

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

**STAY** 



# Stay Design – Team Johanson

# **JOHANSON**

Owner of the declaration:

Johanson Design AB

**Product:** 

STAY

**Declared unit:** 

1 pcs

This declaration is based on Product Category

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-6001-5268-EN

Registration number:

NEPD-6001-5268-EN

Issue date: 06.02.2024

**Valid to:** 06.02.2029

**EPD** software:

LCAno EPD generator ID: 219069

The Norwegian EPD Foundation

# **General information**

#### **Product**

**STAY** 

#### **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-6001-5268-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 STAY

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

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

#### **Functional unit:**

Undercarriage for table

#### 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: 06.02.2024

Valid to: 06.02.2029

# 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: Goran Radulovic

Reviewer of company-specific input data and EPD: Lucas Carlsson

Approved:

Håkon Hauan, CEO EPD-Norge

#### **Product**

#### **Product description:**

Stay features the same simple and practical design that characterises the entire Johanson range. Choose between different heights and three different diameters of the foot. All for the best stability. The base is extremely slim and sleek.

Design: Team Johanson

#### **Product specification**

Stay 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.

This declaration focuses on an in-depth study of STAY-47A Model

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Steel	7,00	97,36	1,40	20,00
Plastic - Polypropylene (PP)	0,10	1,39	0,00	0,00
Powder coating	0,09	1,25	0,00	0,00
Total	7,19		1,40	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Plastic straps	0,01	0,40	0,00	0,00
Recycled cardboard	2,50	99,60	2,50	100,00
Total incl. packaging	9,70		3,90	

#### **Technical data:**

Total weight: 7,19 kg (excluding packaging)

Volume 0,08 m<sup>3</sup>

Total weight: 9,70 kg (including packaging)

Volume 0,08 m<sup>3</sup>

Total height 47 cm Total width 40cm Total depth 40 cm

#### Market:

World wide

# Reference service life, product

15 years (5 years warranty)

Reference service life, building

#### LCA: Calculation rules

#### **Declared unit:**

1 pcs STAY

# **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.

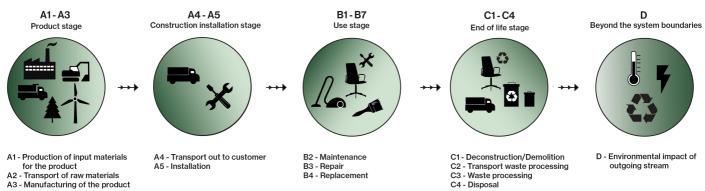
# **JOHANSON**

Materials	Source	Data quality	Year
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Plastic straps	ecoinvent 3.6	Database	2019
Plastic - Polypropylene (PP)	ecoinvent 3.6	Database	2019
Powder coating	Ecoinvent 3.6	Database	2019
Recycled cardboard	Modified ecoinvent 3.6	Database	2019

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

	Pı	roduct stag	ge		uction ion stage		Use stage End of life stage				Beyond the system boundaries						
Raw	materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refu <i>r</i> b ishment	Operational energy use	Operational water use	De- construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery- Recycling-potential
Α	.1	A2	A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
X	<	Х	X	X	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 vacuum cleaning. Assume 900 W effect, 1 minute a week for 15 years 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 %	143	0,043	l/tkm	6,15
Assembly (A5)	Unit	Value			
Waste, packaging, cardboard, 100 % recycled, to average treatment (kg)	kg	2,50			
Waste, packaging, PET straps, to average treatment - A5 (kg)	kg	0,01			
Maintenance (B2)	Unit	Value			
Electricity, Sweden (kWh)	kWh/DU	11,70			
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	0,09			
Waste treatment per kg Polypropylene (PP), incineration with fly ash extraction - C3 (kg)	kg	0,10			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	7,00			
Waste, materials to recycling (kg)	kg	2,38			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	5,81			
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 Polypropylene, PP, 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	0,22			
Substitution of primary steel with net scrap (kg)	kg	2,10			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	3,27			

