



# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

## ARC





The Norwegian EPD Foundation

**Owner of the declaration:** Blå Station AB

Product: ARC

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:** The Norwegian EPD Foundation

**Declaration number:** 

NEPD-8004-7673-EN

Registration number:

NEPD-8004-7673-EN

Issue date: 08.11.2024

Valid to: 08.11.2029

EPD software: LCAno EPD generator ID: 655681

## **General information**

### Product

ARC

#### 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-8004-7673-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 ARC

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

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

#### Functional unit:

ARC is a sound-absorbent which can be mounted according yo your own preferences. ARC is mounted on the wall with a magnetic fitting, so you can easily move around ARC's when you feel like it, maybe to change a striped wall to variegated or from light to dark.

#### 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:**

Blå Station AB Contact person: William Lövdahl Phone: 044-30 00 348 e-mail: william@blastation.se

#### Manufacturer:

Blå Station AB

#### Place of production:

Blå Station AB

, Sweden

Management system: ISO 9001:2015 - ISO 14001:2015

#### **Organisation no:**

556272-1091

#### Issue date:

08.11.2024

Valid to:

08.11.2029

### 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: William Lövdahl

Reviewer of company-specific input data and EPD: Isaac Svensson

Approved:

Håkon Hauan Managing Director of EPD-Norway



## **Product**

#### **Product description:**

Stone Designs brings its third sound absorber to Blå Station. Arc is inspired by the arcades of the Colosseum in Rome and can be used in many vertical and horizontal configurations. The panels deflect irritating sound as the reliefs absorb soundwaves.

https://www.blastation.com/products/product-families/ginkgo/ginkgo

#### **Product specification**

Materials:

50% recycled PET-fibers. 50% Low melt fibers with 75% recycled fibers.

This particular Environmental Product Declaration (EPD) is conducted for one specific ARC panel.

For technical data on variants and options of sound absorbents, please visit our website at: https://www.blastation.com

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Textile - Polyester (PE)	1,20	34,45	1,05	87,50
Metal - Steel	0,12	3,33	0,00	0,00
Total	1,32	37,78	1,05	
Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging Packaging - Wood	kg 1,67	% 47,86		share in material
			material (kg)	share in material (%)

#### **Technical data:**

ARC sound absorbent:

Length: 90 cm Width: 45 cm Depth: 7 cm

For technical data on variants of sound absorbents, please visit our homepage at: https://www.blastation.com

#### Market:

European market

#### **Reference service life, product**

The lifetime of the product depends on the application

Reference service life, building

### LCA: Calculation rules

**Declared unit:** 

1 pcs ARC

#### **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:

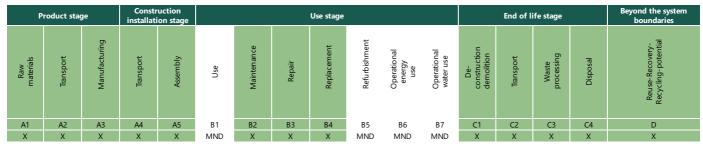
The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was 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.

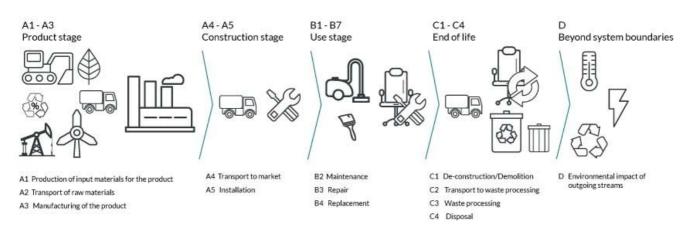


Materials	Source	Data quality	Year
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Wood	Modified ecoinvent 3.6	Database	2019
Recycled cardboard	Modified ecoinvent 3.6	Database	2019
Textile - Polyester (PE)	ecoinvent 3.6	Database	2019
Textile - Polyester (PE)	Modified ecoinvent 3.6	Database	2019



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

#### System boundary:



#### Additional technical information:

Maintenance and service guides:

For maintenance and service guides, please visit our website at: https://www.blastation.com/downloads/care-instructions

For ARC wall planner, please visit our website at: https://www.blastation.com/planners

ARC is 100% recyclable. Ingoing materials and components should be separated and recycled in accordance with local laws and regulations.

