

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

## Soon Modular Seating





The Norwegian EPD Foundation

Owner of the declaration:

Kinnarps AB

**Product:** 

Soon Modular Seating

**Declared unit:** 

1 pc

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-5506-4803-EN

Registration number:

NEPD-5506-4803-EN

Issue date: 05.12.2023

Valid to: 05.12.2028

**EPD Software:** 

LCA.no EPD generator ID: 72369



## **General information**

## Product

Soon Modular Seating

## **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-5506-4803-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 Soon Modular Seating

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

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

#### Functional unit:

Production of one seating solution 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: 05.12.2023

Valid to: 05.12.2028

### 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: Johanna Ljunggren

Reviewer of company-specific input data and EPD: Rickard Thil

Approved:

Håkon Hauan, CEO EPD-Norge



## **Product**

## **Product description:**

Soon 2 section sofa with upholstered seat and back and 100% recycled polyester fabric. Steel underframe. Armrests are available in wood or completely upholstered as options.

From a simple bench or easy chair as starting point, Soon can be configured in infinite sofa combinations – the only limits are space and imagination. Combine bench sections, one-, two- and three-seater sections and straight, arched or round table sections. Armrests are available in wood finish or upholstered. In addition, the back can be supplied in wood. The seat has removable fabric that makes it easy to keep clean and facilitates the extension of the product's lifespan.

Read more: https://www.kinnarps.com/products/seating/soft-seating/soon-module/?pr=Soon%20module

#### **Product specification**

Upholstered seat and back with polyether padding. Steel construction with Nozag springs. Back is available in wood. Replaceable seat upholstery. Moulded armrest in wood (beech, birch, oak) or fully upholstered endpiece. Underframe in powder-coated steel with plastic glide. Wooden tabletops as middle or end sections.

## This EPD includes the following variants:

Soon SO2W: 2 section sofa with seat upholstered with 100% recycled polyester and wood back in beech, birch or oak.

Soon SOB1: 1 section bench with seat upholstered with 100% recycled polyester.

Soon SO1: 1 section sofa with seat and back upholstered with 100% recycled polyester.

Soon SO1: 1 section sofa with seat and back upholstered with wool fabric.

Soon SO1W: 1 section sofa with seat upholstered with 100% recycled polyester and wood back in beech, birch or oak.

Soon SO1W: 1 section sofa with seat upholstered with wool fabric and wood back in beech, birch or oak.

Soon SOC12: Corner section with seat and back upholstered with 100% recycled polyester.

## Included options are:

E1: End-piece of silver steel section with wooden stopper.

C1: Attachment end-piece of silver steel section with wooden stopper. For attaching to tables or a further section.

E2: End-piece of silver steel section with armrest in laminated wood.

C2: Attachment end-piece of silver steel section with armrest in laminated wood. For attaching to tables or a further section.

E4: Fully upholstered end-piece with silver runner.

SO E35: Table fitted to the end of a sofa/bench with an attachment end-piece.

SO C55: Straight table for fitting between two sofas/benches with an attachment end-piece.

SO C95: Corner table at straight angle for fitting between two sofas/benches with an attachment end-piece.

SO FIX: Fittings for screwing sofa/bench/table to floor.

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Stainless steel	1,71	7,24	1,71	100,00
Metal - Steel	15,11	64,15	0,55	3,62
Plastic - Polyethylene terephthalate (PET)	0,27	1,16	0,00	0,00
Plastic - Polyurethane (PUR)	4,70	19,96	0,00	0,00
Textile - Polyester (PE)	1,33	5,65	1,04	78,34
Wood - Plywood	0,43	1,83	0,00	0,00
Total	23,55		3,29	

### **Technical data:**

Fulfilled technical standards:

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating

## Fulfilled fire requirements:

EN 1021-1 Assessment of the ignitability of upholstered furniture - Part 1: Ignition source smouldering cigarette, with Kinnarps standard fabrics EN 1021-2 Assessment of the ignitability of upholstered furniture - Part 2: Ignition source match flame equivalent, with Kinnarps standard fabrics

