

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

## Origo table





The Norwegian EPD Foundation

Owner of the declaration:

Kinnarps AB

Product:

Origo table

**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-5971-5243-EN

Registration number:

NEPD-5971-5243-EN

Issue date: 05.02.2024

**Valid to:** 05.02.2029

**EPD** software:

LCAno EPD generator ID: 139596

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## **General information**

#### **Product**

Origo table

#### **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-5971-5243-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 Origo table

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

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

#### **Functional unit:**

Production of one Origo table, provided and maintained for a period of 15 years.

#### 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:

Kinnarps AB

Contact person: Johanna Ljunggren - Corporate Sustainability

Manager

Phone: +46 515 381 21

e-mail: johanna.ljunggren@kinnarps.se

#### Manufacturer:

Kinnarps AB

#### Place of production:

Kinnarps AB Industrigatan 521 88 Kinnarp, Sweden

#### **Management system:**

ISO 9001, ISO 14001, ISO 45001

#### Organisation no:

556256-6736

Issue date: 05.02.2024

Valid to: 05.02.2029

#### Year of study:

2022

#### **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: Isabell Vesterberg

Reviewer of company-specific input data and EPD: Johanna Ljunggren

**Approved:** 

Håkon Hauan, CEO EPD-Norge



#### **Product**

## **Product description:**

Origo 1200 x 600 mm rectangular table with 724 mm fixed height legs and HPL table top. Sound absorbing acoustic base, castors, micro castors and adjustable foot are available as options.

Origo is a complete range of tables with a focus on ergonomics, acoustics and flexibility to support physical work and study spaces. The tables are available in different heights and a variety of shapes, all with adjustable legs to offer high and low seating. Create a coordinated look and a flexible space with rectangular, square, round, triangular and trapezoidal tables in several sizes. By varying the sizes and shapes of the tables, it's easy to reconfigure them in different ways to support the activity in question.

#### **Product specification**

Origo offers two tabletop options with good acoustic properties: the HPL Acoustic tabletop has a hardwearing surface of high-pressure laminate and effectively dampens noise from hard objects and marmoleum gives a warm, pleasant surface with excellent sound-dampening properties. An optional sound absorber is also available for underneath the table to further improve the acoustics in the room.

Origo can be ordered with innovative micro castors, which are integrated in the leg and make it easy to move the tables and position them next to one another. It's also possible to add connectors. For tables that need to be moved longer distances or over thresholds, there are also larger castors.

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
High pressure laminate - HPL thin	1,58	6,73	0,38	24,07
Metal - Steel	12,60	53,62	2,48	19,72
Plastic - Acrylonitrile butadiene styrene (ABS)	0,30	1,26	0,00	0,00
Wood - Chipboard	9,02	38,39	0,00	0,00
Total	23,49		2,86	

#### **Technical data:**

Certifications:

Swedish Möbelfakta.

#### Fulfilled technical standards:

EN 15372 Furniture - Strength, durability and safety - Requirements for non-domestic tables,

EN 1729:2 Furniture - Chairs and tables for educational institutions.

#### Market:

Mainly Europe, but is available worldwide.

## Reference service life, product

15 years.

Reference service life, building

## LCA: Calculation rules

#### **Declared unit:**

1 pcs Origo table

#### **Cut-off criteria:**

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

#### Allocation:

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

#### Data quality:

Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other LCA databases. The data quality of the raw materials in A1 is presented in the table below. Specific data for the manufacturing processes (product stage A3) refers to the year 2020. All other specific data is from year of study.



