



## Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

## Face Screens



# Martela

The Norwegian EPD Foundation

**Owner of the declaration:** Martela Oyj

Product: Face Screens

**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-6468-5729-EN

**Registration number:** 

NEPD-6468-5729-EN

Issue date: 24.04.2024

Valid to: 24.04.2029

EPD software: LCAno EPD generator ID: 310152

## **General information**

#### Product

Face Screens

#### **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-6468-5729-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 Face Screens

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

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

#### **Functional unit:**

The Face screens enable efficient and versatile use of the space. The acoustic properties of the walls soften the soundscape, making the space pleasant and calm. The screen set includes table and floor screens of different widths and heights, which make it easy to assemble a suitable unit for different spaces.

#### 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:**

Martela Oyj Contact person: Anne-Maria Peitsalo Phone: e-mail: anne-maria.peitsalo@martela.com

#### Manufacturer:

Martela Oyj Miestentie 1 02150 Espoo, Finland

#### **Place of production:**

Martela Oyj, Nummela production Ojakkalantie 10 03100 Nummela, Finland

#### Management system:

ISO 14001, ISO 9001, ISO 45001

#### **Organisation no:**

0114891-2

## Issue date:

24.04.2024

Valid to: 24.04.2029

#### 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: Tiina Bordi

Reviewer of company-specific input data and EPD: Anne-Maria Peitsalo

#### Approved:

Håkon Hauan Managing Director of EPD-Norway

## Product

#### **Product description:**

Face floor screens act as space dividers in offices and schools. The acoustic properties muffle the soundscape making the space pleasant and calm. The inner material is recycled and allergy-tested polyester fibre. Three pedestal models.

#### **Product specification**

Face Floor screen with T-legs: fully upholstered with Cura/ Gabriel fabric Core: dust-free, allergy-tested and sound-absorbing polyester fiber Screen thickness: 4 cm Size: 120x170

SIZE. 120X170

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Aluminium	3,52	37,67	2,82	80,11
Metal - Steel	1,62	17,34	0,00	0,00
Plastic - Polyethylene terephthalate (PET)	2,73	29,21	1,37	50,00
Plastic - Polypropylene (PP)	0,01	0,06	0,00	0,00
Textile - Polyester (PE)	1,47	15,72	1,44	98,03
Total	9,35		5,63	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Cardboard	0,02	2,33	0,01	36,00
Packaging - Wood	0,84	97,67	0,00	0,00
Total incl. packaging	10,21		5,63	

#### **Technical data:**

Möbelfakta certified product

More product information available here: https://www.martela.com/furniture/screens-and-space-dividers/floor-screens/face-floor-screen

#### Market:

Europe

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

At least 10 years verified by type testing in accredited test laboratory, 5 years warranty

#### Reference service life, building

#### **LCA: Calculation rules**

#### Declared unit:

1 pcs Face Screens

#### **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 - Aluminium	ecoinvent 3.6	database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Cardboard	ecoinvent 3.6	Database	2019
Packaging - Wood	Modified ecoinvent 3.6	Database	2019
Plastic - Polyethylene terephthalate (PET)	ecoinvent 3.6	Database	2019
Plastic - Polyethylene terephthalate (PET)	Modified ecoinvent 3.6	Database	2019
Plastic - Polypropylene (PP)	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)

F	Product stag	ge	Constr installati			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	Β7	C1	C2	C3	C4	D
Х	Х	Х	Х	Х	MND	Х	Х	Х	MND	MND	MND	Х	Х	Х	Х	Х

#### System boundary:

Product Stage / A1 Raw materials:

Martela has long partnerships with its suppliers and subcontractors, who buy raw materials to their products and components from their suppliers, respectively. Main suppliers are locating in Europe.

Wood material is coming from sustainably cultivated forest (FSC, PEFC, etc) and fabrics can be chosen from our standard collection with Öko tex or EU ecolabel certificates. Recycled materials are taken to use based on availability and when they fulfill the technical requirements set for the end products.

Materials are including the product package to our customers. Packages that are coming from suppliers are re-used in customer delivery phase (like pallets) or handled as waste in Manufacturing phase A3. Customer delivery package is disposed in Installation phase A5.

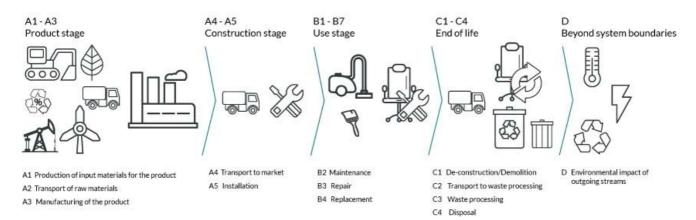
#### Product Stage / A2 Transport:

Transportation is calculated from suppliers location to our own factories in Nummela and Poland and between our factories when delivering components to final assembly phase in our logistics center in Nummela.

