



# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

# Quickly table



# **LAMMHULTS**

The Norwegian EPD Foundation

Owner of the declaration:

Lammhults Möbel AB

**Product:** 

Quickly table

**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-7327-6718-EN

Registration number:

NEPD-7327-6718-EN

Issue date: 23.08.2024

Valid to: 23.08.2029

**EPD** software:

LCAno EPD generator ID: 505775

# **General information**

# **Product**

Quickly table

# **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-7327-6718-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 Quickly table

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

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

# **Functional unit:**

Quickly Flexible H72 70x140cm in high pressure laminate

#### 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:

Lammhults Möbel AB Contact person: Helena Kumlin Phone: +46 472 26 95 00 e-mail: Helena.kumlin@lammhults.se

#### Manufacturer:

Lammhults Möbel AB

#### Place of production:

Lammhults Möbel AB Växjövägen 41 SE-363 45 Lammhult, Sweden

# **Management system:**

ISO 14001, 9001, 45001

# Organisation no:

556058-2602

#### Issue date:

23.08.2024

#### Valid to:

23.08.2029

# 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: Lovisa Aiff

Reviewer of company-specific input data and EPD: Helena Kumlin

#### Approved:

Håkon Hauan

Managing Director of EPD-Norway

# **Product**

# **Product description:**

The Quickly table, designed by Johannes Foersom and Peter Hiort-Lorenzen, is a model of efficiency, with compact folding construction using a quick-lock mechanism for simplicity, safety and stability. Quickly is easy to handle, fold and unfold, for one person, using the unique patented leg locking mechanism.

# **Product specification**

Foldable powder coated or chromium plated frame of  $\emptyset$  30 mm welded conical steel tubing. Foldable T-leg frame of  $\emptyset$ 30 mm welded conical steel tubing available as option.

Table top

Flexible: 25mm poplar plywood with high pressure laminate and straight plastic edge alt. birch or oak veneer with matching wooden edge. Basic: 22mm MDF with melamine and straight plastic edge.

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Steel	3,21	20,44	0,00	0,00
Plastic - Acrylonitrile butadiene styrene (ABS)	0,21	1,36	0,00	0,00
Plastic - Nylon (PA)	0,66	4,23	0,00	0,00
Plastic - Polyethylene	0,02	0,11	0,02	100,00
Plastic - Polyethylene (HDPE)	0,04	0,28	0,00	0,00
Plastic - Polystyrene expandable (EPS)	0,05	0,34	0,00	0,00
Plastic - Polyurethane (PUR)	0,00	0,01	0,00	0,00
Powder coating	0,06	0,38	0,00	0,00
Thermoplastic elastomers (TPE)	0,06	0,36	0,00	0,00
Wood - Plywood	11,39	72,47	0,00	0,00
Total	15,71	100,00	0,02	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Plastic straps	0,05	100,00	0,00	0,00
Total incl. packaging	15,76	100,00	0,02	

### **Technical data:**

Length 140cm Width 70cm Height 72cm

Quickly table H72 meets the requirements of EN 15372:2016 and Möbelfakta.

# Market:

Available world wide

#### Reference service life, product

15 years (warranty 5 years)

Reference service life, building

# LCA: Calculation rules

# **Declared unit:**

1 pcs Quickly table

#### **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.

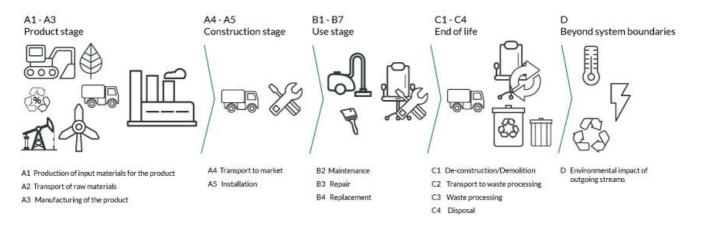
Materials	Source	Data quality	Year
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Plastic straps	ecoinvent 3.6	Database	2019
Plastic - Acrylonitrile butadiene styrene (ABS)	ecoinvent 3.6	Database	2019
Plastic - Nylon (PA)	ecoinvent 3.6	Database	2019
Plastic - Polyethylene	ecoinvent 3.6	Database	2019
Plastic - Polyethylene (HDPE)	ecoinvent 3.6	Database	2019
Plastic - Polystyrene expandable (EPS)	ecoinvent 3.6	Database	2019
Plastic - Polyurethane (PUR)	ecoinvent 3.6	Database	2019
Powder coating	Ecoinvent 3.6	Database	2019
Thermoplastic elastomers (TPE)	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)