**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	3,66E+01	2,27E-01	4,29E+00	9,12E-01	0
	GWP-fossil		kg CO <sub>2</sub> -eq		3,92E+01	2,27E-01	4,12E-02	8,60E-01	0
	GWP-biogenic		kg CO <sub>2</sub> -e	eq	-2,64E+00	9,38E-05	4,24E+00	1,37E-02	0
	GWP-luluc		kg CO <sub>2</sub> -e	eq	4,46E-02	8,06E-05	1,34E-05	3,89E-02	0
٨	ODP		kg CFC11	-eq	3,40E-06	5,13E-08	8,59E-09	3,14E-07	0
CE!	АР		mol H+ -	eq	1,94E-01	6,51E-04	1,92E-04	5,42E-03	0
-	EP-FreshWater		kg P -ec	1	2,48E-03	1,81E-06	3,34E-07	6,14E-05	0
<del></del>	EP-Marine		kg N -ed	7	3,95E-02	1,29E-04	6,42E-05	9,04E-04	0
<del></del>	EP-Terrestial		mol N -e	q	4,11E-01	1,44E-03	6,89E-04	1,15E-02	0
	POCP		kg NMVOC	-eq	1,44E-01	5,52E-04	1,98E-04	2,87E-03	0
<b>3</b> 53	ADP-minerals&metals <sup>1</sup>		kg Sb-ed	7	9,87E-04	6,26E-06	9,89E-07	3,12E-05	0
	ADP-fossil <sup>1</sup>		МЈ		5,31E+02	3,43E+00	5,69E-01	7,40E+01	0
<u></u>	WDP <sup>1</sup>		m <sup>3</sup>		3,32E+03	3,31E+00	7,29E-01	7,13E+03	0
0			""		3,322 - 33	-,	,	.,	
	Indicator		Unit	B4	C1	C2	C3	C4	D
		kg		B4 0			,		
	Indicator		Unit		C1	C2	C3	C4	D
	<b>Indicator</b> GWP-total	kg	<b>Unit</b> g CO <sub>2</sub> -eq	0	C1 0	C2 1,35E-01	C3 4,99E-01	C4 6,26E-02	D -2,33E+00
	Indicator  GWP-total  GWP-fossil	kg kg	<b>Unit</b> g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq	0	C1 0	C2 1,35E-01 1,35E-01	C3 4,99E-01 4,98E-01	C4 6,26E-02 6,25E-02	D -2,33E+00 -2,33E+00
	Indicator  GWP-total  GWP-fossil  GWP-biogenic	kg kg	Unit g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq	0 0	C1 0 0	C2 1,35E-01 1,35E-01 5,57E-05	C3 4,99E-01 4,98E-01 6,92E-04	C4 6,26E-02 6,25E-02 4,75E-05	D -2,33E+00 -2,33E+00 -1,31E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc	kg kg	<b>Unit</b> g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq	0 0 0	0 0 0 0	C2 1,35E-01 1,35E-01 5,57E-05 4,79E-05	C3 4,99E-01 4,98E-01 6,92E-04 1,34E-05	C4 6,26E-02 6,25E-02 4,75E-05 1,93E-05	D -2,33E+00 -2,33E+00 -1,31E-03 -1,69E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP	kg kg kg m	Unit  g CO <sub>2</sub> -eq  g CO <sub>2</sub> -eq  g CO <sub>2</sub> -eq  g CO <sub>2</sub> -eq  CFC11 -eq	0 0 0 0	C1 0 0 0 0 0	C2 1,35E-01 1,35E-01 5,57E-05 4,79E-05 3,05E-08	C3 4,99E-01 4,98E-01 6,92E-04 1,34E-05 4,73E-09	C4 6,26E-02 6,25E-02 4,75E-05 1,93E-05 1,99E-08	D -2,33E+00 -2,33E+00 -1,31E-03 -1,69E-03 -1,38E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP	kg kg kg m	Unit  g CO <sub>2</sub> -eq  g CO <sub>2</sub> -eq  g CO <sub>2</sub> -eq  CFC11 -eq  ol H+ -eq	0 0 0 0 0	C1 0 0 0 0 0	C2 1,35E-01 1,35E-01 5,57E-05 4,79E-05 3,05E-08 3,87E-04	C3 4,99E-01 4,98E-01 6,92E-04 1,34E-05 4,73E-09 3,03E-04	C4 6,26E-02 6,25E-02 4,75E-05 1,93E-05 1,99E-08 4,53E-04	D -2,33E+00 -2,33E+00 -1,31E-03 -1,69E-03 -1,38E-03 -1,16E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater	kg kg m	Unit  g CO <sub>2</sub> -eq  g CO <sub>2</sub> -eq  g CO <sub>2</sub> -eq  CFC11 -eq  ol H+ -eq  kg P -eq	0 0 0 0 0 0	C1 0 0 0 0 0 0	C2 1,35E-01 1,35E-01 5,57E-05 4,79E-05 3,05E-08 3,87E-04 1,08E-06	C3 4,99E-01 4,98E-01 6,92E-04 1,34E-05 4,73E-09 3,03E-04 1,26E-06	C4 6,26E-02 6,25E-02 4,75E-05 1,93E-05 1,99E-08 4,53E-04 6,13E-07	D -2,33E+00 -2,33E+00 -1,31E-03 -1,69E-03 -1,38E-03 -1,16E-02 -1,44E-04