#### Product Stage / A3 Manufacturing:

Martela has two own factories for manufacturing these products. Poland factory is producing sewing and upholstery parts to chairs and screens. Production unit in Nummela make final assembly of the products based on customer orders.

Nummela factory is using renewable electricity and heating energy. From factory waste 98% is recycled. Poland factory is in rental premises and cannot choose its used energy, so in calculation we are using Poland average factors.



Additional technical information:

## LCA: Scenarios and additional technical information

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

Construction installation stage / A4 Transport:

Transportation from Martela logistics center in Nummela to our customers are calculated based on average transportation distances: in Scandinavia 1100 km incl. by ferry 300 km (between Turku - Stockholm).

#### Construction installation stage / A5 Assembly:

Martela products are partly assembled at customer premises. This assembling is done with hand tools and use of energy is minimal in this stage. Customer package is disposed in this stage automatically by the tool set-up, but our own installation teams take all waste back to our premises and packages are re-used (like pallets) or recycled as materials (included in A3 waste).

#### User stage / B1-B7:

Martela products do not require special maintenance. Cleaning with for example vacuuming and wet wiping is advice accordingly. Based on technical durability testing according EN standard in accredited testing laboratory Martela verifies use life of at least 10 years and grants normal warranty for 5 years. Product use life can be extended from that by re-furbishing upholstery parts.

#### End-of-life stage / C1-C4:

LCA-tool is calculating stage C waste processing and disposal material by material for recycling and resource for energy production in Norway. Material amounts are calculated based on the material used to make the product. Average transportation distance of 85 km has added for waste management.

#### Beyond the system boundaries / Re-use - Recovery - Recycling -potential / D:

LCA-tool is calculating stage D potential based on material recycling and resource for energy production from materials if product end of lifecycle would be in Norway. Material amounts are calculated based on the material used to make the product

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Ship, Ferry, Sea (km)	50,0 %	300	0,034	l/tkm	10,20
Truck, 16-32 tonnes, EURO 6 (km)	36,7 %	800	0,043	l/tkm	34,40
Assembly (A5)	Unit	Value			
Waste, packaging, corrugated board box, to average treatment (kg)	kg	0,02			
Waste, packaging, pallet, EUR wooden pallet, reusable, average treatment (kg)	kg	0,84			
Maintenance (B2)	Unit	Value			
Electricity, Finland (kWh)	kWh/DU	0,25			
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	2,73			
Waste treatment per kg Polypropylene (PP), incineration with fly ash extraction - C3 (kg)	kg	0,01			
Waste treatment per kg Scrap aluminium, incineration with fly ash extraction (kg)	kg	3,52			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	1,62			
Waste treatment per kg Textile, incineration with fly ash extraction (kg)	kg	1,47			
Waste, materials to recycling (kg)	kg	0,92			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap aluminium (kg)	kg	3,15			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	1,07			
Landfilling of ashes from incineration of Polyethylene terephthalate, PET, process per kg ashes and residues - C4 (kg)	kg	0,06			
Landfilling of ashes from incineration of Polypropylene, PP, process per kg ashes and residues - C4 (kg)	kg	0,00			
Landfilling of ashes from incineration of Textile, soiled, process per kg ashes and residues (kg)	kg	0,07			

Benefits and loads beyond the system boundaries (D)	Unit	Value		
Substitution of electricity, in Norway (MJ)	MJ	4,21		
Substitution of primary aluminium with net scrap (kg)	kg	0,07		
Substitution of primary steel with net scrap (kg)	kg	0,55		
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	63,68		

