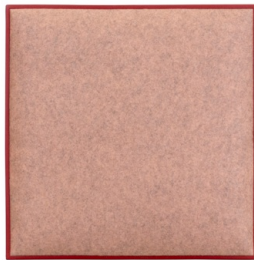


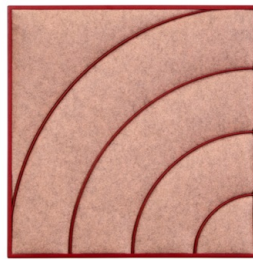
Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

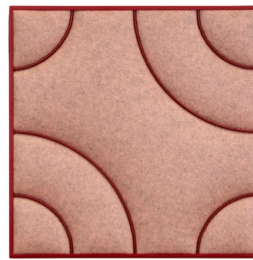
Circuit Family



C0



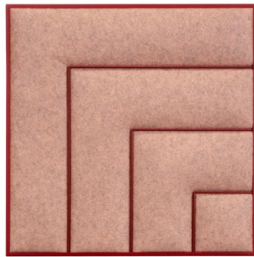
C1



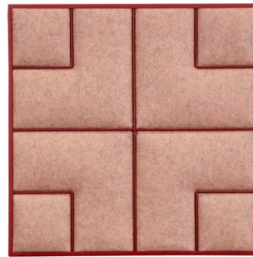
C2



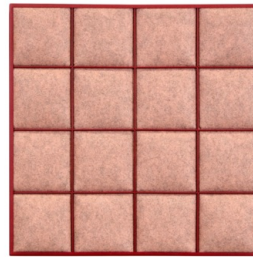
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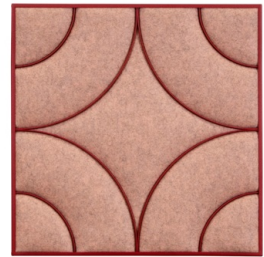
C4



C5



C6



C7

DECIBEL
by JOHANSON

JOHANSON

EPD-Global

CIRCUIT
Design – Johan Lindstén

Owner of the declaration:

Johanson Design AB

Product:

Circuit Family

Declared unit:

1 pcs

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:

EPD-Global

Declaration number:

NEPD-14155-14490

Issue date:

20.11.2025

Valid to:

20.11.2030

EPD software:

LCAno EPD generator ID:
1316287

General information

Product

Circuit Family

Program operator:

EPD-Global
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 977 22 020
web: www.epd-global.com

Declaration number:

NEPD-14155-14490

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-Global shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Declared unit:

1 pcs Circuit Family

Declared unit (cradle to gate) with option:

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

Functional unit:

Circuit acoustic panel provides effective sound absorption for interior environments such as offices, meeting rooms, and public spaces. The functional unit includes all components required for normal function and installation, including metal frame, acoustic material, MDF backing, and fabric upholstery.

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-Global'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-Global, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Global'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 EPD-Global'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:

20.11.2025

Valid to:

20.11.2030

Year of study:

2024

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

Development and verification of EPD:

The declaration is created using EPD tool lca.tools ver EPD2022.03, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD-Global.

Developer of EPD: Lucas Carlsson

Reviewer of company-specific input data and EPD: Sandra Rube

Approved:

Håkon Hauan, CEO EPD-Global

Product

Product description:

Circuit, designed by Johan Lindstén, is a modular acoustic wall panel system that combines aesthetic expression with high acoustic performance. Each panel measures 60.5 × 60.5 × 6 cm. The design is based on cyclical geometric patterns, creating a sense of endless continuity and allowing limitless configurations and combinations.

The panels consist of a metal frame in selectable RAL colors, a pattern made from flat-rolled metal wire (8×3 mm), an MDF backboard, and Ecophon Inside acoustic material. The surface is upholstered in a wide range of fabrics from suppliers such as Gabriel, Kvadrat, Camira, and Davis, ensuring both acoustic efficiency and visual versatility. Mounting options include a wooden beam suspension (standard) or rubber-coated neodymium magnets (optional).