Materials	Source	Data quality	Year
High pressure laminate - HPL thin	EPD-ICL-20220238-CBE1-EN	EPD	2021
Metal - Steel	ecoinvent 3.6	Database	2019
Plastic - Acrylonitrile butadiene styrene (ABS)	ecoinvent 3.6	Database	2019
Wood - Chipboard	ecoinvent 3.6	Database	2019



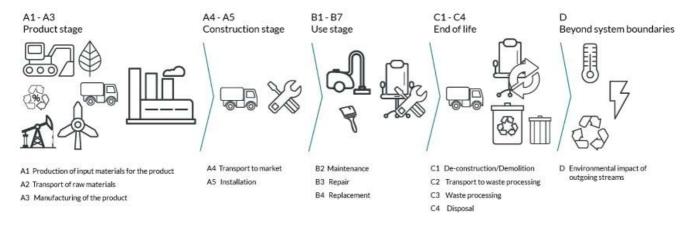
## System boundaries (X=included, MND=module not declared, MNR=module not relevant)

P	roduct stag	je		ruction 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> bishment	Operational energy use	Operational water use	De- construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery- Recycling-potential
A1	A2	A3	A4	A5	B1	B2	В3	B4	В5	В6	В7	C1	C2	C3	C4	D
Χ	X	Χ	Χ	Χ	MND	Χ	Χ	Χ	MND	MND	MND	X	Χ	Χ	Χ	X

#### System boundary:

Certain steel components are manufactured at Kinnarps' production site in Jönköping and some have been purchased as finished components. The table top is manufactured at Kinnarps' production site in Kinnarp, where the final assembly of the product is also done.

The flow chart below illustrates the system boundaries of the analysis.



#### Additional technical information:



#### LCA: Scenarios and additional technical information

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

The product is shipped to the consumer in Kinnarps' trucks with blankets and cardboard sheets as packaging material which is returned to the factory after delivery and reused. This method saves 270 kg of packaging material per container and enables 50% more products to be transported in each truck. Kinnarps' trucks have a load efficiency of approximately 87 % and are run on diesel with renewable content. For more information about sustainability at Kinnarps, visit https://www.kinnarps.com/about-kinnarps/sustainability/

The maintenance scenario includes wet-wiping once a week for the whole reference service life.

In normal use, no repair or replacement is required during the product's referenced service life.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, HVO, EURO 6 (kgkm)	36,7 %	300	0,043	l/tkm	12,90
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, over 32 tonnes, EURO 6 (km)	53,3 %	85	0,023	l/tkm	1,96
Waste processing (C3)	Unit	Value			
Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg)	kg	1,58			
Waste treatment per kg Plastics, Mixture, municipal incineration with fly ash extraction (kg)	kg	0,30			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	12,60			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	9,02			
Waste, materials to recycling (kg)	kg	4,27			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	8,32			
Landfilling of ashes from incineration of Non- hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0,37			
Landfilling of ashes from incineration of Plastics, Mixture, municipal incineration with fly ash extraction, process per kg ashes and residues - C4 (kg)	kg	0,01			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0,10			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity, in Norway (MJ)	MJ	7,66			
Substitution of primary steel with net scrap (kg)	kg	3,38			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	115,96			



