> -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 certified according to Swedish Möbelfakta.

## Additional Environmental Information

### Key Environmental Indicators

Key environmental indicators	Unit	A1-A3	A4	A1-C4	A1-D
GWPTotal	kg CO <sub>2</sub> -eq	52,80	0,33	106,63	104,17
Total energy consumption	MJ	1826,94	7,29	1971,01	1756,60
Amount of recycled materials	%	12,28			

### Additional environmental impact indicators required in NPCR Part A for construction products

Indicator	Unit	A1-A3	A4	A5	B2	B3
GWPIOBC	kg CO <sub>2</sub> -eq	8,61E+01	3,28E-01	0	5,37E+00	0

Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO <sub>2</sub> -eq	0	0	2,53E-01	1,96E+01	5,39E-02	-2,65E+00

GWPI-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 <sub>2</sub> -eq)	Total energy consumption (MJ)	Amount of recycled materials (%)
Humlan armchair	15,66	35,40	1073,66	15,21
Humlan armchair high back	16,14	46,70	1168,69	17,98
Humlan armchair high back, swivel stand	16,04	51,21	1191,50	18,84
Humlan armchair swivel stand	14,36	44,28	1076,60	18,11
Humlan footrest	3,92	12,80	390,59	13,81
Humlan three-seater sofa	38,03	72,33	2413,46	13,01

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 <small>Global program operator</small>	<b>Program operator and publisher</b> The Norwegian EPD Foundation Post Box 5250 Majorstuen, 0303 Oslo, Norway	Phone: +47 977 22 020 e-mail: <a href="mailto:post@epd-norge.no">post@epd-norge.no</a> web: <a href="http://www.epd-norge.no">www.epd-norge.no</a>
	<b>Owner of the declaration:</b> NC Nordic Care AB Ydrevägen 23, Box 30, SE 573 21 Tranås, Sweden	Phone: +46 140 38 40 60 e-mail: <a href="mailto:moa.u@ncnordiccare.se">moa.u@ncnordiccare.se</a> web: <a href="http://www.ncnordiccare.se">www.ncnordiccare.se</a>
	<b>Author of the Life Cycle Assessment</b> LCA.no AS Dokka 6A, 1671 Kråkerøy, Norway	Phone: +47 916 50 916 e-mail: <a href="mailto:post@lca.no">post@lca.no</a> web: <a href="http://www.lca.no">www.lca.no</a>
	<b>Developer of EPD generator</b> LCA.no AS Dokka 6A, 1671 Kråkerøy, Norway	Phone: +47 916 50 916 e-mail: <a href="mailto:post@lca.no">post@lca.no</a> web: <a href="http://www.lca.no">www.lca.no</a>
	ECO Platform ECO Portal	web: <a href="http://www.eco-platform.org">www.eco-platform.org</a> web: ECO Portal