#### Market

Mainly Europe, but is available world wide

## Reference service life, product

15 years

Reference service life, building

## LCA: Calculation rules

## **Declared unit:**



1 pcs Soon Modular Seating

#### **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
Metal - Stainless steel	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Plastic - Polyethylene terephthalate (PET)	ecoinvent 3.6	Database	2019
Plastic - Polyurethane (PUR)	ecoinvent 3.6	Database	2019
Textile - Polyester (PE)	ecoinvent 3.6	Database	2019
Wood - Plywood	modified ecoinvent 3.6	Database	2019
Textile - Polyester (PE)	SCS-EPD-08784	EPD	2020



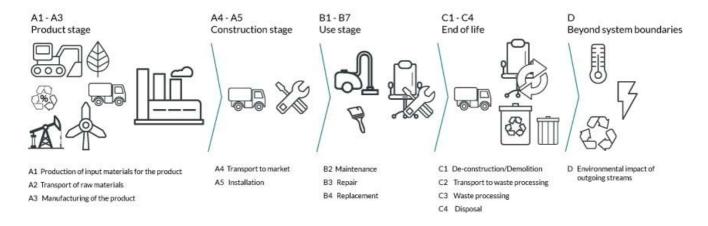
## System boundaries (X=included, MND=module not declared, MNR=module not relevant)

	Pı	roduct stag	ge		uction ion stage				Use stage	e 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	Х	X	Χ	X

## System boundary:

The upholstering takes place at Kinnarps' production site in Skillingaryd, where the fabric is also beeing processed. Certain steel components are manufactured at Kinnarps' production site in Jönköping and some are purchased as premanufactured components. Final assembly of the product is done at Kinnarps' production site in Kinnarp.

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 vaccum cleaning of textiles 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			
Electricity, European average (kWh)	kWh/DU	11,70			
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 Polyethylene terephthalate, PET, incineration with fly ash extraction - C3 (kg)	kg	0,27			
Waste treatment per kg Polyurethane (PU), incineration (kg)	kg	4,70			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	16,82			
Waste treatment per kg Textile, incineration with fly ash extraction (kg)	kg	1,33			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	0,43			
Waste, materials to recycling (kg)	kg	5,71			
Disposal (C4)	Unit	Value			
andfilling of ashes and residues from ncineration of Scrap steel (kg)	kg	11,11			
Landfilling of ashes from incineration of Polyethylene terephthalate, PET, process per kg ashes and residues - C4 (kg)	kg	0,01			
andfilling of ashes from incineration of Polyurethane (PU), process per kg ashes and residues - C4 (kg)	kg	0,18			
Landfilling of ashes from incineration of Textile, soiled, process per kg ashes and residues (kg)	kg	0,07			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0,00			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity, in Norway (MJ)	MJ	8,40			
Substitution of primary steel with net scrap (kg)	kg	4,90			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	127,12			