#### **LCA: Results**

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

Environme	ental impact		1 3						
	Indicator		Unit		A1-A3	A4	A5	B2	В3
	GWP-total		kg CO <sub>2</sub> -	eq	4,40E+01	2,77E-01	0	2,69E-01	0
	GWP-fossil		kg CO <sub>2</sub> -eq		6,04E+01	2,76E-01	0	2,67E-01	0
	GWP-biogenic		kg CO <sub>2</sub> -eq		-1,65E+01	4,67E-04	0	1,68E-03	0
	GWP-Iuluc		kg CO <sub>2</sub> -	eq	1,38E-01	4,30E-04	0	4,35E-04	0
(3)	ODP		kg CFC11	-eq	5,26E-06	5,69E-08	0	2,37E-08	0
C.	AP		mol H+ -	eq	3,13E-01	1,93E-03	0	1,56E-03	0
<del></del>	EP-FreshWater		kg P -ed	1	3,29E-03	1,01E-05	0	2,14E-05	0
<del></del>	EP-Marine		kg N -ed	7	6,67E-02	5,12E-04	0	2,48E-04	0
<del>2</del>	EP-Terrestial		mol N -e	eq	7,29E-01	5,72E-03	0	2,88E-03	0
	POCP		kg NMVOC	-eq	2,62E-01	2,09E-03	0	9,05E-04	0
	ADP-minerals&metals <sup>1</sup>		kg Sb-e	9	1,29E-03	3,35E-05	0	7,48E-06	0
	ADP-fossil <sup>1</sup>		МЈ		9,62E+02	5,84E+00	0	4,57E+00	0
<u></u>	WDP <sup>1</sup>		$m^3$		2.025 . 04	1,73E+01	0	8,18E+01	0
(%)	WDP.		m <sup>3</sup>		2,03E+04	1,736+01	U	0, 101-01	U
(%)	Indicator		Unit m <sup>3</sup>	B4	2,03E+04	C2	C3	C4	D
				B4 0					
	Indicator		Unit		C1	C2	C3	C4	D
	<b>Indicator</b> GWP-total		<b>Unit</b> kg CO <sub>2</sub> -eq	0	C1 0	C2 1,76E-01	C3 2,13E+01	C4 9,48E-02	D -4,42E+00
	Indicator  GWP-total  GWP-fossil		Unit kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq	0	C1 0	C2 1,76E-01 1,75E-01	C3 2,13E+01 4,57E+00	C4 9,48E-02 9,47E-02	D -4,42E+00 -4,40E+00
	Indicator  GWP-total  GWP-fossil  GWP-biogenic		Unit kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq	0 0	C1 0 0	C2 1,76E-01 1,75E-01 7,52E-05	C3 2,13E+01 4,57E+00 1,67E+01	C4 9,48E-02 9,47E-02 7,03E-05	D -4,42E+00 -4,40E+00 -3,44E-03
<b>P P P P P P P P P P</b>	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc		Unit  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq	0 0 0	0 0 0 0	C2 1,76E-01 1,75E-01 7,52E-05 5,35E-05	C3 2,13E+01 4,57E+00 1,67E+01 9,89E-05	C4 9,48E-02 9,47E-02 7,03E-05 2,86E-05	D -4,42E+00 -4,40E+00 -3,44E-03 -2,48E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP		Unit  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq	0 0 0 0	C1 0 0 0 0	C2 1,76E-01 1,75E-01 7,52E-05 5,35E-05 4,23E-08	C3 2,13E+01 4,57E+00 1,67E+01 9,89E-05 4,09E-08	C4 9,48E-02 9,47E-02 7,03E-05 2,86E-05 2,94E-08	D -4,42E+00 -4,40E+00 -3,44E-03 -2,48E-02 -4,90E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP		Wnit  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  cg CFC11 -eq  mol H+ -eq	0 0 0 0 0	C1 0 0 0 0 0	C2 1,76E-01 1,75E-01 7,52E-05 5,35E-05 4,23E-08 5,65E-04	C3 2,13E+01 4,57E+00 1,67E+01 9,89E-05 4,09E-08 2,53E-03	C4 9,48E-02 9,47E-02 7,03E-05 2,86E-05 2,94E-08 6,71E-04	D -4,42E+00 -4,40E+00 -3,44E-03 -2,48E-02 -4,90E-02 -2,41E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater		kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq cg CFC11 -eq mol H+ -eq kg P -eq	0 0 0 0 0 0	C1 0 0 0 0 0 0	C2 1,76E-01 1,75E-01 7,52E-05 5,35E-05 4,23E-08 5,65E-04 1,40E-06	C3 2,13E+01 4,57E+00 1,67E+01 9,89E-05 4,09E-08 2,53E-03 6,41E-06	C4 9,48E-02 9,47E-02 7,03E-05 2,86E-05 2,94E-08 6,71E-04 9,44E-07	D -4,42E+00 -4,40E+00 -3,44E-03 -2,48E-02 -4,90E-02 -2,41E-02 -2,89E-04
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine		kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq cg CFC11 -eq mol H+ -eq kg P -eq kg N -eq	0 0 0 0 0 0	C1 0 0 0 0 0 0	C2 1,76E-01 1,75E-01 7,52E-05 5,35E-05 4,23E-08 5,65E-04 1,40E-06 1,24E-04	C3 2,13E+01 4,57E+00 1,67E+01 9,89E-05 4,09E-08 2,53E-03 6,41E-06 1,11E-03	C4 9,48E-02 9,47E-02 7,03E-05 2,86E-05 2,94E-08 6,71E-04 9,44E-07 2,39E-04	D -4,42E+00 -4,40E+00 -3,44E-03 -2,48E-02 -4,90E-02 -2,41E-02 -2,89E-04 -5,64E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine  EP-Terrestial		kg CO <sub>2</sub> -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq	0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0	C2 1,76E-01 1,75E-01 7,52E-05 5,35E-05 4,23E-08 5,65E-04 1,40E-06 1,24E-04 1,38E-03	C3 2,13E+01 4,57E+00 1,67E+01 9,89E-05 4,09E-08 2,53E-03 6,41E-06 1,11E-03 1,17E-02	C4 9,48E-02 9,47E-02 7,03E-05 2,86E-05 2,94E-08 6,71E-04 9,44E-07 2,39E-04 2,65E-03	D -4,42E+00 -4,40E+00 -3,44E-03 -2,48E-02 -4,90E-02 -2,41E-02 -2,89E-04 -5,64E-03 -5,87E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine  EP-Terrestial  POCP		kg CO <sub>2</sub> -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq g NMVOC -eq	0 0 0 0 0 0 0	C1 0 0 0 0 0 0 0 0	C2 1,76E-01 1,75E-01 7,52E-05 5,35E-05 4,23E-08 5,65E-04 1,40E-06 1,24E-04 1,38E-03 5,42E-04	C3 2,13E+01 4,57E+00 1,67E+01 9,89E-05 4,09E-08 2,53E-03 6,41E-06 1,11E-03 1,17E-02 2,97E-03	C4 9,48E-02 9,47E-02 7,03E-05 2,86E-05 2,94E-08 6,71E-04 9,44E-07 2,39E-04 2,65E-03 7,62E-04	D -4,42E+00 -4,40E+00 -3,44E-03 -2,48E-02 -4,90E-02 -2,41E-02 -5,64E-03 -5,87E-02 -2,41E-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



