

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Madison



Madison Design – Alexander Lervik

JOHANSON

The Norwegian EPD Foundation

Owner of the declaration:

Johanson Design AB

Product:

Madison

Declared unit:

1 pcs

This declaration is based on Product Category Rules:

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

NPCR 026:2022 Part B for Furniture

Program operator:

The Norwegian EPD Foundation

Declaration number:

NEPD-5728-5033-EN

Registration number:

NEPD-5728-5033-EN

Issue date: 08.01.2024

Valid to: 08.01.2029

EPD Software:

LCA.no EPD generator ID: 169262

General information

Product

Madison

Program operator:

Post Box 5250 Majorstuen, 0303 Oslo, Norway The Norwegian EPD Foundation Phone: +47 23 08 80 00 web: post@epd-norge.no

Declaration number:

NEPD-5728-5033-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 Madison

Declared unit (cradle to gate) with option:

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

Functional unit:

Madison table legs in various colors and heights.

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:

Johanson Design AB Contact person: Lucas Carlsson Phone: +46 (0) 433 725 00 e-mail: lucas@johansondesign.se

Manufacturer:

Johanson Design AB

Place of production:

Johanson Design AB Anders Anderssons väg 7 285 35 Markaryd, Sweden

Management system:

ISO 14001

Organisation no:

SE556358520601

Issue date: 08.01.2024

Valid to: 08.01.2029

Year of study:

2020

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: Lucas Carlsson

Reviewer of company-specific input data and EPD: Goran Radulovic

Approved:

Håkon Hauan, CEO EPD-Norge

Product

Product description:

Madison, designed by Alexander Lervik, is one of Johanson's most flexible table series.

Works from small coffee tables to large conference tables.

The table in its simplicity can be delivered in our entire Multicolour system with more than 400 choises.

There is also a unique table top to choose, for the Madison Conefernce, with rounded shapes.

Madison table system features the same simple and practical design that characterises the entire Johanson range.

Choose between different heights and five different bases.. All for the best stability.

The base is slim and sleek.

On page 11 you will find all the varieties of Madison series.

Product specification

This declaration focuses on an in-depth study of Madison 72

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Steel	5,90	98,09	2,02	34,30
Plastic - Nylon (PA)	0,04	0,67	0,00	0,00
Powder coating	0,08	1,25	0,00	0,00
Total	6,02		2,02	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Plastic straps	0,02	0,87	0,00	0,00
Recycled cardboard	1,71	99,13	1,71	100,00
Total incl. packaging	7,74		3,73	

Technical data:

Total weight: 6,02 kg (excluding packaging)

Volume 0.30 m³

Total weight: 7,74 kg (including packaging)

Volume 0.37 m³

Total height 72 cm Total width 65 cm Total depth 65 cm

Möbelfakta certified

https://www.mobelfakta.se/Details.html?id=941

Market:

World wide

Reference service life, product

15 Years (5 years warranty)

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs Madison

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:

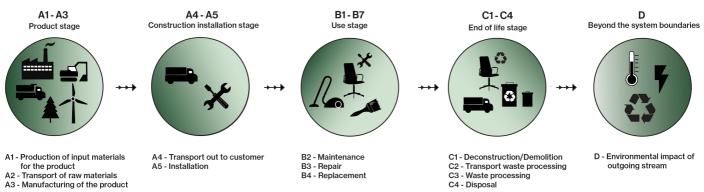
Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other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

Materials	Source	Data quality	Year
Packaging - Plastic straps	ecoinvent 3.6	Database	2019
Plastic - Nylon (PA)	ecoinvent 3.6	Database	2019
Powder coating	Ecoinvent 3.6	Database	2019
Recycled cardboard	Modified ecoinvent 3.6	Database	2019
Metal - Steel	S-P-08145	EPD	2021

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

	Pı	roduct stag	ge		uction ion stage				Use stage					End of I	ife 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	Х	Х	Χ	MND	Χ	Χ	Х	MND	MND	MND	X	Χ	X	Χ	X

System boundary:



Additional technical information:

Data in A3 is gathered from 2020

Data in B2 is calculated:

For Cleaning with wet cloth, Assume 0,001 m3 (1 liter) once a week for 15 years

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, 16-32 tonnes, EURO 6 (km)	36,7 %	150	0,043	l/tkm	6,45
Assembly (A5)	Unit	Value			
Waste, packaging, cardboard, 100 % recycled, to average treatment (kg)	kg	1,71			
Waste, packaging, PET straps, to average treatment - A5 (kg)	kg	0,02			
Maintenance (B2)	Unit	Value			
Water, tap water (m3)	m3/DU	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 %	85	0,043	l/tkm	3,66
Waste processing (C3)	Unit	Value			
Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg)	kg	0,08			
Waste treatment per kg Plastics, Mixture, municipal incineration with fly ash extraction (kg)	kg	0,04			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	5,90			
Waste, materials to recycling (kg)	kg	2,00			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	3,90			
Landfilling of ashes from incineration of Non- hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0,02			
Landfilling of ashes from incineration of Plastics, Mixture, municipal incineration with fly ash extraction, process per kg ashes and residues - C4 (kg)	kg	0,00			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity, in Norway (MJ)	MJ	0,11			
Substitution of primary steel with net scrap (kg)	kg	1,32			
Substitution of thermal energy, district heating, in Norway (MJ)	МЈ	1,60			