## **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	1,00E+02	2,75E-01	0	5,01E+00	0
	GWP-fossil		kg CO <sub>2</sub> -eq		9,95E+01	2,75E-01	0	4,96E+00	0
	GWP-biogenic		kg CO <sub>2</sub> -e	eq	6,75E-01	4,65E-04	0	3,49E-02	0
	GWP-luluc		kg CO <sub>2</sub> -e	eq	2,70E-01	4,28E-04	0	1,15E-02	0
٨	ODP		kg CFC11 -	-eq	6,28E-06	5,66E-08	0	4,20E-07	0
Œ	АР		mol H+ -	eq	5,07E-01	1,93E-03	0	2,90E-02	0
<del></del>	EP-FreshWater		kg P -eq	1	9,26E-03	1,01E-05	0	5,30E-04	0
<del></del>	EP-Marine		kg N -ec	7	1,05E-01	5,09E-04	0	3,68E-03	0
	EP-Terrestial		mol N -e	q	1,04E+00	5,70E-03	0	4,53E-02	0
	POCP		kg NMVOC	-eq	3,77E-01	2,08E-03	0	1,15E-02	0
	ADP-minerals&metals <sup>1</sup>		kg Sb -ed	q	2,07E-03	3,34E-05	0	3,64E-05	0
	ADP-fossil <sup>1</sup>		MJ		1,51E+03	5,81E+00	0	1,02E+02	0
<u>%</u>	WDP <sup>1</sup>		m <sup>3</sup>		2,65E+04	1,72E+01	0	1,54E+03	0
	Indicator		Unit	B4	C1	C2	C3	C4	D
	<b>Indicator</b> GWP-total	kg	<b>Unit</b> J CO <sub>2</sub> -eq	B4 0	C1 0	C2 3,28E-01	C3 1,60E+01	C4 1,35E-01	D -6,16E+00
_	GWP-total	kg	J CO <sub>2</sub> -eq	0	0	3,28E-01	1,60E+01	1,35E-01	-6,16E+00
	GWP-total GWP-fossil	kg kg	1 CO <sub>2</sub> -eq 1 CO <sub>2</sub> -eq	0	0	3,28E-01 3,28E-01	1,60E+01 1,33E+01	1,35E-01 1,35E-01	-6,16E+00 -6,13E+00
	GWP-total GWP-fossil GWP-biogenic	kg kg	J CO <sub>2</sub> -eq J CO <sub>2</sub> -eq J CO <sub>2</sub> -eq	0 0	0 0	3,28E-01 3,28E-01 1,36E-04	1,60E+01 1,33E+01 2,67E+00	1,35E-01 1,35E-01 1,07E-04	-6,16E+00 -6,13E+00 -4,49E-03
	GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc	kg kg kg	CO <sub>2</sub> -eq CO <sub>2</sub> -eq CO <sub>2</sub> -eq CO <sub>2</sub> -eq	0 0 0	0 0 0 0	3,28E-01 3,28E-01 1,36E-04 1,17E-04	1,60E+01 1,33E+01 2,67E+00 9,57E-05	1,35E-01 1,35E-01 1,07E-04 3,90E-05	-6,16E+00 -6,13E+00 -4,49E-03 -2,78E-02
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP	kg kg kg t	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	0 0 0 0	3,28E-01 3,28E-01 1,36E-04 1,17E-04 7,42E-08	1,60E+01 1,33E+01 2,67E+00 9,57E-05 7,11E-08	1,35E-01 1,35E-01 1,07E-04 3,90E-05 3,94E-08	-6,16E+00 -6,13E+00 -4,49E-03 -2,78E-02 -5,37E-02
	GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP	kg kg kg ( ma	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 0	0 0 0 0 0	3,28E-01 3,28E-01 1,36E-04 1,17E-04 7,42E-08 9,42E-04	1,60E+01 1,33E+01 2,67E+00 9,57E-05 7,11E-08 1,17E-02	1,35E-01 1,35E-01 1,07E-04 3,90E-05 3,94E-08 9,13E-04	-6,16E+00 -6,13E+00 -4,49E-03 -2,78E-02 -5,37E-02 -3,29E-02