1,25E-09

2,68E-08

4,27E-01

0,00E+00

2,02E-09

3,27E+00

0

4,70E-11

1,25E-09

4,72E+00

-1,89E-08

3,39E-07

-6,66E+01

Additional er	vironmental impa	t indicators						
	Indicator	Unit		A1-A3	A4	A5	B2	В3
	PM	Disease incidence		5,10E-06	6,40E-08	0	1,31E-08	0
(101)	IRP <sup>2</sup>	kgBq U235 -eq		8,69E+00	1,91E-02	0	3,16E-02	0
4	ETP-fw <sup>1</sup>	CTUe	CTUe		8,52E+00	0	4,95E+00	0
46. *** <b>!</b>	HTP-c <sup>1</sup>	CTUh	CTUh		0,00E+00	0	7,39E-10	0
46 B	HTP-nc <sup>1</sup>	CTUh		2,65E-06	1,42E-08	0	1,64E-08	0
	SQP <sup>1</sup>	dimensionless	dimensionless		1,09E+01	0	1,28E+00	0
li li	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	1,61E-08	4,01E-08	1,23E-08	-6,45E-07
	IRP <sup>2</sup>	kgBq U235 -eq	0	0	1,25E-02	6,19E-03	8,69E-03	-4,80E-02
	ETP-fw <sup>1</sup>	CTUe	0	0	2,08E+00	1,78E+01	1,29E+00	-2,60E+02