Blå Station offers solutions for renovations and recycling based on customer's preferences, product, condition, quantity and region. Contact Blå Station for more information.

## LCA: Scenarios and additional technical information

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

Absence of data for user and end of life stage:

B1: User stage is fully dependent on application and environment of the product.

B3-B5: Reparation, replacement and refurbishment of the product is dependent on non-domestic usage. Reparation, replacement , and

refurbishment are possible, please contact Blå Station for further information for possible solutions.

B6-B7: ARC does not require energy nor water for operational usage.

C1: No special tools are needed for de-construction.

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 %	500	0,043	l/tkm	21,50
Assembly (A5)	Unit	Value			
Waste, packaging, cardboard, 100 % recycled, to average treatment (kg)	kg	0,50			
Waste, packaging, pallet, EUR wooden pallet, reusable, average treatment (kg)	kg	1,67			
Maintenance (B2)	Unit	Value			
Water, tap water (kg)	kg/DU	0,50			
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 %	30	0,043	l/tkm	1,29
Waste processing (C3)	Unit	Value			
Waste, materials to recycling (kg)	kg	0,04			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	0,12			
Waste treatment per kg Textile, incineration with fly ash extraction (kg)	kg	1,05			
Waste treatment per kg Textile, incineration with fly ash extraction (kg)	kg	0,15			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	0,08			
Landfilling of ashes from incineration of Textile, soiled, process per kg ashes and residues (kg)	kg	0,05			
Landfilling of ashes from incineration of Textile, soiled, process per kg ashes and residues (kg)	kg	0,01			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of primary steel with net scrap (kg)	kg	0,01			
Substitution of electricity (MJ)	MJ	0,95			
Substitution of thermal energy, district heating (MJ)	MJ	14,39			
Substitution of electricity (MJ)	MJ	0, 14			
Substitution of thermal energy, district heating (MJ)	MJ	2,06			