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine	kg kg kg m	Unit  g CO <sub>2</sub> -eq  g CO <sub>2</sub> -eq  g CO <sub>2</sub> -eq  CFC11 -eq  ol H+ -eq  kg P -eq	0 0 0 0 0 0	C1 0 0 0 0 0 0	C2 1,35E-01 1,35E-01 5,57E-05 4,79E-05 3,05E-08 3,87E-04 1,08E-06 7,66E-05	C3 4,99E-01 4,98E-01 6,92E-04 1,34E-05 4,73E-09 3,03E-04 1,26E-06 1,17E-04	C4 6,26E-02 6,25E-02 4,75E-05 1,93E-05 1,99E-08 4,53E-04 6,13E-07 1,62E-04	D -2,33E+00 -2,33E+00 -1,31E-03 -1,69E-03 -1,38E-03 -1,16E-02 -1,44E-04 -2,43E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine  EP-Terrestial	kg kg kg m kg m	Unit g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq cFC11 -eq ol H+ -eq kg P -eq kg N -eq nol N -eq	0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0	C2 1,35E-01 1,35E-01 5,57E-05 4,79E-05 3,05E-08 3,87E-04 1,08E-06 7,66E-05 8,57E-04	C3 4,99E-01 4,98E-01 6,92E-04 1,34E-05 4,73E-09 3,03E-04 1,26E-06 1,17E-04 1,26E-03	C4 6,26E-02 6,25E-02 4,75E-05 1,93E-05 1,99E-08 4,53E-04 6,13E-07 1,62E-04 1,79E-03	D -2,33E+00 -2,33E+00 -1,31E-03 -1,69E-03 -1,38E-03 -1,16E-02 -1,44E-04 -2,43E-03 -2,48E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine  EP-Terrestial  POCP	kg kg kg m kg m	Unit g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq g CO <sub>2</sub> -eq CFC11 -eq ol H+ -eq kg P -eq kg N -eq nol N -eq	0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0 0	C2 1,35E-01 1,35E-01 5,57E-05 4,79E-05 3,05E-08 3,87E-04 1,08E-06 7,66E-05 8,57E-04 3,28E-04	C3 4,99E-01 4,98E-01 6,92E-04 1,34E-05 4,73E-09 3,03E-04 1,26E-06 1,17E-04 1,26E-03 3,69E-04	C4 6,26E-02 6,25E-02 4,75E-05 1,93E-05 1,99E-08 4,53E-04 6,13E-07 1,62E-04 1,79E-03 5,16E-04	D -2,33E+00 -2,33E+00 -1,31E-03 -1,69E-03 -1,38E-03 -1,16E-02 -1,44E-04 -2,43E-03 -2,48E-02 -1,17E-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		2,43E-06	1,39E-08	2,84E-09	4,09E-08	0
(**) E	IRP <sup>2</sup>	kgBq U235 -eq		2,43E+00	1,50E-02	2,44E-03	2,41E+00	0
	ETP-fw <sup>1</sup>	CTUe		1,54E+03	2,54E+00	7,58E-01	4,16E+01	0
44.	HTP-c <sup>1</sup>	CTUh		1,84E-07	0,00E+00	2,30E-11	1,79E-09	0
48	HTP-nc <sup>1</sup>	CTUh		1,74E-06	2,77E-09	9,51E-10	4,18E-08	0
	SQP <sup>1</sup>	dimensionless		3,78E+02	2,40E+00	3,85E-01	3,20E+01	0
I	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	8,25E-09	1,24E-08	8,35E-09	-2,01E-07
	IRP <sup>2</sup>	kgBq U235 -eq	0	0	8,90E-03	1,15E-03	5,87E-03	6,56E-03
<b>3</b>	ETP-fw <sup>1</sup>	CTUe	0	0	1,51E+00	3,28E+00	8,36E-01	-1,30E+02
40.* *** <u>\$</u>	HTP-c <sup>1</sup>	CTUh	0	0	0,00E+00	3,52E-10	2,90E-11	-1,11E-08
₩ <u></u>	HTP-nc <sup>1</sup>	CTUh	0	0	1,65E-09	2,21E-09	7,52E-10	2,40E-07