The Circuit family includes multiple pattern variants (C0–C7), allowing architects and designers to create unique visual compositions while maintaining consistent acoustic performance

Product specification

This declaration focuses on an in-depth study of Circuit C0

The table on page 11 of this declaration provides the key environmental indicators for the other models within the product family

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Insulation - glass wool	0.515	10.42	0.4566	88.66
Metal - Stainless steel	0.008	0.1618	0.001747	21.83
Metal - Steel	1.40	28.34	0.2802	20.00
Powder coating	0.07	1.42	0.00	0.00
Textile - Polyester	0.39	7.89	0.05323	13.65
Wood - Medium Density Fibreboard (MDF)	2.56	51.78	0.00	0.00
Total	4.94	100.00	0.79	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Cardboard	0.20	45.26	0.00	0.00
Packaging - Plastic straps	0.01	1.60	0.00	0.00
Recycled cardboard	0.23	53.14	0.23	100.00
Total incl. packaging	5.38	100.00	1.02	

Technical data:

Volume 0.02 m³ - (excluding packaging)

Volume 0.07 m³ - (including packaging)

Total height 60,5 cm

Total width 60,5 cm

Total depth 6 cm

Complied with technical standards:

Circuit panels achieve Absorption Class B according to SS-EN ISO 354:2003 and ISO 20189:2018, making them suitable for environments requiring improved sound quality and controlled reverberation.

Möbelfakta certified

Market:

World Wide

Reference service life, product

15 years (5 year warranty)

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs Circuit Family

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
Insulation - glass wool	ecoinvent 3.6	Database	2019
Metal - Stainless steel	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Cardboard	Modified ecoinvent 3.6	Database	2019
Packaging - Plastic straps	ecoinvent 3.6	Database	2019
Powder coating	ecoinvent 3.6	Database	2019
Recycled cardboard	Modified ecoinvent 3.6	Database	2019
Textile - Polyester	ecoinvent 3.6	Database	2019
Textile - Polyester	EPD	EPD	2020
Wood - Medium Density Fibreboard (MDF)	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:

Fabric used in the calculation is Camira - Era 170, a 100% polyester, 320 g/m2 ±5%

A3 Data Collection (Production Phase)

Data for the A3 module, encompassing the production phase, was collected in 2020. This data includes all relevant inputs and outputs associated with manufacturing processes.

A4 Data Collection (Transport to Customer)

Transport data for the A4 module was sourced from Trafa.se and reflects operations during the years 2021-2022. According to statistics from Trafikanalys, the average distance covered by a Swedish heavy-duty truck transporting furniture in domestic traffic was approximately 143 kilometers in 2022, with an average of 153 kilometers for the period 2012–2022. These values are based on representative industry conditions and account for the most recent data on logistics efficiency and route optimization.

A5 Data (Packaging Disposal)

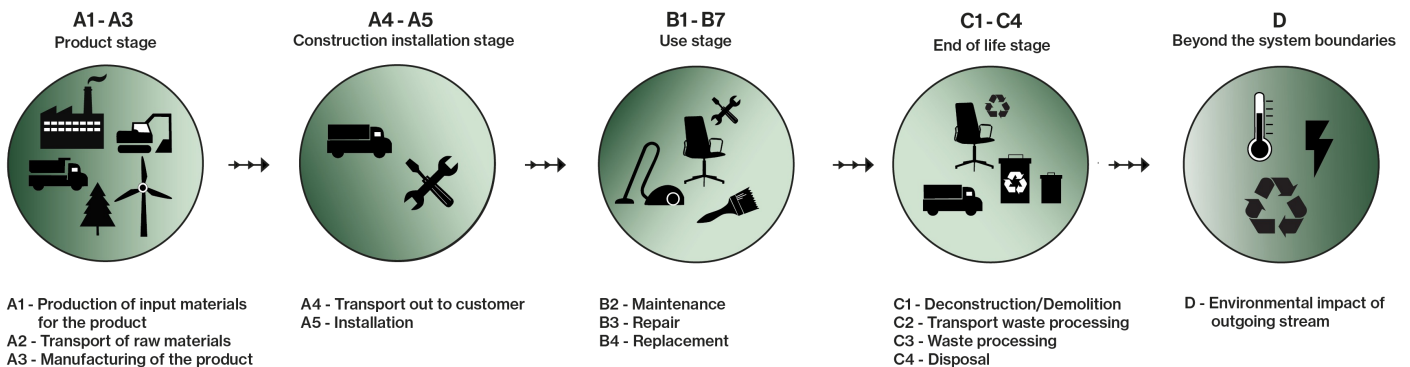
For the A5 module, it is assumed that packaging materials are automatically handled and disposed of in alignment with standard waste management practices at this stage. This assumption aligns with typical end-of-life scenarios for packaging in regulated waste systems.