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater	kg kg kg c mc k	CO <sub>2</sub> -eq CO <sub>2</sub> -eq CO <sub>2</sub> -eq CO <sub>2</sub> -eq CFC11 -eq CFC11 -eq CFC19 -eq	0 0 0 0 0 0	0 0 0 0 0 0	3,28E-01 3,28E-01 1,36E-04 1,17E-04 7,42E-08 9,42E-04 2,62E-06	1,60E+01 1,33E+01 2,67E+00 9,57E-05 7,11E-08 1,17E-02 6,45E-06	1,35E-01 1,35E-01 1,07E-04 3,90E-05 3,94E-08 9,13E-04 1,39E-06	-6,16E+00 -6,13E+00 -4,49E-03 -2,78E-02 -5,37E-02 -3,29E-02 -3,97E-04
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine	kg kg kg ( ma k	CO <sub>2</sub> -eq CO <sub>2</sub> -eq CO <sub>2</sub> -eq CO <sub>2</sub> -eq CFC11 -eq CFC11 -eq CFC19 -eq CFC10 -eq	0 0 0 0 0 0	0 0 0 0 0 0	3,28E-01 3,28E-01 1,36E-04 1,17E-04 7,42E-08 9,42E-04 2,62E-06 1,86E-04	1,60E+01 1,33E+01 2,67E+00 9,57E-05 7,11E-08 1,17E-02 6,45E-06 6,48E-03	1,35E-01 1,35E-01 1,07E-04 3,90E-05 3,94E-08 9,13E-04 1,39E-06 3,24E-04	-6,16E+00 -6,13E+00 -4,49E-03 -2,78E-02 -5,37E-02 -3,29E-02 -3,97E-04 -7,53E-03
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial	kg kg kg 0 ma k kg N	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 cg P -eq cg N -eq	0 0 0 0 0 0 0	0 0 0 0 0 0 0	3,28E-01 3,28E-01 1,36E-04 1,17E-04 7,42E-08 9,42E-04 2,62E-06 1,86E-04 2,08E-03	1,60E+01 1,33E+01 2,67E+00 9,57E-05 7,11E-08 1,17E-02 6,45E-06 6,48E-03 6,22E-02	1,35E-01 1,35E-01 1,07E-04 3,90E-05 3,94E-08 9,13E-04 1,39E-06 3,24E-04 3,59E-03	-6,16E+00 -6,13E+00 -4,49E-03 -2,78E-02 -5,37E-02 -3,29E-02 -3,97E-04 -7,53E-03 -7,81E-02
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial POCP	kg kg kg 0 ma k kg N	g CO <sub>2</sub> -eq cFC11 -eq cg P -eq gg N -eq col N -eq	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	3,28E-01 3,28E-01 1,36E-04 1,17E-04 7,42E-08 9,42E-04 2,62E-06 1,86E-04 2,08E-03 7,98E-04	1,60E+01 1,33E+01 2,67E+00 9,57E-05 7,11E-08 1,17E-02 6,45E-06 6,48E-03 6,22E-02 1,49E-02	1,35E-01 1,35E-01 1,07E-04 3,90E-05 3,94E-08 9,13E-04 1,39E-06 3,24E-04 3,59E-03 1,03E-03	-6,16E+00 -6,13E+00 -4,49E-03 -2,78E-02 -5,37E-02 -3,29E-02 -3,97E-04 -7,53E-03 -7,81E-02 -3,29E-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 env	vironmental impact in	dicators						
	Indicator	Unit	A1-A3	A4	A5	B2	В3	
	PM	Disease incidence	Disease incidence		6,37E-08	0	7,60E-08	0
	IRP <sup>2</sup>	kgBq U235 -eq		1,07E+01	1,90E-02	0	8,97E-01	0
40	ETP-fw <sup>1</sup>	CTUe		3,89E+03	8,48E+00	0	7,17E+01	0
40.* *****	HTP-c <sup>1</sup>	CTUh		4,96E-07	0,00E+00	0	2,00E-09	0
42	HTP-nc <sup>1</sup>	CTUh		3,10E-06	1,42E-08	0	6,91E-08	0
	SQP <sup>1</sup>	dimensionless		8,07E+02	1,08E+01	0	2,47E+01	0
Inc	dicator	Unit	R4	C1	C2	C3	C4	D