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)

1,42E+00

9,35E-02

3,18E+00

-3,27E+00

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.

Resource use									
	Indicator		Uı	nit	A1-A3	A4	A5	B2	В3
	PERE		MJ		7,19E+01	4,90E-02	9,40E-03	3,40E+01	0
	PERM		N	۷J	2,05E+01	0,00E+00	-1,46E+01	0,00E+00	0
<b>₽</b>	PERT		N	۷J	9,24E+01	4,90E-02	-1,46E+01	3,40E+01	0
<b>3</b>	PENRE		N	۷J	5,59E+02	3,43E+00	5,69E-01	7,41E+01	0
	PENRM		N	ΛJ	3,51E+00	0,00E+00	-2,30E-01	0,00E+00	0
<b>A</b>	PENRT		N	ΛJ	5,63E+02	3,43E+00	3,40E-01	7,41E+01	0
	SM		k	g	3,90E+00	0,00E+00	0,00E+00	0,00E+00	0
2	RSF		N	۸J	1,40E+00	1,75E-03	3,11E-04	1,79E-01	0
	NRSF		N	۸J	2,03E+00	6,27E-03	1,28E-03	4,58E-01	0
<b>%</b>	FW		m	n <sup>3</sup>	5,25E-01	3,66E-04	2,69E-04	8,60E-01	0
			"	1	-,	.,	,	-,	-
	ndicator	Unit		B4	C1	C2	C3	C4	D
ू ेट्ट	<b>ndicator</b> PERE	<b>Unit</b> MJ	it						
			<b>it</b>	B4	C1	C2	C3	C4	D
S S	PERE	МЈ	<b>it</b> J	B4 0	C1 0	C2 2,91E-02	C3 2,08E-02	C4 2,63E-02	D -3,25E+00
e I	PERE PERM	MJ	<b>it</b> J	B4 0 0	C1 0 0	C2 2,91E-02 0,00E+00	C3 2,08E-02 0,00E+00	C4 2,63E-02 0,00E+00	D -3,25E+00 0,00E+00
्र (हे) <b>्र</b> ्र	PERE PERM PERT	WI WI WI	it J J	B4 0 0	C1 0 0	C2 2,91E-02 0,00E+00 2,91E-02	C3 2,08E-02 0,00E+00 2,08E-02	C4 2,63E-02 0,00E+00 2,63E-02	D -3,25E+00 0,00E+00 -3,25E+00
्र <b>4</b> ्रह्	PERE PERM PERT PENRE	мл мл мл мл	it  J  J  J	B4 0 0 0 0	C1 0 0 0	C2 2,91E-02 0,00E+00 2,91E-02 2,04E+00	C3 2,08E-02 0,00E+00 2,08E-02 3,98E-01	C4 2,63E-02 0,00E+00 2,63E-02 1,47E+00	D -3,25E+00 0,00E+00 -3,25E+00 -1,97E+01
# # # # #	PERE PERM PERT PENRE PENRM	мл мл мл мл	it  J  J  J  J	B4 0 0 0 0 0	C1 0 0 0 0	C2 2,91E-02 0,00E+00 2,91E-02 2,04E+00 0,00E+00	C3 2,08E-02 0,00E+00 2,08E-02 3,98E-01 -3,28E+00	C4 2,63E-02 0,00E+00 2,63E-02 1,47E+00 0,00E+00	D -3,25E+00 0,00E+00 -3,25E+00 -1,97E+01 0,00E+00
	PERE PERM PERT PENRE PENRM PENRT	мл мл мл мл мл	it  J  J  J  J  J	B4 0 0 0 0 0	C1 0 0 0 0 0	C2 2,91E-02 0,00E+00 2,91E-02 2,04E+00 0,00E+00 2,04E+00	C3 2,08E-02 0,00E+00 2,08E-02 3,98E-01 -3,28E+00 -2,88E+00	C4 2,63E-02 0,00E+00 2,63E-02 1,47E+00 0,00E+00 1,47E+00	D -3,25E+00 0,00E+00 -3,25E+00 -1,97E+01 0,00E+00 -1,97E+01
	PERE PERM PERT PENRE PENRM PENRT SM	MJ MJ MJ MJ MJ	it  J  J  J  J  J  J  J  J  J  J  J  J  J	B4 0 0 0 0 0 0	C1 0 0 0 0 0 0	C2 2,91E-02 0,00E+00 2,91E-02 2,04E+00 0,00E+00 2,04E+00 0,00E+00	C3 2,08E-02 0,00E+00 2,08E-02 3,98E-01 -3,28E+00 -2,88E+00 0,00E+00	C4 2,63E-02 0,00E+00 2,63E-02 1,47E+00 0,00E+00 1,47E+00 0,00E+00	D -3,25E+00 0,00E+00 -3,25E+00 -1,97E+01 0,00E+00 -1,97E+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		Unit		A1-A3	A4	A5	B2	В3
	HWD			g	3,88E-01	1,77E-04	0,00E+00	4,49E-03	0
	NHWD	kg		g	1,11E+01	1,67E-01	2,51E+00	2,85E-01	0
<u>.</u>	RWD		kg		2,25E-03	2,33E-05	0,00E+00	1,07E-03	0
In	dicator		Unit	B4	C1	C2	C3	C4	D
ā	HWD		kg	0	0	1,05E-04	0,00E+00	5,80E+00	-1,20E-02
Ū	NHWD		kg	0	0	9,90E-02	9,00E-02	3,66E-02	-9,50E-01
₩	RWD		kg	0	0	1,39E-05	0,00E+00	9,07E-06	4,95E-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	Indicator			A1-A3	A4	A5	B2	В3			
<b>@</b> D	CRU	kg	kg		0,00E+00	0,00E+00	0,00E+00	0			
&>	MFR	kg		4,28E-02	0,00E+00	2,33E+00	0,00E+00	0			
DF	MER	kg		3,89E-07	0,00E+00	3,90E-06	0,00E+00	0			
50	EEE	МЈ	МЈ		0,00E+00	1,43E-01	0,00E+00	0			
DØ.	D∄ EET		МЈ		0,00E+00	2,16E+00	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	2,38E+00	0,00E+00	0,00E+00			
DF	MER	kg	0	0	0,00E+00	7,19E+00	0,00E+00	0,00E+00			
<b>₹</b> D	EEE	MJ	0	0	0,00E+00	3,57E-01	0,00E+00	0,00E+00			
D®	EET	MJ	0	0	0,00E+00	5,40E+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	1,16E+00							
	kg C							