Р	roduct stag	ge		uction on 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	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
Χ	X	Χ	Χ	Χ	MND	X	Χ	Χ	MND	MND	MND	Χ	Χ	X	Χ	X

# System boundary:

The analysis is a cradle-to-cradle, A1-D, where some B-stages that were assumed to be neglectable are not included. The A1-A4 stages includes the extraction and production of raw materials, transportation to the production site, the production process itself, and an estimated transport distance to the market. A5 includes the generated waste from the packaging of the product after the assembly at the customer. The only B-stage that is assumed to be relevant is B2, which includes assumptions on how the customer takes care of the product according to Lammhults' care instructions. The C- and D-stages includes the use of materials and energy for deconstruction, the transport to waste management, the waste processes, disposal of materials that cannot be processed, and the potential of reuse, recovery, and recycling of the product.



# Additional technical information:

https://www.lammhults.se/products/tables-trolleys/quickly

 $Lammhults\ Care\ \&\ Maintenance:\ https://issuu.com/lammhults/docs/lammhultscaremaintenance 2205$ 

# LCA: Scenarios and additional technical information

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

Some assumptions have been made regarding the products lifetime after leaving the factory gates. The product is assumed to be transported to the capitol of each country sold/delivered to. An average distance (A4) to the customer has been calculated through this data. In the A5 phase, the packaging of the product becomes waste, and the impacts are added automatically according to assumptions made in the EPD tool on waste handling on-site. In the use stage, the assumption is that the customer takes care of the product by cleaning the product with water and mild detergent. For the end-of-life stage of the product, it has been assumed that there is a 50 km distance from the customer to a waste terminal. The rest of the values are automatically filled in by the tool. For the D-stage, automatic values are filled in, according to generic data.

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 %	548	0,043	l/tkm	23,56
Assembly (A5)	Unit	Value			
Waste, packaging, PET straps, to average treatment - A5 (kg)	kg	0,05			
Maintenance (B2)	Unit	Value			
Household detergent, 5% soap solution (kg)	kg/DU	0,00			
Wastewater, average treatment (m3)	m3	0,00			
Water, tap water (m3)	m3/DU	0,00			
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 Expanded Polystyrene (EPS), incineration - C3 (kg)	kg	0,05			
Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg)	kg	0,06			
Waste treatment per kg Plastics, Mixture, municipal incineration with fly ash extraction (kg)	kg	0,88			
Waste treatment per kg Polyethylene, PE, incineration with fly ash extraction - C3 (kg)	kg	0,12			
Waste treatment per kg Polyurethane (PU), incineration (kg)	kg	0,00			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	3,21			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	11,39			
Waste, materials to recycling (kg)	kg	1,09			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	2,12			
Landfilling of ashes from incineration of expanded polystyrene (EPS), process per kg ashes and residues - C4 (kg)	kg	0,00			
Landfilling of ashes from incineration of Non- hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0,01			
Landfilling of ashes from incineration of Plastics, Mixture, municipal incineration with fly ash extraction, process per kg ashes and residues - C4 (kg)	kg	0,03			
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 Polyurethane (PU), 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	0,13			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity, in Norway (MJ)	MJ	9,62			
Substitution of primary steel with net scrap (kg)	kg	1,00			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	145,52			