I	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	2,01E-08	6,54E-08	1,65E-08	-8,15E-07
	IRP <sup>2</sup>	kgBq U235 -eq	0	0	2,17E-02	1,01E-02	1,18E-02	-4,80E-02
<b>3</b>	ETP-fw <sup>1</sup>	CTUe	0	0	3,67E+00	3,90E+01	1,86E+00	-3,58E+02
40.* *** <u>\$</u>	HTP-c <sup>1</sup>	CTUh	0	0	0,00E+00	1,65E-09	6,90E-11	-2,70E-08
<del>%</del>	HTP-nc <sup>1</sup>	CTUh	0	0	4,01E-09	4,17E-08	1,94E-09	5,08E-07
	SQP <sup>1</sup>	dimensionless	0	0	3,47E+00	7,54E-01	6,44E+00	-7,39E+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)

<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		U	nit	A1-A3	A4	A5	B2	В3
	PERE	PERE		МЈ		2,63E-01	0	1,98E+01	0
	PERM	PERM		МЈ		0,00E+00	0	0,00E+00	0
ុក្ស	PERT		N	۷J	3,49E+02	2,63E-01	0	1,98E+01	0
A	PENRE		N	۷J	1,38E+03	5,81E+00	0	1,03E+02	0
Å	PENRM		N	NJ	2,27E+02	0,00E+00	0	0,00E+00	0
<b>I</b>	PENRT		N	NJ	1,60E+03	5,81E+00	0	1,03E+02	0
	SM		k	κg	3,57E+00	0,00E+00	0	0,00E+00	0
	RSF		МЈ		1,40E+00	8,55E-03	0	1,45E+00	0
	NRSF		MJ		1,72E+01	2,95E-02	0	3,44E-01	0
<b>⊗</b>	FW		n	n <sup>3</sup>	1,53E+00	2,38E-03	0	8,69E-02	0
	icator	U	Init	B4	C1	C2	C3	C4	D
Indi	PERE		<b>Init</b> MJ	B4 0	C1 0	C2 7,09E-02	C3 1,79E-01	C4 5,85E-02	D -6,88E+01
		N							
Ç.	PERE	1	MJ	0	0	7,09E-02	1,79E-01	5,85E-02	-6,88E+01
T.	PERE PERM	1	MJ	0	0	7,09E-02 0,00E+00	1,79E-01 -8,54E+00	5,85E-02 0,00E+00	-6,88E+01 0,00E+00
₹.	PERE PERM PERT	1	M1 M1	0 0	0 0 0	7,09E-02 0,00E+00 7,09E-02	1,79E-01 -8,54E+00 -8,36E+00	5,85E-02 0,00E+00 5,85E-02	-6,88E+01 0,00E+00 -6,88E+01
E I I	PERE PERM PERT PENRE	1	м1 М1 М1	0 0 0	0 0 0 0	7,09E-02 0,00E+00 7,09E-02 4,95E+00	1,79E-01 -8,54E+00 -8,36E+00 6,01E+00	5,85E-02 0,00E+00 5,85E-02 2,93E+00	-6,88E+01 0,00E+00 -6,88E+01 -5,59E+01
E I I I	PERE PERM PERT PENRE PENRM	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	м1 м1 м1	0 0 0 0	0 0 0 0	7,09E-02 0,00E+00 7,09E-02 4,95E+00 0,00E+00	1,79E-01 -8,54E+00 -8,36E+00 6,01E+00 -1,57E+02	5,85E-02 0,00E+00 5,85E-02 2,93E+00 0,00E+00	-6,88E+01 0,00E+00 -6,88E+01 -5,59E+01 0,00E+00
	PERE PERM PERT PENRE PENRM PENRT	1	мл мл мл мл	0 0 0 0 0	0 0 0 0 0	7,09E-02 0,00E+00 7,09E-02 4,95E+00 0,00E+00 4,95E+00	1,79E-01 -8,54E+00 -8,36E+00 6,01E+00 -1,57E+02 -1,51E+02	5,85E-02 0,00E+00 5,85E-02 2,93E+00 0,00E+00 2,93E+00	-6,88E+01 0,00E+00 -6,88E+01 -5,59E+01 0,00E+00 -5,59E+01
	PERE PERM PERT PENRE PENRM PENRT SM	1	MJ MJ MJ MJ kg	0 0 0 0 0 0	0 0 0 0 0 0	7,09E-02 0,00E+00 7,09E-02 4,95E+00 0,00E+00 4,95E+00 0,00E+00	1,79E-01 -8,54E+00 -8,36E+00 6,01E+00 -1,57E+02 -1,51E+02 0,00E+00	5,85E-02 0,00E+00 5,85E-02 2,93E+00 0,00E+00 2,93E+00 0,00E+00	-6,88E+01 0,00E+00 -6,88E+01 -5,59E+01 0,00E+00 -5,59E+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		U	nit	A1-A3	A4	A5	B2	В3
	HWD	HWD		kg		8,16E-04	0	1,54E-02	0
	NHWD		k	g	5,09E+01	8,64E-01	0	3,47E-01	0
₩	RWD		kg		1,24E-02	2,33E-05	0	7,32E-04	0
In	dicator		Unit	B4	C1	C2	C3	C4	D
ā	HWD		kg	0	0	2,56E-04	0,00E+00	1,12E+01	-2,85E-02
Ū	NHWD		kg	0	0	2,41E-01	0,00E+00	2,03E-01	-2,45E+00
æ	RWD		kg	0	0	3,37E-05	0,00E+00	1,80E-05	-4,03E-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	)	0,00E+00	0,00E+00	0	0,00E+00	0
&▷	MFR	kç	kg		0,00E+00	0	0,00E+00	0
DF	MER	kç	J	4,85E-02	0,00E+00	0	0,00E+00	0
50	EEE	М	J	2,50E+00	0,00E+00	0	0,00E+00	0
DB.	EET	М	J	3,78E+01	0,00E+00	0	0,00E+00	0
Indicato	or	Unit	B4	C1	C2	C3	C4	D
<b>∅&gt;</b>	CRU	kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
\$>	MFR	kg	0	0	0,00E+00	5,71E+00	0,00E+00	0,00E+00
DV	MER	kg	0	0	0,00E+00	2,36E+01	0,00E+00	0,00E+00
50	EEE	MJ	0	0	0,00E+00	8,59E+00	0,00E+00	0,00E+00
	EET	MJ	0	0	0,00E+00	1,30E+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								
Unit	At the factory gate							
kg C	1,96E-01							
kg C	2,33E-04							
	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-eq/kWh