## LCA: Results

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

Environme	ental impact							
	Indicator	Uni	t	A1-A3	A4	A5	B2	B3
P	GWP-total	kg CO <sub>2</sub>	-eq	3,66E+01	1,88E+00	1,31E+00	6,38E-02	0
P	GWP-fossil	kg CO <sub>2</sub>	kg CO <sub>2</sub> -eq		1,88E+00	1,45E-03	6,28E-02	0
(j)	GWP-biogenic	kg CO <sub>2</sub>	-eq	-4,46E-01	7,17E-04	1,31E+00	3,39E-04	0
P	GWP-luluc	kg CO <sub>2</sub>	-eq	1,57E-01	7,68E-04	3,97E-07	6,90E-04	0
Ò	ODP	kg CFC1	1 -eq	3,69E-06	4,15E-07	2,49E-10	8,68E-09	0
(	АР	mol H+	-eq	2,25E-01	1,67E-02	1,06E-05	2,76E-04	0
	EP-FreshWater	kg P -	eq	2,05E-03	1,34E-05	1,62E-08	2,76E-06	0
÷	EP-Marine	kg N	eq	3,67E-02	3,94E-03	4,41E-06	4,37E-05	0
	EP-Terrestial	mol N	-eq	4,45E-01	4,38E-02	4,73E-05	5,49E-04	0
	РОСР	kg NMV0	DC -eq	1,46E-01	1,25E-02	1,23E-05	1,40E-04	0
B	ADP-minerals&metals <sup>1</sup>	kg Sb	eq	2,39E-03	4,39E-05	2,62E-08	5,07E-07	0
Ð	ADP-fossil <sup>1</sup>	MJ		5,57E+02	2,75E+01	1,78E-02	1,91E+00	0
%	WDP <sup>1</sup>	m <sup>3</sup>		4,95E+03	2,28E+01	2,62E-02	1,06E+02	0
	Indicator	Unit	B4	C1	C2	C3	C4	D
P	Indicator GWP-total	<b>Unit</b> kg CO <sub>2</sub> -eq	B4 0	C1 0	C2 1,59E-01	C3 7,84E+00	C4 4,89E-02	D -1,65E+00
P	GWP-total	kg CO <sub>2</sub> -eq	0	0	1,59E-01	7,84E+00	4,89E-02	-1,65E+00
P	GWP-total GWP-fossil	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq	0	0 0	1,59E-01 1,59E-01	7,84E+00 5,69E+00	4,89E-02 4,89E-02	-1,65E+00 -1,62E+00
P P P	GWP-total GWP-fossil GWP-biogenic	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq	0 0 0	0 0 0	1,59E-01 1,59E-01 6,59E-05	7,84E+00 5,69E+00 2,15E+00	4,89E-02 4,89E-02 4,53E-05	-1,65E+00 -1,62E+00 -4,06E-03
P P P	GWP-total GWP-fossil GWP-biogenic GWP-luluc	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 0 0 0	1,59E-01 1,59E-01 6,59E-05 5,66E-05	7,84E+00 5,69E+00 2,15E+00 1,83E-05	4,89E-02 4,89E-02 4,53E-05 1,45E-05	-1,65E+00 -1,62E+00 -4,06E-03 -2,52E-02
P P P P	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CFC11 -eq	0 0 0 0 0	0 0 0 0 0	1,59E-01 1,59E-01 6,59E-05 5,66E-05 3,60E-08	7,84E+00 5,69E+00 2,15E+00 1,83E-05 1,08E-08	4,89E-02 4,89E-02 4,53E-05 1,45E-05 1,48E-08	-1,65E+00 -1,62E+00 -4,06E-03 -2,52E-02 -2,69E-02
P P P D C	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CFC11 -eq mol H+ -eq	0 0 0 0 0 0 0	0 0 0 0 0 0	1,59E-01 1,59E-01 6,59E-05 5,66E-05 3,60E-08 4,57E-04	7,84E+00 5,69E+00 2,15E+00 1,83E-05 1,08E-08 1,73E-03	4,89E-02 4,89E-02 4,53E-05 1,45E-05 1,48E-08 3,41E-04	-1,65E+00 -1,62E+00 -4,06E-03 -2,52E-02 -2,69E-02 -1,04E-02
	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 kg CFC11 -eq mol H+ -eq kg P -eq	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	1,59E-01 1,59E-01 6,59E-05 5,66E-05 3,60E-08 4,57E-04 1,27E-06	7,84E+00 5,69E+00 2,15E+00 1,83E-05 1,08E-08 1,73E-03 1,66E-06	4,89E-02 4,89E-02 4,53E-05 1,45E-05 1,48E-08 3,41E-04 4,92E-07	-1,65E+00 -1,62E+00 -4,06E-03 -2,52E-02 -2,69E-02 -1,04E-02 -9,50E-05
	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 kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq	<ul> <li>0</li> <li>0&lt;</li></ul>	0 0 0 0 0 0 0 0	1,59E-01 1,59E-01 6,59E-05 5,66E-05 3,60E-08 4,57E-04 1,27E-06 9,05E-05	7,84E+00 5,69E+00 2,15E+00 1,83E-05 1,08E-08 1,73E-03 1,66E-06 8,65E-04	4,89E-02 4,89E-02 4,53E-05 1,45E-05 1,48E-08 3,41E-04 4,92E-07 1,21E-04	-1,65E+00 -1,62E+00 -4,06E-03 -2,52E-02 -2,69E-02 -1,04E-02 -9,50E-05 -2,17E-03
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq	<ul> <li>0</li> <li>0&lt;</li></ul>	0 0 0 0 0 0 0 0 0	1,59E-01 1,59E-01 6,59E-05 5,66E-05 3,60E-08 4,57E-04 1,27E-06 9,05E-05 1,01E-03	7,84E+00 5,69E+00 2,15E+00 1,83E-05 1,08E-08 1,73E-03 1,66E-06 8,65E-04 8,93E-03	4,89E-02 4,89E-02 4,53E-05 1,45E-05 1,48E-08 3,41E-04 4,92E-07 1,21E-04 1,34E-03	-1,65E+00 -1,62E+00 -4,06E-03 -2,52E-02 -2,69E-02 -1,04E-02 -9,50E-05 -2,17E-03 -2,32E-02
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial POCP	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq kg NMVOC -eq	<ul> <li>0</li> <li>0&lt;</li></ul>	0 0 0 0 0 0 0 0 0 0 0	1,59E-01 1,59E-01 6,59E-05 5,66E-05 3,60E-08 4,57E-04 1,27E-06 9,05E-05 1,01E-03 3,88E-04	7,84E+00 5,69E+00 2,15E+00 1,83E-05 1,08E-08 1,73E-03 1,66E-06 8,65E-04 8,93E-03 2,19E-03	4,89E-02 4,89E-02 4,53E-05 1,45E-05 1,48E-08 3,41E-04 4,92E-07 1,21E-04 1,34E-03 3,86E-04	-1,65E+00 -1,62E+00 -4,06E-03 -2,52E-02 -2,69E-02 -1,04E-02 -9,50E-05 -2,17E-03 -2,32E-02 -8,04E-03