**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 <sub>2</sub> -e	eq	1,63E+01	1,41E+00	3,96E-03	6,33E-04	0
	GWP-fossil		kg CO <sub>2</sub> -e	eq	3,38E+01	1,41E+00	3,96E-03	4,54E-04	0
	GWP-biogenic		kg CO <sub>2</sub> -e	eq	-1,76E+01	5,84E-04	5,47E-07	2,31E-05	0
	GWP-luluc		kg CO <sub>2</sub> -e	eq	1,48E-01	5,02E-04	3,04E-07	1,56E-04	0
(3)	ODP		kg CFC11 -	-eq	3,08E-06	3,20E-07	2,38E-10	4,90E-11	0
(Fi	АР		mol H+ -	eq	1,96E-01	4,05E-03	4,88E-06	3,31E-06	0
<del></del>	EP-FreshWater		kg P -eq	1	2,10E-03	1,13E-05	8,15E-09	8,26E-07	0
<del></del>	EP-Marine		kg N -ec	7	5,03E-02	8,02E-04	4,47E-06	1,65E-06	0
<del></del>	EP-Terrestial		mol N -e	q	5,31E-01	8,97E-03	1,75E-05	8,09E-06	0
	POCP		kg NMVOC	-eq	1,71E-01	3,44E-03	5,75E-06	1,91E-06	0
	ADP-minerals&metals <sup>1</sup>		kg Sb-ed	7	6,91E-04	3,90E-05	2,11E-08	1,64E-08	0
	ADP-fossil <sup>1</sup>		MJ		5,93E+02	2,13E+01	1,63E-02	7,06E-03	0
<u></u>	WDP <sup>1</sup>		2		1,61E+04	2,06E+01	5,77E-02	1,07E-01	0
	WDP		m <sup>3</sup>		1,015+04	2,000-01	3,11L-UZ	1,076-01	O
	Indicator	Un		B4	C1	C2	C3	C4	D
		<b>U</b> n kg CO	nit	B4 0			,		
	Indicator		<b>nit</b> O <sub>2</sub> -eq		C1	C2	C3	C4	D
	<b>Indicator</b> GWP-total	kg CO	nit 0 <sub>2</sub> -eq 0 <sub>2</sub> -eq	0	C1 0	C2 1,29E-01	C3 2,19E+01	C4 2,89E-02	D -1,97E+00
	Indicator  GWP-total  GWP-fossil	kg CO	nit 0'2 -eq 0'2 -eq	0	C1 0	C2 1,29E-01 1,29E-01	C3 2,19E+01 2,91E+00	C4 2,89E-02 2,88E-02	D -1,97E+00 -1,94E+00
	Indicator  GWP-total  GWP-fossil  GWP-biogenic	kg CO kg CO	nit D <sub>2</sub> -eq D <sub>2</sub> -eq D <sub>2</sub> -eq	0 0	C1 0 0	C2 1,29E-01 1,29E-01 5,33E-05	C3 2,19E+01 2,91E+00 1,90E+01	C4 2,89E-02 2,88E-02 2,06E-05	D -1,97E+00 -1,94E+00 -2,35E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc	kg CO kg CO kg CO	nit D <sub>2</sub> -eq D <sub>2</sub> -eq D <sub>2</sub> -eq	0 0 0	0 0 0 0	C2 1,29E-01 1,29E-01 5,33E-05 4,58E-05	C3 2,19E+01 2,91E+00 1,90E+01 3,71E-05	C4 2,89E-02 2,88E-02 2,06E-05 8,02E-06	D -1,97E+00 -1,94E+00 -2,35E-03 -2,96E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP	kg CO kg CO kg CO kg CFC	2 - eq 2 - eq 2 - eq 2 - eq 111 - eq + - eq	0 0 0 0	0 0 0 0 0	C2 1,29E-01 1,29E-01 5,33E-05 4,58E-05 2,92E-08	C3 2,19E+01 2,91E+00 1,90E+01 3,71E-05 1,89E-08	C4 2,89E-02 2,88E-02 2,06E-05 8,02E-06 7,99E-09	D -1,97E+00 -1,94E+00 -2,35E-03 -2,96E-02 -6,15E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP	kg CO kg CO kg CO kg CFC mol H	2 - eq 