## LCA: Results

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

	ental impact								
	Indicator		Unit		A1-A3	A4	A5	B2	B3
P	GWP-total		kg CO <sub>2</sub> -e	eq	2,82E+00	2,85E-01	3,39E+00	1,73E-04	0
P	GWP-fossil		kg CO <sub>2</sub> -eq		5,89E+00	2,84E-01	1,03E-02	1,72E-04	0
P	GWP-biogenic		kg CO <sub>2</sub> -e	P	-3,09E+00	1,18E-04	3,38E+00	1,08E-06	0
Ð	GWP-luluc		kg CO <sub>2</sub> -e	eq	1,87E-02	1,01E-04	3,25E-06	2,79E-07	0
Ò	ODP		kg CFC11 -	-eq	5,45E-07	6,44E-08	2,07E-09	1,50E-11	0
( Er	AP		mol H+ -e	eq	3,33E-02	8,18E-04	5,63E-05	1,00E-06	0
	EP-FreshWater		kg P -eo	1	3,36E-04	2,27E-06	9,33E-08	1,37E-08	0
	EP-Marine		kg N -ec	1	7,16E-03	1,62E-04	2,04E-05	1,59E-07	0
	EP-Terrestial		mol N -e	q	8,82E-02	1,81E-03	2,20E-04	1,85E-06	0
	РОСР		kg NMVOC	-eq	2,79E-02	6,93E-04	6,07E-05	5,81E-07	0
S	ADP-minerals&metals <sup>1</sup>		kg Sb-eo	7	8,08E-04	7,86E-06	2,33E-07	4,80E-09	0
Ð	ADP-fossil <sup>1</sup>		MJ		8,42E+01	4,30E+00	1,40E-01	2,93E-03	0
<b>%</b>	WDP <sup>1</sup>		m <sup>3</sup>		5,27E+02	4,16E+00	1,84E-01	5,22E-02	0
			Unit						
	Indicator		Unit	B4	C1	C2	C3	C4	D
P	Indicator GWP-total	kg	Unit J CO <sub>2</sub> -eq	B4 0	C1 0	C2 1,71E-02	C3 1,77E+00	C4 1,01E-03	D -1,13E-01
P									
	GWP-total	kg	J CO <sub>2</sub> -eq	0	0	1,71E-02	1,77E+00	1,01E-03	-1,13E-01
P	GWP-total GWP-fossil	kg	ј СО <sub>2</sub> -еq ј СО <sub>2</sub> -еq	0 0	0	1,71E-02 1,71E-02	1,77E+00 1,52E-02	1,01E-03 1,00E-03	-1,13E-01 -1,09E-01
P	GWP-total GWP-fossil GWP-biogenic	kg kg	y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq	0 0 0	0 0 0	1,71E-02 1,71E-02 7,06E-06	1,77E+00 1,52E-02 1,76E+00	1,01E-03 1,00E-03 8,05E-06	-1,13E-01 -1,09E-01 -2,05E-04
P P	GWP-total GWP-fossil GWP-biogenic GWP-luluc	kg kg kg	y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq	0 0 0 0	0 0 0 0	1,71E-02 1,71E-02 7,06E-06 6,07E-06	1,77E+00 1,52E-02 1,76E+00 2,40E-06	1,01E-03 1,00E-03 8,05E-06 2,81E-07	-1,13E-01 -1,09E-01 -2,05E-04 -3,29E-03
P P D	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP	kg kg kg m	y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq CFC11 -eq	0 0 0 0	0 0 0 0 0	1,71E-02 1,71E-02 7,06E-06 6,07E-06 3,87E-09	1,77E+00 1,52E-02 1,76E+00 2,40E-06 1,28E-09	1,01E-03 1,00E-03 8,05E-06 2,81E-07 2,80E-10	-1,13E-01 -1,09E-01 -2,05E-04 -3,29E-03 -6,95E-03
P P D C	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP	kg kg kg kg	$OO_2 - eq$ $OO_2 - eq$ $OO_$	0 0 0 0 0	0 0 0 0 0 0	1,71E-02 1,71E-02 7,06E-06 6,07E-06 3,87E-09 4,91E-05	1,77E+00 1,52E-02 1,76E+00 2,40E-06 1,28E-09 1,92E-04	1,01E-03 1,00E-03 8,05E-06 2,81E-07 2,80E-10 6,57E-06	-1,13E-01 -1,09E-01 -2,05E-04 -3,29E-03 -6,95E-03 -8,56E-04
P P P C C	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater	kg kg kg m kg kg kg kg kg k	y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq y CO <sub>2</sub> -eq cFC11 -eq cFC11 -eq ol H+ -eq cg P -eq	0 0 0 0 0 0 0	0 0 0 0 0 0 0	1,71E-02 1,71E-02 7,06E-06 6,07E-06 3,87E-09 4,91E-05 1,36E-07	1,77E+00 1,52E-02 1,76E+00 2,40E-06 1,28E-09 1,92E-04 2,64E-07	1,01E-03 1,00E-03 8,05E-06 2,81E-07 2,80E-10 6,57E-06 1,06E-08	-1,13E-01 -1,09E-01 -2,05E-04 -3,29E-03 -6,95E-03 -8,56E-04 -9,34E-06
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine	kg kg kg m k k m	$g CO_2 - eq$ $g CO_2 - eq$ G FC11 - eq G H + - eq g P - eq g N - eq	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	1,71E-02 1,71E-02 7,06E-06 6,07E-06 3,87E-09 4,91E-05 1,36E-07 9,71E-06	1,77E+00 1,52E-02 1,76E+00 2,40E-06 1,28E-09 1,92E-04 2,64E-07 9,16E-05	1,01E-03 1,00E-03 8,05E-06 2,81E-07 2,80E-10 6,57E-06 1,06E-08 2,32E-06	-1,13E-01 -1,09E-01 -2,05E-04 -3,29E-03 -6,95E-03 -8,56E-04 -9,34E-06 -2,71E-04
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial	kg kg kg m k kg k	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 cFC11 -eq cl H+ -eq cg P -eq cg N -eq nol N -eq	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	1,71E-02 1,71E-02 7,06E-06 6,07E-06 3,87E-09 4,91E-05 1,36E-07 9,71E-06 1,09E-04	1,77E+00 1,52E-02 1,76E+00 2,40E-06 1,28E-09 1,92E-04 2,64E-07 9,16E-05 9,74E-04	1,01E-03 1,00E-03 8,05E-06 2,81E-07 2,80E-10 6,57E-06 1,06E-08 2,32E-06 2,58E-05	-1,13E-01 -1,09E-01 -2,05E-04 -3,29E-03 -6,95E-03 -8,56E-04 -9,34E-06 -2,71E-04 -2,93E-03
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial POCP	kg kg kg m k kg k	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 eg P -eq eg N -eq nol N -eq	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	1,71E-02 1,71E-02 7,06E-06 6,07E-06 3,87E-09 4,91E-05 1,36E-07 9,71E-06 1,09E-04 4,16E-05	1,77E+00 1,52E-02 1,76E+00 2,40E-06 1,28E-09 1,92E-04 2,64E-07 9,16E-05 9,74E-04 2,40E-04	1,01E-03 1,00E-03 8,05E-06 2,81E-07 2,80E-10 6,57E-06 1,06E-08 2,32E-06 2,58E-05 7,38E-06	-1,13E-01 -1,09E-01 -2,05E-04 -3,29E-03 -6,95E-03 -8,56E-04 -9,34E-06 -2,71E-04 -2,93E-03 -8,37E-04