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 -e	eq	2,54E+01	1,90E-01	2,93E+00	2,69E-01	0
	GWP-fossil	GWP-fossil		kg CO ₂ -eq		1,90E-01	2,89E-02	2,67E-01	0
	GWP-biogenic	GWP-biogenic		eq	-1,99E+00	7,85E-05	2,90E+00	1,68E-03	0
	GWP-luluc		kg CO ₂ -e	eq	3,02E-02	6,75E-05	9,24E-06	4,35E-04	0
Ö	ODP		kg CFC11 -	-eq	2,22E-06	4,30E-08	5,91E-09	2,37E-08	0
	АР		mol H+ -	eq	1,38E-01	5,45E-04	1,32E-04	1,56E-03	0
*	EP-FreshWater		kg P -ec	I	9,37E-03	1,52E-06	2,30E-07	2,14E-05	0
*	EP-Marine		kg N -ed	1	3,04E-02	1,08E-04	4,47E-05	2,48E-04	0
	EP-Terrestial		mol N -e	q	2,98E-01	1,21E-03	4,74E-04	2,88E-03	0
	POCP		kg NMVOC	-eq	1,13E-01	4,62E-04	1,37E-04	9,05E-04	0
	ADP-minerals&metals ¹		kg Sb -eq		4,73E-04	5,24E-06	6,80E-07	7,48E-06	0
B	ADP-fossil ¹		MJ		3,61E+02	2,87E+00	3,92E-01	4,57E+00	0
<u>%</u>	WDP ¹		m ³		1,64E+03	2,77E+00	5,08E-01	8,18E+01	0
	Indicator	Indicator		B4	C1	C2	C3	C4	D
			Unit	D-T	CI	CZ	CS	C4	
	GWP-total		kg CO ₂ -eq	0	0	1,08E-01	2,99E-01	4,19E-02	-1,46E+00
	GWP-total GWP-fossil								
_			kg CO ₂ -eq	0	0	1,08E-01	2,99E-01	4,19E-02	-1,46E+00
	GWP-fossil		kg CO ₂ -eq kg CO ₂ -eq	0	0	1,08E-01 1,07E-01	2,99E-01 2,98E-01	4,19E-02 4,18E-02	-1,46E+00 -1,46E+00
	GWP-fossil GWP-biogenic		kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0	0 0	1,08E-01 1,07E-01 4,45E-05	2,99E-01 2,98E-01 5,84E-04	4,19E-02 4,18E-02 3,18E-05	-1,46E+00 -1,46E+00 -8,18E-04
	GWP-fossil GWP-biogenic GWP-luluc	k	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0 0	0 0 0 0	1,08E-01 1,07E-01 4,45E-05 3,82E-05	2,99E-01 2,98E-01 5,84E-04 1,13E-05	4,19E-02 4,18E-02 3,18E-05 1,29E-05	-1,46E+00 -1,46E+00 -8,18E-04 -9,69E-04
	GWP-fossil GWP-biogenic GWP-luluc ODP	k	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g CFC11 -eq	0 0 0 0	0 0 0 0	1,08E-01 1,07E-01 4,45E-05 3,82E-05 2,43E-08	2,99E-01 2,98E-01 5,84E-04 1,13E-05 4,01E-09	4,19E-02 4,18E-02 3,18E-05 1,29E-05 1,34E-08	-1,46E+00 -1,46E+00 -8,18E-04 -9,69E-04 -6,78E-04
	GWP-fossil GWP-biogenic GWP-luluc ODP AP	k	kg CO ₂ -eq 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	1,08E-01 1,07E-01 4,45E-05 3,82E-05 2,43E-08 3,09E-04	2,99E-01 2,98E-01 5,84E-04 1,13E-05 4,01E-09 2,49E-04	4,19E-02 4,18E-02 3,18E-05 1,29E-05 1,34E-08 3,03E-04	-1,46E+00 -1,46E+00 -8,18E-04 -9,69E-04 -6,78E-04 -7,27E-03
	GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater	k	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g CFC11 -eq mol H+ -eq kg P -eq	0 0 0 0 0 0	0 0 0 0 0 0	1,08E-01 1,07E-01 4,45E-05 3,82E-05 2,43E-08 3,09E-04 8,59E-07	2,99E-01 2,98E-01 5,84E-04 1,13E-05 4,01E-09 2,49E-04 1,06E-06	4,19E-02 4,18E-02 3,18E-05 1,29E-05 1,34E-08 3,03E-04 4,10E-07	-1,46E+00 -1,46E+00 -8,18E-04 -9,69E-04 -6,78E-04 -7,27E-03 -8,99E-05
	GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine	k	kg CO ₂ -eq 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	1,08E-01 1,07E-01 4,45E-05 3,82E-05 2,43E-08 3,09E-04 8,59E-07 6,11E-05	2,99E-01 2,98E-01 5,84E-04 1,13E-05 4,01E-09 2,49E-04 1,06E-06 9,52E-05	4,19E-02 4,18E-02 3,18E-05 1,29E-05 1,34E-08 3,03E-04 4,10E-07 1,08E-04	-1,46E+00 -1,46E+00 -8,18E-04 -9,69E-04 -6,78E-04 -7,27E-03 -8,99E-05 -1,51E-03
	GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial	k	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g 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	1,08E-01 1,07E-01 4,45E-05 3,82E-05 2,43E-08 3,09E-04 8,59E-07 6,11E-05 6,84E-04	2,99E-01 2,98E-01 5,84E-04 1,13E-05 4,01E-09 2,49E-04 1,06E-06 9,52E-05 1,02E-03	4,19E-02 4,18E-02 3,18E-05 1,29E-05 1,34E-08 3,03E-04 4,10E-07 1,08E-04 1,20E-03	-1,46E+00 -1,46E+00 -8,18E-04 -9,69E-04 -6,78E-04 -7,27E-03 -8,99E-05 -1,51E-03 -1,55E-02
	GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial POCP	k	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq g CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq g NMVOC -eq	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	1,08E-01 1,07E-01 4,45E-05 3,82E-05 2,43E-08 3,09E-04 8,59E-07 6,11E-05 6,84E-04 2,62E-04	2,99E-01 2,98E-01 5,84E-04 1,13E-05 4,01E-09 2,49E-04 1,06E-06 9,52E-05 1,02E-03 3,01E-04	4,19E-02 4,18E-02 3,18E-05 1,29E-05 1,34E-08 3,03E-04 4,10E-07 1,08E-04 1,20E-03 3,45E-04	-1,46E+00 -1,46E+00 -8,18E-04 -9,69E-04 -6,78E-04 -7,27E-03 -8,99E-05 -1,51E-03 -1,55E-02 -7,33E-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 er	nvironmental impac	t indicators						
	Indicator	Unit		A1-A3	A4	A5	B2	В3
	PM	Disease incidence		6,63E-07	1,16E-08	1,96E-09	1,31E-08	0
	IRP ²	kgBq U235 -eq		1,08E+00	1,25E-02	1,68E-03	3,16E-02	0
42	ETP-fw ¹	CTUe		4,43E+02	2,13E+00	5,21E-01	4,95E+00	0
46.* ****	HTP-c ¹	CTUh		2,74E-08	0,00E+00	1,50E-11	7,39E-10	0
48	HTP-nc ¹	CTUh		3,79E-07	2,32E-09	6,52E-10	1,64E-08	0
	SQP ¹	dimensionless		2,00E+02	2,01E+00	2,68E-01	1,28E+00	0
Į.	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	6,58E-09	1,04E-08	5,59E-09	-1,25E-07
	IRP ²	kgBq U235 -eq	0	0	7,10E-03	9,76E-04	3,93E-03	4,35E-03
	ETP-fw ¹	CTUe	0	0	1,20E+00	2,92E+00	5,59E-01	-8,14E+01
44.	HTP-c ¹	CTUh	0	0	0,00E+00	2,96E-10	1,90E-11	-6,98E-09
48	HTP-nc ¹	CTUh	0	0	1,32E-09	1,92E-09	5,01E-10	1,51E-07
	SQP ¹	dimensionless	0	0	1,14E+00	7,93E-02	2,13E+00	-1,80E+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"