2 - eq 2 - eq 2 - eq 11 - eq + - eq	0 0 0 0 0	C1 0 0 0 0 0	C2 1,29E-01 1,29E-01 5,33E-05 4,58E-05 2,92E-08 3,70E-04	C3 2,19E+01 2,91E+00 1,90E+01 3,71E-05 1,89E-08 2,44E-03	C4 2,89E-02 2,88E-02 2,06E-05 8,02E-06 7,99E-09 1,88E-04	D -1,97E+00 -1,94E+00 -2,35E-03 -2,96E-02 -6,15E-02 -1,24E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater	kg CO kg CO kg CO kg CFC mol H kg P	2 - eq 2 - eq 2 - eq 3 - eq 4 - eq - eq - eq	0 0 0 0 0 0	C1 0 0 0 0 0 0	C2 1,29E-01 1,29E-01 5,33E-05 4,58E-05 2,92E-08 3,70E-04 1,03E-06	C3 2,19E+01 2,91E+00 1,90E+01 3,71E-05 1,89E-08 2,44E-03 3,37E-06	C4 2,89E-02 2,88E-02 2,06E-05 8,02E-06 7,99E-09 1,88E-04 3,04E-07	D -1,97E+00 -1,94E+00 -2,35E-03 -2,96E-02 -6,15E-02 -1,24E-02 -1,42E-04
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine	kg CO kg CO kg CO kg CFC mol H kg P	nit  22 - eq  22 - eq  22 - eq  211 - eq  - eq  - eq  N - eq	0 0 0 0 0 0	C1 0 0 0 0 0 0 0	C2 1,29E-01 1,29E-01 5,33E-05 4,58E-05 2,92E-08 3,70E-04 1,03E-06 7,32E-05	C3 2,19E+01 2,91E+00 1,90E+01 3,71E-05 1,89E-08 2,44E-03 3,37E-06 1,16E-03	C4 2,89E-02 2,88E-02 2,06E-05 8,02E-06 7,99E-09 1,88E-04 3,04E-07 6,62E-05	D -1,97E+00 -1,94E+00 -2,35E-03 -2,96E-02 -6,15E-02 -1,24E-02 -1,42E-04 -3,40E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine  EP-Terrestial	kg CO kg CO kg CO kg CFC mol H kg P kg N	nit  102 - eq  102 - eq  102 - eq  111 - eq  1 - eq  1 - eq  1 - eq  1 - eq	0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0	C2 1,29E-01 1,29E-01 5,33E-05 4,58E-05 2,92E-08 3,70E-04 1,03E-06 7,32E-05 8,19E-04	C3 2,19E+01 2,91E+00 1,90E+01 3,71E-05 1,89E-08 2,44E-03 3,37E-06 1,16E-03 1,22E-02	C4 2,89E-02 2,88E-02 2,06E-05 8,02E-06 7,99E-09 1,88E-04 3,04E-07 6,62E-05 7,34E-04	D -1,97E+00 -1,94E+00 -2,35E-03 -2,96E-02 -6,15E-02 -1,24E-02 -1,42E-04 -3,40E-03 -3,61E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine  EP-Terrestial  POCP	kg CO kg CO kg CO kg CFC mol H kg P kg N	-eq	0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0 0	C2 1,29E-01 1,29E-01 5,33E-05 4,58E-05 2,92E-08 3,70E-04 1,03E-06 7,32E-05 8,19E-04 3,14E-04	C3 2,19E+01 2,91E+00 1,90E+01 3,71E-05 1,89E-08 2,44E-03 3,37E-06 1,16E-03 1,22E-02 3,01E-03	C4 2,89E-02 2,88E-02 2,06E-05 8,02E-06 7,99E-09 1,88E-04 3,04E-07 6,62E-05 7,34E-04 2,10E-04	D -1,97E+00 -1,94E+00 -2,35E-03 -2,96E-02 -6,15E-02 -1,24E-02 -1,42E-04 -3,40E-03 -3,61E-02 -1,23E-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