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)

CTUh

CTUh

dimensionless

HTP-c<sup>1</sup>

HTP-nc<sup>1</sup>

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		Unit	A1-A3	A4	A5	B2	В3			
	PERE		MJ	2,86E+02	2,64E-01	0	6,21E-01	0			
2	PERM		MJ		0,00E+00	0	0,00E+00	0			
Ţ,	PERT		MJ	3,90E+02	2,64E-01	0	6,21E-01	0			
	PENRE		МЈ	9,37E+02	5,84E+00	0	4,57E+00	0			
<u>A</u>	PENRM		MJ	2,83E+01	0,00E+00	0	0,00E+00	0			
<b>IA</b>	PENRT		MJ	9,66E+02	5,84E+00	0	4,57E+00	0			
	SM		kg	3,01E+00	0,00E+00	0	0,00E+00	0			
2	RSF		MJ		8,59E-03	0	4,98E-02	0			
	NRSF		MJ		2,96E-02	0	4,91E-02	0			
(%)	FW		m <sup>3</sup>		2,39E-03	0	7,85E-01	0			
	ndicator	Unit	B4	C1	C2	C3	C4	D			
	PERE	MJ	0	0	3,59E-02	1,26E-01	4,03E-02	-6,19E+01			
	PERM	MJ	0	0	0,00E+00	-9,87E+01	0,00E+00	0,00E+00			
<b>್ಷ</b> ್ಟ					·	3,072101	0,00E+00	.,			
1.6	PERT	MJ	0	0	3,59E-02	-9,86E+01	4,02E-02	-6,19E+01			
	PENRE	WI	0	0							
					3,59E-02	-9,86E+01	4,02E-02	-6,19E+01			
	PENRE	МЈ	0	0	3,59E-02 2,85E+00	-9,86E+01 2,38E+00	4,02E-02 2,17E+00	-6,19E+01 -4,09E+01			
<b>B</b>	PENRE PENRM	MJ	0	0	3,59E-02 2,85E+00 0,00E+00	-9,86E+01 2,38E+00 -2,73E+01	4,02E-02 2,17E+00 0,00E+00	-6,19E+01 -4,09E+01 0,00E+00			
<b>4</b> <b>4</b> 0 <b>14</b> 1	PENRE PENRM PENRT	MJ MJ	0 0 0	0 0	3,59E-02 2,85E+00 0,00E+00 2,85E+00	-9,86E+01 2,38E+00 -2,73E+01 -2,49E+01	4,02E-02 2,17E+00 0,00E+00 2,17E+00	-6,19E+01 -4,09E+01 0,00E+00 -4,09E+01			
	PENRE PENRM PENRT SM	MJ MJ kg	0 0 0 0	0 0 0	3,59E-02 2,85E+00 0,00E+00 2,85E+00 0,00E+00	-9,86E+01 2,38E+00 -2,73E+01 -2,49E+01 0,00E+00	4,02E-02 2,17E+00 0,00E+00 2,17E+00 0,00E+00	-6,19E+01 -4,09E+01 0,00E+00 -4,09E+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 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" \*INA Indicator Not Assessed



End of life - Waste											
	Indicator				A1-A3	A4	A5	B2	В3		
	HWD	HWD		kg		8,19E-04	0	8,64E-04	0		
	NHWD	NHWD		kg		8,68E-01	0	5,55E-02	0		
<u>.</u>	RWD		kg		6,70E-03	2,34E-05	0	2,68E-05	0		
In	dicator		Unit	B4	C1	C2	C3	C4	D		
ā	HWD		kg	0	0	1,56E-04	0,00E+00	8,67E+00	-1,98E-02		
Ū	NHWD		kg	0	0	2,48E-01	1,58E+00	1,28E-01	-1,75E+00		
₩	RWD		kg	0	0	1,95E-05	0,00E+00	1,37E-05	-4,01E-05		