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO2

# **Additional requirements**

# Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

Electricity mix	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 <sub>2</sub> -eq	36,58	0,23	42,70	40,37
Total energy consumption	MJ	634,32	3,48	751,16	730,62
Amount of recycled materials	%	39.56			

Additional environmental impact indicators required in NPCR Part A for construction products								
Indicator	Unit	Unit		A4	A5	B2	В3	
GWPIOBC	kg CO <sub>2</sub> -eq	kg CO <sub>2</sub> -eq		2,27E-01	0,00E+00	9,11E-01	0	
Indicator	Unit	B4	C1	C2	C3	C4	D	
GWPIOBC	kg CO <sub>2</sub> -eq	0	0	1,35E-01	4,01E-01	6,28E-02	-3,48E+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 (%)		
STAY - 47A	9,70	36,58	634,32	40,21		
STAY - 57A	9,90	37,64	650,23	39,80		
STAY - 72A	10,30	39,77	682,05	39,03		
STAY - 47B	10,91	47,72	776,38	32,17		
STAY - 57B	11,21	49,32	800,24	31,84		
STAY - 72B	11,51	50,91	824,11	31,53		
STAY - 90B	12,11	52,32	854,44	32,88		
STAY - 100B	12,66	53,15	877,95	34,53		
STAY - 110B	12,86	54,21	893,86	34,31		
STAY - 47C	16,36	76,35	1207,03	28,36		
STAY - 57C	16,67	77,36	1225,29	28,68		
STAY - 72C	17,33	79,31	1262,75	29,55		
STAY - 90C	17,77	80,21	1283,88	30,40		
STAY - 100C	18,53	80,91	1312,06	32,39		
STAY - 110C	18,93	83,03	1343,88	32,12		

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