#### Remarks to environmental impacts

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

<sup>\*</sup>INA Indicator Not Assessed

<sup>1.</sup> 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 e	nvironmental impac	t indicators						
	Indicator	Unit		A1-A3	A4	A5	B2	В3
	PM	Disease incidence	Disease incidence		8,64E-08	8,80E-11	3,60E-11	0
(101)	IRP <sup>2</sup>	kgBq U235 -eq		6,20E+00	9,32E-02	7,38E-05	4,49E-05	0
<b>4</b>	ETP-fw <sup>1</sup>	CTUe		1,28E+03	1,58E+01	1,56E-02	1,66E-02	0
40.* *** <b>2</b>	HTP-c <sup>1</sup>	CTUh	CTUh		0,00E+00	0,00E+00	1,00E-12	0
% <u>Q</u>	HTP-nc <sup>1</sup>	CTUh		8,42E-07	1,73E-08	1,50E-11	2,70E-11	0
	SQP <sup>1</sup>	dimensionless	dimensionless		1,49E+01	2,85E-02	7,94E-03	0
I	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	7,88E-09	2,65E-08	3,34E-09	-5,12E-07
	IRP <sup>2</sup>	kgBq U235 -eq	0	0	8,51E-03	3,48E-03	2,42E-03	-7,31E-02
	ETP-fw <sup>1</sup>	CTUe	0	0	1,44E+00	8,32E+00	4,05E-01	-1,27E+02
40. <u>*</u>	HTP-c <sup>1</sup>	CTUh	0	0	0,00E+00	6,97E-10	1,60E-11	-6,48E-09
% <u>₽</u>	HTP-nc <sup>1</sup>	CTUh	0	0	1,58E-09	2,67E-08	4,56E-10	5,18E-08

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)

1,36E+00

2,65E-01

1,35E+00

-8,14E+01

dimensionless

SQP<sup>1</sup>

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

<sup>\*</sup>INA Indicator Not Assessed

<sup>1.</sup> 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

<sup>2.</sup> 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.

# **LAMMHULTS**

Resource use									
	Indicator		U	nit	A1-A3	A4	A5	B2	В3
Ç.	PERE		N	۷J	7,90E+02	3,05E-01	4,12E-04	2,28E-03	0
	PERM		N	۷J	1,59E+02	0,00E+00	0,00E+00	0,00E+00	0
F.	PERT		N	ΛJ	9,49E+02	3,05E-01	4,12E-04	2,28E-03	0
	PENRE		N	۷J	5,68E+02	2,13E+01	1,63E-02	7,27E-03	0
49	PENRM		N	NJ	3,87E+01	0,00E+00	-1,15E+00	0,00E+00	0
IA	PENRT		N	NJ	6,06E+02	2,13E+01	-1,13E+00	7,27E-03	0
	SM		k	g	1,80E-02	0,00E+00	0,00E+00	0,00E+00	0
2	RSF		N	NJ	1,11E+00	1,09E-02	1,08E-05	6,56E-05	0
	NRSF		N	NJ	3,54E+00	3,91E-02	2,83E-05	6,55E-05	0
<b>&amp;</b>	FW		n	n <sup>3</sup>	7,03E-01	2,28E-03	8,63E-06	1,02E-03	0
	ndicator	U	Jnit	B4	C1	C2	C3	C4	D
Ţ.	PERE	1	MJ	0	0	2,79E-02	6,38E-02	1,28E-02	-7,53E+01
A	PERM	ı	MJ	0	0	0,00E+00	-1,59E+02	0,00E+00	0,00E+00
	PERT	ı	MJ	0	0	2,79E-02	-1,59E+02	1,28E-02	-7,53E+01
	PENRE	ı	MJ	0	0	1,95E+00	1,62E+00	5,96E-01	-2,13E+01
Å	PENRM	ı	MJ	0	0	0,00E+00	-3,83E+01	0,00E+00	0,00E+00
IA	PENRT	ı	MJ	0	0	1,95E+00	-3,67E+01	5,96E-01	-2,13E+01
	SM	I	kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
2	RSF	ı	MJ	0	0	9,97E-04	1,43E-03	3,34E-04	2,66E-02
	NRSF	ı	MJ	0	0	3,56E-03	0,00E+00	5,31E-02	-3,26E+00
<b>&amp;</b>	FW	r	m <sup>3</sup>	0	0	2,08E-04	5,06E-03	5,38E-04	-9,21E-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 resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary 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