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** 

Additional er	ditional environmental impact indicators							
	Indicator	Unit		A1-A3	A4	A5	B2	B3
	PM	Disease incidence	Disease incidence		1,02E-07	1,34E-10	1,24E-09	0
(***) E	IRP <sup>2</sup>	kgBq U235 -eq		2,59E+00	1,20E-01	6,75E-05	4,69E-02	0
	ETP-fw <sup>1</sup>	CTUe		9,87E+02	1,95E+01	2,12E-02	1,34E+00	0
44. ****	HTP-c <sup>1</sup>	CTUh		6,62E-08	0,00E+00	2,00E-12	3,40E-11	0
4 <u>8</u>	HTP-nc <sup>1</sup>	CTUh	CTUh		2,18E-08	8,90E-11	8,63E-10	0
è	SQP <sup>1</sup>	dimensionless	dimensionless		1,64E+01	1,05E-02	1,16E+00	0
h	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	9,74E-09	1,68E-08	6,21E-09	-2,80E-07
<b>1</b> 04	IRP <sup>2</sup>	kgBq U235 -eq	0	0	1,05E-02	1,90E-03	4,42E-03	-6,72E-02
Ð	ETP-fw <sup>1</sup>	CTUe	0	0	1,78E+00	1,98E+01	6,64E-01	-7,22E+01
40.* ****	HTP-c <sup>1</sup>	CTUh	0	0	0,00E+00	3,51E-10	2,30E-11	-5,07E-09
88 E	HTP-nc <sup>1</sup>	CTUh	0	0	1,95E-09	1,27E-08	6,51E-10	1,67E-08
	SQP <sup>1</sup>	dimensionless	0	0	1,68E+00	1,50E-01	2,39E+00	-3,58E+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"