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9,0 E-03 = 9,0\*10-3 = 0,009" \*INA Indicator Not Assessed

End of life - Output flow								
Ind	icator	Un	it	A1-A3	A4	A5	B2	В3
<b>®</b>	CRU	kç	kg		0,00E+00	0	0,00E+00	0
&▷	MFR	kç	kg		0,00E+00	0	0,00E+00	0
DF	MER	kç	kg		0,00E+00	0	0,00E+00	0
5D	EEE		MJ		0,00E+00	0	0,00E+00	0
D	EET	М	МЈ		0,00E+00	0	0,00E+00	0
Indicato	or	Unit	B4	C1	C2	C3	C4	D
<b>Ø▷</b>	CRU	kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
\$>	MFR	kg	0	0	0,00E+00	4,27E+00	0,00E+00	0,00E+00
D7	MER	kg	0	0	0,00E+00	2,35E+01	0,00E+00	0,00E+00
50	EEE	MJ	0	0	0,00E+00	7,08E+00	0,00E+00	0,00E+00
	EET	MJ	0	0	0,00E+00	1,07E+02	0,00E+00	0,00E+00

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

"Reading example: 9,0 E-03 = 9,0\*10-3 = 0,009" \*INA Indicator Not Assessed

Biogenic Carbon Content									
Indicator	Unit	At the factory gate							
Biogenic carbon content in product	kg C	4,84E+00							
Biogenic carbon content in accompanying packaging	kg C	4,34E-02							

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-eq/kWh

#### **Dangerous substances**

The product contains substances given by the REACH Candidate list that are less than 0,1 % by weight.

#### **Indoor environment**

The product is low-emitting and tested according to Swedish Möbelfakta.

## **Additional Environmental Information**

## **Key Environmental Indicators**

Key environmental indicators	Unit	A1-A3	A4	A1-C4	A1-D
GWPtotal	kg CO <sub>2</sub> -eq	43,97	0,28	66,08	61,65
Total energy consumption	MJ	1226,24	6,14	1245,36	1143,01
Amount of recycled materials	%	12,16			

Additional environmental impact indicators required in NPCR Part A for construction products							
Indicator	Unit		A1-A3	A4	A5	B2	В3
GWPIOBC	kg CO <sub>2</sub> -eq	kg CO <sub>2</sub> -eq		2,77E-01	0	2,69E-01	0
Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO <sub>2</sub> -eq	0	0	1,76E-01	2,86E+00	9,90E-02	-6,27E+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 (%)
Origo - 1200x600 - Fixed height 900 mm - HPL	24,60	47,58	1289,76	12,48
Origo - 700x600 mm - Fixed height 724 mm - HPL	16,90	39,07	934,94	13,36
Origo - 700x600 mm - Fixed height 724 mm - Marmoleum	18,20	41,31	1012,57	11,81
Origo - 700x600 mm - Fixed height 724 mm - HPL acoustics	18,20	41,58	1033,18	12,42
Origo - 700x600 mm - Fixed height 900 mm - HPL	17,70	42,31	991,71	13,66
Origo - 1400x600 mm - Fixed height 724 mm - HPL	26,30	46,00	1338,31	11,87
Origo - 1200x800 mm - Fixed height 900 mm - HPL	28,80	47,80	1445,47	11,60

Key environmental indicators (A1-A3) for options for this EPD						
Options	Weight (kg)	GWPtotal (kg CO <sub>2</sub> -eq)	Total energy consumption (MJ)	Amount of recycled materials (%)		
Origo - Sound absorber, 1 pcs	0,70	3,69	57,50	47,43		
Origo - Levelling foot, 1 pcs	0,03	0,31	3,05	0,00		
Origo - Micro castor, 1 pcs	0,03	0,24	2,64	0,00		
Origo - Castor, 1 pcs	0,14	1,26	13,77	1,66		



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