^{*}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	В3
	PERE		MJ	4,58E+01	4,10E-02	6,49E-03	6,21E-01	0
2	PERM		MJ	1,40E+01	0,00E+00	-1,00E+01	0,00E+00	0
- Fig.	PERT		MJ	5,98E+01	4,10E-02	-1,00E+01	6,21E-01	0
8	PENRE		МЈ	4,21E+02	2,87E+00	3,92E-01	4,57E+00	0
. La	PENRM		МЈ	1,90E+00	0,00E+00	-3,44E-01	0,00E+00	0
IA	PENRT		MJ	4,23E+02	2,87E+00	4,77E-02	4,57E+00	0
<u></u>	SM		kg	3,73E+00	0,00E+00	0,00E+00	0,00E+00	0
2	RSF		MJ	1,18E+00	1,47E-03	2,15E-04	4,98E-02	0
	NRSF		MJ		5,25E-03	8,80E-04	4,91E-02	0
(%)	FW		m ³	4,22E-01	3,07E-04	1,85E-04	7,85E-01	0
	ndicator	Unit	B4	C1	C2	C3	C4	D
i j								
4	PERE	MJ	0	0	2,33E-02	1,78E-02	1,76E-02	-1,81E+00
	PERE	WI	0	0	2,33E-02 0,00E+00	1,78E-02 0,00E+00	1,76E-02 0,00E+00	-1,81E+00 0,00E+00
	PERM	MJ	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
i i	PERM PERT	MJ	0	0	0,00E+00 2,33E-02	0,00E+00 1,78E-02	0,00E+00 1,75E-02	0,00E+00 -1,81E+00
I F	PERM PERT PENRE	MJ MJ	0 0 0	0 0	0,00E+00 2,33E-02 1,62E+00	0,00E+00 1,78E-02 3,33E-01	0,00E+00 1,75E-02 9,86E-01	0,00E+00 -1,81E+00 -1,23E+01
I I I	PERM PERT PENRE PENRM	MJ MJ	0 0 0 0	0 0 0	0,00E+00 2,33E-02 1,62E+00 0,00E+00	0,00E+00 1,78E-02 3,33E-01 -1,56E+00	0,00E+00 1,75E-02 9,86E-01 0,00E+00	0,00E+00 -1,81E+00 -1,23E+01 0,00E+00
	PERM PERT PENRE PENRM PENRT	MJ MJ MJ	0 0 0 0	0 0 0 0	0,00E+00 2,33E-02 1,62E+00 0,00E+00 1,62E+00	0,00E+00 1,78E-02 3,33E-01 -1,56E+00 -1,23E+00	0,00E+00 1,75E-02 9,86E-01 0,00E+00 9,86E-01	0,00E+00 -1,81E+00 -1,23E+01 0,00E+00 -1,23E+01
	PERM PERT PENRE PENRM PENRT SM	MJ MJ MJ MJ kg	0 0 0 0 0	0 0 0 0 0	0,00E+00 2,33E-02 1,62E+00 0,00E+00 1,62E+00 0,00E+00	0,00E+00 1,78E-02 3,33E-01 -1,56E+00 -1,23E+00 0,00E+00	0,00E+00 1,75E-02 9,86E-01 0,00E+00 9,86E-01 0,00E+00	0,00E+00 -1,81E+00 -1,23E+01 0,00E+00 -1,23E+01 0,00E+00