# **LAMMHULTS**

End of life - Waste								
	Indicator	Uı	nit	A1-A3	A4	A5	B2	В3
	HWD	k	g	1,07E+00	1,10E-03	0,00E+00	1,72E-05	0
Ū	NHWD	k	g	8,10E+00	1,04E+00	5,00E-02	1,18E-04	0
<u> </u>	RWD	k	g	3,53E-03	1,45E-04	0,00E+00	3,91E-08	0
In	dicator	Unit	B4	C1	C2	C3	C4	D
Ā	HWD	kg	0	0	1,00E-04	0,00E+00	2,22E+00	-6,27E-03
Ū	NHWD	kg	0	0	9,46E-02	6,00E-02	5,35E-02	-7,33E-01
<b>3</b>	RWD	kg	0	0	1,33E-05	0,00E+00	3,61E-06	-6,01E-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								
Ind	icator	Uni	t	A1-A3	A4	A5	B2	В3
<b>@</b> D	CRU	kg	kg		0,00E+00	0,00E+00	0,00E+00	0
&>	MFR	kg	kg		0,00E+00	2,55E-02	0,00E+00	0
DF	MER	kg	kg		0,00E+00	2,50E-06	0,00E+00	0
50	EEE	M		6,41E-01	0,00E+00	3,84E-06	0,00E+00	0
<b>▶</b> ®	EET	M	МЈ		0,00E+00	5,81E-05	0,00E+00	0
Indicato	or	Unit	B4	C1	C2	C3	C4	D
<b>∅</b> >	CRU	kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
&▷	MFR	kg	0	0	0,00E+00	1,09E+00	0,00E+00	0,00E+00
DF	MER	kg	0	0	0,00E+00	1,57E+01	0,00E+00	0,00E+00
<b>₹</b> D	EEE	MJ	0	0	0,00E+00	9,67E+00	0,00E+00	0,00E+00
D	EET	МЈ	0	0	0,00E+00	1,46E+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\*10-3 = 0,009" \*INA Indicator Not Assessed

Biogenic Carbon Content		
Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	5,18E+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, 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**

# **Additional Environmental Information**

# **Key Environmental Indicators**

Key environmental indicators	Unit	A1-A3	A4	A1-C4	A1-D
GWPtotal	kg CO <sub>2</sub> -eq	16,28	1,41	39,75	37,77
Total energy consumption	MJ	1362,26	21,69	1388,30	1288,51
Amount of recycled materials	%	0,06			

Additional environmental impact indicators required in NPCR Part A for construction products							
Indicator	Unit		A1-A3	A4	A5	B2	В3
GWPIOBC	kg CO <sub>2</sub> -eq		5,69E+01	1,41E+00	3,96E-03	6,32E-04	0
Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO <sub>2</sub> -eq	0	0	1,29E-01	2,85E+00	3,17E-02	-2,50E+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 <sub>2</sub> -eq)	Total energy consumption (MJ)	Amount of recycled materials (%)		
Quickly Flexible 80x180cm	21,88	9,95	1798,68	0,08		
Quickly Flexible 50x120cm	10,33	16,72	920,57	0,17		
Quickly Basic 70x140cm	20,37	41,35	1715,33	0,09		
Quickly Basic 50x120cm	13,71	33,48	1187,66	0,13		

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