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" \*INA Indicator Not Assessed

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

**Remarks to environmental impacts** 



dditional environmental impact indicators									
	Indicator	Unit		A1-A3	A4	A5	B2	B3	
	PM	Disease incidence		3,35E-07	1,74E-08	7,85E-10	9,00E-12	0	
	IRP <sup>2</sup>	kgBq U235 -eq		3,50E-01	1,88E-02	5,80E-04	2,03E-05	0	
	ETP-fw <sup>1</sup>	CTUe		2,02E+02	3,19E+00	1,81E-01	3,17E-03	0	
40.* ****	HTP-c <sup>1</sup>	CTUh		7,14E-09	0,00E+00	8,00E-12	1,00E-12	0	
48 E	HTP-nc <sup>1</sup>	CTUh		9,56E-08	3,48E-09	3,50E-10	1,10E-11	0	
	SQP <sup>1</sup>	dimensionless	dimensionless		3,01E+00	9,07E-02	8,19E-04	0	
I	ndicator	Unit	B4	C1	C2	C3	C4	D	
	PM	Disease incidence	0	0	1,05E-09	2,17E-09	1,17E-10	-4,88E-08	
	IRP <sup>2</sup>	kgBq U235 -eq	0	0	1,13E-03	2,44E-04	8,48E-05	-8,66E-03	
	ETP-fw <sup>1</sup>	CTUe	0	0	1,91E-01	2,78E-01	1,41E-02	-8,20E+00	
40.* ****	HTP-c <sup>1</sup>	CTUh	0	0	0,00E+00	4,60E-11	0,00E+00	-2,04E-10	
A A	1	CTUh	0	0	2,09E-10	2,09E-09	1,60E-11	-5,64E-09	
8°	HTP-nc <sup>1</sup>	croit							