Maintenance Data (B2 Module)

No energy or water consumption is associated with maintenance activities over the assumed 15-year reference service life.

Maintenance requirements are minimal, as the product does not require any cleaning substances.

Dust can be removed using a duster or a soft brush as needed.



Additional technical information:

To achieve the best possible climate footprint, it's essential to take care of your furniture. The longer you maintain and care for your products, the better it is for the environment. Use our care instructions for optimal results.

You find it here:

<https://decibelab.com/downloads>

FSC Certification:

Decibel sources its wood materials from responsibly managed forests certified by the Forest Stewardship Council (FSC). This certification ensures that the wood used in its products is harvested in an environmentally and socially responsible manner, promoting the conservation of forests and the well-being of forest-dependent communities.

Möbelfakta Certification:

Decibels products meet the standards set by Möbelfakta, a certification system for furniture. Möbelfakta evaluates products based on criteria such as quality, environment, and social responsibility, ensuring that certified products meet rigorous sustainability and performance standards.

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 %	143.00	0.043	l/tkm	6.15
Assembly (A5)					
	Unit	Value			
Waste, packaging, cardboard, 100 % recycled, to average treatment (kg)	kg	0.2322			
Waste, packaging, corrugated board box, 0 % recycled, to average treatment (kg)	kg	0.1978			
Waste, packaging, PET straps, to average treatment - A5 (kg)	kg	0.007			
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 %	85.00	0.043	l/tkm	3.66
Waste processing (C3)					
	Unit	Value			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	2.56			
Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg)	kg	0.585			
Waste treatment per kg Textile, incineration with fly ash extraction (kg)	kg	0.39			
Waste, materials to recycling (kg)	kg	0.4781			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	1.41			
Disposal (C4)					
	Unit	Value			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0.02945			
Landfilling of ashes from incineration of Non-hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0.1388			
Landfilling of ashes from incineration of Textile, soiled, process per kg ashes and residues (kg)	kg	0.01959			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	0.9309			
Benefits and loads beyond the system boundaries (D)					
	Unit	Value			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	37.54			
Substitution of electricity, in Norway (MJ)	MJ	2.48			
Substitution of primary steel with net scrap (kg)	kg	0.3824			

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 ₂ -eq	9.16E+00	1.26E-01	7.37E-01	0	0	
GWP-fossil	kg CO ₂ -eq	1.39E+01	1.26E-01	7.51E-03	0	0	
GWP-biogenic	kg CO ₂ -eq	-4.80E+00	5.20E-05	7.30E-01	0	0	
GWP-luluc	kg CO ₂ -eq	2.95E-02	4.47E-05	2.34E-06	0	0	
ODP	kg CFC11 -eq	5.27E-06	2.85E-08	1.50E-09	0	0	
AP	mol H+ -eq	7.85E-02	3.61E-04	3.36E-05	0	0	
EP-FreshWater	kg P -eq	1.23E-03	1.00E-06	5.83E-08	0	0	
EP-Marine	kg N -eq	1.53E-02	7.15E-05	1.15E-05	0	0	
EP-Terrestrial	mol N -eq	1.85E-01	7.99E-04	1.20E-04	0	0	
POCP	kg NMVOC -eq	5.64E-02	3.06E-04	3.47E-05	0	0	
ADP-minerals&metals ¹	kg Sb-eq	2.90E-04	3.47E-06	1.72E-07	0	0	
ADP-fossil ¹	MJ	2.11E+02	1.90E+00	9.96E-02	0	0	
WDP ¹	m ³	3.73E+03	1.84E+00	1.31E-01	0	0	