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources; SM = Use of secondary materials; PENRM = Use of renewable primary energy resources; SM = Use of secondary materials; PENRM = 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			nit	A1-A3	A4	A5	B2	В3
	HWD		k	g	9,51E-01	1,48E-04	0,00E+00	8,64E-04	0
Ō	NHWD		kg		9,48E+00	1,39E-01	1,73E+00	5,55E-02	0
- -	RWD		kg		5,01E-03	1,95E-05	0,00E+00	2,68E-05	0
In	dicator		Unit	B4	C1	C2	C3	C4	D
Ā	HWD		kg	0	0	8,38E-05	0,00E+00	3,89E+00	-7,53E-03
Ū	NHWD		kg	0	0	7,90E-02	7,50E-02	2,41E-02	-5,95E-01
8	RWD		kg	0	0	1,11E-05	0,00E+00	6,08E-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" *INA Indicator Not Assessed

End of life - Output flow								
Ind	icator	Uni	t	A1-A3	A4	A5	B2	В3
®▷	CRU	kg	kg		0,00E+00	0,00E+00	0,00E+00	0
&>	MFR	kg		4,28E-02	0,00E+00	1,60E+00	0,00E+00	0
Þ₹	MER	kg		3,89E-07	0,00E+00	3,08E-06	0,00E+00	0
50	EEE	MJ		4,54E-02	0,00E+00	9,78E-02	0,00E+00	0
D	EET	MJ		6,86E-01	0,00E+00	1,48E+00	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	2,00E+00	0,00E+00	0,00E+00
DF	MER	kg	0	0	0,00E+00	6,02E+00	0,00E+00	0,00E+00
₹ D	EEE	MJ	0	0	0,00E+00	2,25E-01	0,00E+00	0,00E+00
DØ	EET	MJ	0	0	0,00E+00	3,40E+00	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	0,00E+00							
kg C	7,92E-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	Data 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 ₂ -eq	25,45	0,19	29,29	27,83
Total energy consumption	MJ	469,37	2,92	481,01	468,42
Amount of recycled materials	%	47.27			

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		1,90E-01	0,00E+00	2,69E-01	0
Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO ₂ -eq	0	0	1,08E-01	2,17E-01	4,21E-02	-2,18E+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 (%)		
Madison-Mini 47	5,19	13,69	283,97	56,99		
Madison-Mini 57	5,59	15,42	311,92	55,36		
Madison 57	6,84	21,53	405,88	50,11		
Madison 72	7,74	25,45	469,37	48,24		
Madison 90	7,84	25,88	476,36	48,06		
Madison 100	8,44	27,48	508,65	48,64		
Madison 110	8,64	28,34	522,63	48,31		
Madison XL 57	13,73	43,97	814,02	49,51		
Madison XL 72	14,99	47,19	880,88	50,18		
Madison T-72 - 120x70	10,09	36,69	644,72	43,54		
Madison T-72 - 140x70	10,29	37,05	653,87	44,00		
Madison T-72 - 180x70	10,79	39,21	688,81	43,55		
Madison T-XL-72 - 240x110	22,34	79,00	1398,97	44,76		
Madison T-XL-72 - 300x110	30,20	113,16	1949,49	41,99		
Madison T-XL-72 - 360x110	32,61	123,59	2118,38	41,41		
Madison T-XL-72 - 420x110	41,08	160,40	2712,02	39,91		

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