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" \*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		U	nit	A1-A3	A4	A5	B2	B3
î. G	PERE		Ν	L	2,77E+01	6,16E-02	2,40E-03	3,98E-04	0
E.	PERM		Ν	IJ	2,61E+01	0,00E+00	-2,61E+01	0,00E+00	0
~~~. ~.	PERT		Ν	٨J	5,38E+01	6,16E-02	-2,61E+01	3,98E-04	0
B	PENRE		Ν	NJ	5,66E+01	4,30E+00	1,40E-01	2,93E-03	0
es.	PENRM		Ν	NJ	2,77E+01	0,00E+00	0,00E+00	0,00E+00	0
IA	PENRT		Ν	٨J	8,43E+01	4,30E+00	1,40E-01	2,93E-03	0
	SM		k	g	1,55E+00	0,00E+00	0,00E+00	0,00E+00	0
	RSF		Ν	NJ	2,23E-01	2,20E-03	7,76E-05	3,19E-05	0
1. Ale and the second s	NRSF		MJ		4,05E-01	7,88E-03	4,35E-04	3,15E-05	0
<b>\$</b>	FW	m <sup>3</sup>		7,71E-02	4,60E-04	7,26E-05	5,03E-04	0	
				n-	1,112 02	.,002 01	.,	-,	-
	ndicator	Ur	nit	B4	C1	C2	C3	C4	D
ا چ	ndicator PERE								
		N	nit	B4	C1	C2	C3	C4	D
i S	PERE	M	<b>nit</b> ЛЈ	B4 0	C1 0	C2 3,69E-03	C3 4,15E-03	C4 4,43E-04	D -8,43E+00
	PERE PERM	N N	<b>nit</b> ЛЈ ЛЈ	B4 0 0	C1 0 0	C2 3,69E-03 0,00E+00	C3 4,15E-03 0,00E+00	C4 4,43E-04 0,00E+00	D -8,43E+00 0,00E+00
ूट खि ्रि	PERE PERM PERT	N N N	<b>nit</b> ЛЈ ЛЈ	B4 0 0 0	C1 0 0 0	C2 3,69E-03 0,00E+00 3,69E-03	C3 4,15E-03 0,00E+00 4,15E-03	C4 4,43E-04 0,00E+00 4,43E-04	D -8,43E+00 0,00E+00 -8,43E+00
्र मु स्रि स्रि	PERE PERM PERT PENRE	M M M M	<b>nit</b> ЛЈ ЛЈ ЛЈ	B4 0 0 0 0	C1 0 0 0 0	C2 3,69E-03 0,00E+00 3,69E-03 2,58E-01	C3 4,15E-03 0,00E+00 4,15E-03 1,42E-01	C4 4,43E-04 0,00E+00 4,43E-04 2,10E-02	D -8,43E+00 0,00E+00 -8,43E+00 -1,48E+00
	PERE PERM PERT PENRE PENRM		nit лл лл лл лл лл	B4 0 0 0 0 0	C1 0 0 0 0 0	C2 3,69E-03 0,00E+00 3,69E-03 2,58E-01 0,00E+00	C3 4,15E-03 0,00E+00 4,15E-03 1,42E-01 -2,77E+01	C4 4,43E-04 0,00E+00 4,43E-04 2,10E-02 0,00E+00	D -8,43E+00 0,00E+00 -8,43E+00 -1,48E+00 0,00E+00
	PERE PERM PERT PENRE PENRM PENRT	M M M M M K	<b>nit</b> лJ лJ лJ лJ лJ	B4 0 0 0 0 0 0	C1 0 0 0 0 0 0 0	C2 3,69E-03 0,00E+00 3,69E-03 2,58E-01 0,00E+00 2,58E-01	C3 4,15E-03 0,00E+00 4,15E-03 1,42E-01 -2,77E+01 -2,76E+01	C4 4,43E-04 0,00E+00 4,43E-04 2,10E-02 0,00E+00 2,10E-02	D -8,43E+00 0,00E+00 -8,43E+00 -1,48E+00 -1,48E+00
	PERE PERM PERT PENRE PENRM PENRT SM	M M M M K	<b>nit</b> лJ лJ лJ лJ лJ лJ яJ	B4 0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0 0 0	C2 3,69E-03 0,00E+00 3,69E-03 2,58E-01 0,00E+00 2,58E-01 0,00E+00	C3 4,15E-03 0,00E+00 4,15E-03 1,42E-01 -2,77E+01 -2,76E+01 0,00E+00	C4 4,43E-04 0,00E+00 4,43E-04 2,10E-02 0,00E+00 2,10E-02 0,00E+00	D -8,43E+00 0,00E+00 -8,43E+00 -1,48E+00 0,00E+00 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 excluding non-renewable primary energy resources used as raw materials; PERT = Total use of non renewable primary energy resources; SENRE = Use of non renewable primary energy resources; SENRE = Use of non renewable primary energy resources; SM = Use of secondary materials; RESF = Use of renewable primary energy resources; SM = Use of secondary materials; RESF = 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