Indicator	Unit	B4	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq	0	0	7.48E-02	6.33E+00	1.17E-02	-6.47E-01
GWP-fossil	kg CO ₂ -eq	0	0	7.47E-02	1.41E+00	1.17E-02	-6.38E-01
GWP-biogenic	kg CO ₂ -eq	0	0	3.09E-05	4.92E+00	1.07E-05	-6.81E-04
GWP-luluc	kg CO ₂ -eq	0	0	2.66E-05	3.04E-05	3.42E-06	-7.69E-03
ODP	kg CFC11 -eq	0	0	1.69E-08	1.27E-08	3.47E-09	-1.59E-02
AP	mol H+ -eq	0	0	2.15E-04	7.06E-04	8.00E-05	-3.88E-03
EP-FreshWater	kg P -eq	0	0	5.97E-07	1.73E-06	1.19E-07	-4.52E-05
EP-Marine	kg N -eq	0	0	4.25E-05	3.13E-04	2.84E-05	-1.02E-03
EP-Terrestrial	mol N -eq	0	0	4.75E-04	3.28E-03	3.15E-04	-1.08E-02
POCP	kg NMVOC -eq	0	0	1.82E-04	8.16E-04	9.05E-05	-3.86E-03
ADP-minerals&metals ¹	kg Sb-eq	0	0	2.06E-06	5.54E-07	1.93E-07	-9.43E-06
ADP-fossil ¹	MJ	0	0	1.13E+00	5.91E-01	2.58E-01	-6.65E+00
WDP ¹	m ³	0	0	1.09E+00	-3.35E+00	5.66E-01	-1.69E+01







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*10⁻³ = 0.009"

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	8.20E-07	7.69E-09	4.98E-10	0	0
 IRP ²	kgBq U235 -eq	1.56E+00	8.30E-03	4.27E-04	0	0
 ETP-fw ¹	CTUe	4.23E+02	1.41E+00	1.32E-01	0	0
 HTP-c ¹	CTUh	6.51E-08	0.00E+00	4.00E-12	0	0
 HTP-nc ¹	CTUh	4.21E-07	1.54E-09	1.65E-10	0	0
 SQP ¹	dimensionless	2.74E+02	1.33E+00	6.93E-02	0	0











Indicator	Unit	B4	C1	C2	C3	C4	D
 PM	Disease incidence	0	0	4.57E-09	8.36E-09	1.45E-09	-1.44E-07
 IRP ²	kgBq U235 -eq	0	0	4.94E-03	1.67E-03	1.04E-03	-1.84E-02
 ETP-fw ¹	CTUe	0	0	8.37E-01	4.71E+00	1.65E-01	-4.04E+01
 HTP-c ¹	CTUh	0	0	0.00E+00	2.81E-10	6.00E-12	-2.33E-09
 HTP-nc ¹	CTUh	0	0	9.15E-10	7.79E-09	1.77E-10	2.78E-08
 SQP ¹	dimensionless	0	0	7.90E-01	1.07E-01	5.62E-01	-2.11E+01

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"




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	5.32E+01	2.72E-02	1.66E-03	0	0	
	PERM	MJ	2.09E+01	0.00E+00	-4.51E+00	0	0	
	PERT	MJ	7.41E+01	2.72E-02	-4.51E+00	0	0	
	PENRE	MJ	2.11E+02	1.90E+00	9.96E-02	0	0	
	PENRM	MJ	3.04E+01	0.00E+00	-1.61E-01	0	0	
	PENRT	MJ	2.41E+02	1.90E+00	-6.10E-02	0	0	
	SM	kg	1.02E+00	0.00E+00	0.00E+00	0	0	
	RSF	MJ	5.89E-01	9.73E-04	5.46E-05	0	0	
	NRSF	MJ	6.27E-01	3.48E-03	2.23E-04	0	0	
	FW	m ³	2.23E-01	2.03E-04	4.71E-05	0	0	

Indicator		Unit	B4	C1	C2	C3	C4	D
	PERE	MJ	0	0	1.62E-02	3.58E-02	5.05E-03	-1.95E+01
	PERM	MJ	0	0	0.00E+00	-1.64E+01	0.00E+00	0.00E+00
	PERT	MJ	0	0	1.62E-02	-1.63E+01	5.05E-03	-1.95E+01
	PENRE	MJ	0	0	1.13E+00	6.57E-01	2.58E-01	-6.65E+00
	PENRM	MJ	0	0	0.00E+00	-3.03E+01	0.00E+00	0.00E+00
	PENRT	MJ	0	0	1.13E+00	-2.96E+01	2.58E-01	-6.65E+00
	SM	kg	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	RSF	MJ	0	0	5.78E-04	8.61E-04	1.33E-04	1.18E-02
	NRSF	MJ	0	0	2.07E-03	0.00E+00	1.44E-02	-6.97E-01
	FW	m ³	0	0	1.21E-04	1.08E-03	2.33E-04	-2.40E-02