## **Dangerous substances**

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

#### **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	100,41	0,28	122,13	115,97
Total energy consumption	MJ	1734,59	6,11	1879,18	1756,52
Amount of recycled materials	%	13.94			

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		2,75E-01	0	5,37E+00	0
Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO <sub>2</sub> -eq	0	0	3,28E-01	1,54E+01	1,40E-01	-8,82E+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 (%)		
Soon - 2 section sofa - 100% recycled polyester fabric - Wood back	19,50	54,72	1262,27	10,93		
Soon - 1 section bench - Upholstered seat - 100% recycled polyester fabric	7,50	32,32	544,61	19,14		
Soon - 1 section sofa - 100% recycled polyester fabric	11,90	47,86	823,20	15,38		
Soon - 1 section sofa - Wool fabric	12,10	92,21	1064,05	10,75		
Soon - 1 section sofa - 100 % recycled polyester fabric - Wood back	9,80	27,39	635,23	10,88		
Soon - 1 section sofa - Wool fabric - Wood back	9,90	53,26	775,68	7,65		
Soon - Corner section - Polyester fabric	22,60	87,27	1530,07	17,63		

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 (%)	
Soon - End-piece - Wooden stopper	2,50	7,89	145,78	24,06	
Soon - Attachement end-piece - Wooden stopper	3,60	11,22	204,86	24,42	
Soon - End-piece - Armrest in laminated wood	3,10	7,00	177,05	19,57	
Soon - Attachement end-piece - Armrest in laminated wood	3,40	8,27	198,68	20,10	
Soon - Upholstered end-piece - Silver runner	2,70	10,07	159,48	31,71	
Soon - End table	2,10	2,29	120,79	7,98	
Soon - Straight table	4,80	6,35	302,87	8,94	
Soon - Corner table	5,20	8,08	328,41	9,94	
Soon - Fittings 2 pcs	0,22	0,67	12,23	5,29	



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