End of life - Waste										
	Indicator		U	nit	A1-A3	A4	A5	B2	B3	
Â	HWD		k	g	5,69E-02	2,22E-04	0,00E+00	5,54E-07	0	
Ī	NHWD		k	g	2,25E+00	2,09E-01	5,83E-01	3,56E-05	0	
æ	RWD		kg		2,88E-04	2,93E-05	0,00E+00	1,72E-08	0	
In	dicator		Unit	B4	C1	C2	C3	C4	D	
A	HWD		kg	0	0	1,33E-05	0,00E+00	7,87E-02	-1,37E-04	
Ū	NHWD		kg	0	0	1,26E-02	0,00E+00	1,99E-03	-3,80E-02	
8	RWD		kg	0	0	1,76E-06	0,00E+00	1,28E-07	-7,10E-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									
Indie	cator		Unit		A1-A3	A4	A5	B2	B3
$\otimes \triangleright$	CRU	kg		0,00E+00	0,00E+00	1,58E+00	0,00E+00	0	
\$\$	MFR		kg		0,00E+00	0,00E+00	4,65E-01	0,00E+00	0
DF	MER		kg		0,00E+00	0,00E+00	8,27E-02	0,00E+00	0
FD	EEE		МЈ		0,00E+00	0,00E+00	8,61E-02	0,00E+00	0
DI	EET		MJ		0,00E+00	0,00E+00	1,30E+00	0,00E+00	0
Indicator	•	Unit		B4	C1	C2	C3	C4	D
$\otimes \triangleright$	CRU	kg		0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
432	MFR	kg		0	0	0,00E+00	3,94E-02	0,00E+00	0,00E+00
Þ₽	MER	kg		0	0	0,00E+00	1,32E+00	0,00E+00	0,00E+00
5D	EEE	MJ		0	0	0,00E+00	8,38E-01	0,00E+00	0,00E+00
	EET	MJ		0	0	0,00E+00	1,27E+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" \*INA Indicator Not Assessed

Biogenic Carbon Content

Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in accompanying packaging	kg C	9,21E-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, Nordic (kWh)	ecoinvent 3.6	145,70	g CO2-eq/kWh

#### Dangerous substances

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

#### Indoor environment

Emission measurement according to Sec 01350 (Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers, version 1.1, 2010, by the California Department of Public Health) = CDPH-IAQ.

### **Additional Environmental Information**

#### **Key Environmental Indicators**

Key environmental indicators	Unit	A1-A3	A4	A1-C4	A1-D
GWPtotal	kg CO <sub>2</sub> -eq	2,82	0,28	8,28	8,17
Total energy consumption	MJ	84,95	4,37	89,90	79,50
Amount of recycled materials	%	44,50			

Additional environmental impact indicators required in NPCR Part A for construction products								
Indicator	Unit	Unit		A4	A5	B2	B3	
GWPIOBC	kg CO <sub>2</sub> -eq	kg CO <sub>2</sub> -eq		2,85E-01	1,03E-02	1,73E-04	0	
Indicator	Unit	B4	C1	C2	C3	C4	D	
GWPIOBC	kg CO <sub>2</sub> -eq	0	0	1,71E-02	1,98E+00	4,62E-03	-1,19E-01	

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.



## 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.

The product is tested and approved according to the following standard:

Emission measurement according to Sec 01350 (Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers, version 1.1, 2010, by the California Department of Public Health) = CDPH-IAQ.

Fire test according to EN ISO 11925-2

Flammability tests according to UL723 on polyester felt with laminated fabric

#### SOUND ABSORPTION COEFFICIENT ACCORDING TO ISO 354 AND ISO 11654

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VERIFIED	ECO Portal	web: ECO Portal