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources 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*10⁻³ = 0.009"






End of life - Waste								
Indicator		Unit	A1-A3	A4	A5	B2	B3	
	HWD	kg	2.84E-01	9.80E-05	0.00E+00	0	0	
	NHWD	kg	5.91E+00	9.24E-02	4.37E-01	0	0	
	RWD	kg	4.43E-03	1.29E-05	0.00E+00	0	0	

Indicator		Unit	B4	C1	C2	C3	C4	D
	HWD	kg	0	0	5.82E-05	0.00E+00	1.07E+00	-2.33E-03
	NHWD	kg	0	0	5.49E-02	5.85E-01	3.34E-02	-2.46E-01
	RWD	kg	0	0	7.69E-06	0.00E+00	1.73E-06	-1.51E-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"

End of life - Output flow								
Indicator		Unit	A1-A3	A4	A5	B2	B3	
	CRU	kg	0.00E+00	0.00E+00	0.00E+00	0	0	
	MFR	kg	1.99E-01	0.00E+00	4.04E-01	0	0	
	MER	kg	4.32E-01	0.00E+00	9.35E-07	0	0	
	EEE	MJ	2.83E-01	0.00E+00	2.46E-02	0	0	
	EET	MJ	4.29E+00	0.00E+00	3.72E-01	0	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	4.78E-01	0.00E+00	0.00E+00
	MER	kg	0	0	0.00E+00	4.94E+00	0.00E+00	0.00E+00
	EEE	MJ	0	0	0.00E+00	2.09E+00	0.00E+00	0.00E+00
	EET	MJ	0	0	0.00E+00	3.16E+01	0.00E+00	0.00E+00

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"

Biogenic Carbon Content		
Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	1.19E+00
Biogenic carbon content in accompanying packaging	kg C	1.99E-01

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-eq/kWh

Dangerous substances

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

Indoor environment

Additional Environmental Information

Key Environmental Indicators

Key environmental performance indicators	Unit	Product stage	Construction stage		Use stage			End-of-life				Net benefits and loads from reuse, recovery, and/or recycling
		A1-A3	A4	A5	B2	B3	B4	C1	C2	C3	C4	D
GWPtotal	kg CO ₂ -eq	9.16	0.13	0.74	0.00	0.00	0.00	0.00	0.07	6.33	0.01	-0.65
Total energy consumption	MJ	265.46	1.93	0.10	0.00	0.00	0.00	0.00	1.15	0.69	0.28	-26.85
Share of recycled materials	%	19.02										

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

Indicator	Unit	A1-A3	A4	A5	B2	B3
GWPIOBC	kg CO ₂ -eq	1.42E+01	1.26E-01	7.51E-03	0	0

Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO ₂ -eq	0	0	7.48E-02	2.05E+00	1.41E-02	-6.43E-01

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 ₂ -eq)	Total energy consumption (MJ)	Amount of recycled materials (%)
Circuit C0	5.38	9.16	265.46	19.03
Circuit C1	5.86	11.66	301.42	19.11
Circuit C2	5.91	11.92	305.02	19.12
Circuit C3	5.72	10.96	291.29	19.09
Circuit C4	5.74	11.06	292.79	19.09
Circuit C5	5.85	11.62	300.75	19.11
Circuit C6	6.07	12.77	317.26	19.14
Circuit C7	5.92	11.99	306.15	19.12

Bibliography

ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures.
 ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines.
 EN 15804:2012+A2:2019 Environmental product declaration - Core rules for the product category of construction products.
 ISO 21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products.
 ecoinvent v3, Allocation, cut-off by classification, Swiss Centre of Life Cycle Inventories.
 Iversen et al., (2021) eEPD v2021.09 Background information for EPD generator tool system verification, LCA.no Report number: 07.21
 Ruud et al., (2023) EPD generator for NPCR026 Part B for Furniture - Background information for EPD generator application and LCA data, LCA.no report number 01.23
 NPCR Part A: Construction products and services. Ver. 2.0. March 2021, EPD-Norge.
 NPCR 026 Part B for Furniture. Ver. 2.0 March 2022, EPD-Norge.

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