\*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		Unit	A1-A3	A4	A5	B2	B3
ș. D	PERE		MJ	9,87E+01	3,55E-01	3,47E-04	5,93E-01	0
P	PERM		MJ	1,18E+01	0,00E+00	-1,18E+01	0,00E+00	0
×.	PERT		MJ	1,11E+02	3,55E-01	-7,47E-01	5,93E-01	0
B	PENRE		MJ	4,58E+02	2,75E+01	1,78E-02	1,97E+00	0
.Åe	PENRM		MJ	1,02E+02	0,00E+00	0,00E+00	0,00E+00	0
IA	PENRT		MJ	5,60E+02	2,75E+01	1,78E-02	1,97E+00	0
	SM		kg	5,78E+00	0,00E+00	0,00E+00	0,00E+00	0
	RSF	МЈ		1,75E+00	1,24E-02	1,04E-05	6,91E-03	0
Ū.	NRSF	MJ		9,55E-01	4,15E-02	1,01E-04	2,21E-02	0
۲	FW		m <sup>3</sup>	5,87E-01	2,65E-03	1,18E-05	1,90E-03	0
In								
	dicator	Unit	B4	C1	C2	C3	C4	D
ा इन्	<b>dicator</b> PERE	Unit MJ	B4 0	C1 0	C2 3,44E-02	C3 3,13E-02	C4 2,09E-02	D -3,60E+01
i S	PERE	MJ	0	0	3,44E-02	3,13E-02	2,09E-02	-3,60E+01
	PERE	MJ	0	0 0	3,44E-02 0,00E+00	3,13E-02 0,00E+00	2,09E-02 0,00E+00	-3,60E+01 0,00E+00
्र हि	PERE PERM PERT	MJ MJ	0 0 0	0 0 0	3,44E-02 0,00E+00 3,44E-02	3,13E-02 0,00E+00 3,13E-02	2,09E-02 0,00E+00 2,09E-02	-3,60E+01 0,00E+00 -3,60E+01
	PERE PERM PERT PENRE	LM MJ MJ	0 0 0 0	0 0 0 0	3,44E-02 0,00E+00 3,44E-02 2,41E+00	3,13E-02 0,00E+00 3,13E-02 1,05E+00	2,09E-02 0,00E+00 2,09E-02 1,10E+00	-3,60E+01 0,00E+00 -3,60E+01 -1,86E+01
	PERE PERM PERT PENRE PENRM	۲M ۲M ۲M ۲M	0 0 0 0 0	0 0 0 0 0	3,44E-02 0,00E+00 3,44E-02 2,41E+00 0,00E+00	3,13E-02 0,00E+00 3,13E-02 1,05E+00 -9,81E+01	2,09E-02 0,00E+00 2,09E-02 1,10E+00 0,00E+00	-3,60E+01 0,00E+00 -3,60E+01 -1,86E+01 0,00E+00
	PERE PERM PERT PENRE PENRM PENRT	۲M ۲M ۲M ۲M ۲M ۲M	0 0 0 0 0 0	0 0 0 0 0 0	3,44E-02 0,00E+00 3,44E-02 2,41E+00 0,00E+00 2,41E+00	3,13E-02 0,00E+00 3,13E-02 1,05E+00 -9,81E+01 -9,71E+01	2,09E-02 0,00E+00 2,09E-02 1,10E+00 0,00E+00 1,10E+00	-3,60E+01 0,00E+00 -3,60E+01 -1,86E+01 0,00E+00 -1,86E+01
	PERE PERM PERT PENRE PENRM PENRT SM	MJ MJ MJ MJ MJ Kg	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	3,44E-02 0,00E+00 3,44E-02 2,41E+00 0,00E+00 2,41E+00 0,00E+00	3,13E-02 0,00E+00 3,13E-02 1,05E+00 -9,81E+01 -9,71E+01 0,00E+00	2,09E-02 0,00E+00 2,09E-02 1,10E+00 0,00E+00 1,10E+00 0,00E+00	-3,60E+01 0,00E+00 -3,60E+01 -1,86E+01 0,00E+00 -1,86E+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 excluding non-renewable primary energy resources; SENRE = Use of non renewable primary energy resources; SENRE = Use of secondary materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary materials; RERT = Total use of non renewable primary energy resources; SM = Use of secondary materials; RERT = Use of non renewable primary energy resources; SM = Use of secondary materials; RERT = 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	kg		5,07E-01	1,36E-03	0,00E+00	1,05E-04	0
Ī	NHWD	ł	g	1,18E+01	1,11E+00	6,20E-02	5,38E-03	0
æ	RWD	ł	¢g	2,29E-03	1,88E-04	0,00E+00	2,14E-05	0
In	dicator	Unit	B4	C1	C2	C3	C4	D
A	HWD	kg	0	0	1,24E-04	0,00E+00	4,27E+00	-6,72E-04
Ū	NHWD	kg	0	0	1,17E-01	0,00E+00	5,35E-02	-5,59E-01
8	RWD	kg	0	0	1,64E-05	0,00E+00	6,77E-06	-5,95E-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								
Indie	cator	U	Unit		A4	A5	B2	B3
$\otimes \triangleright$	CRU	k	kg		0,00E+00	0,00E+00	0,00E+00	0
\$\$I>	MFR	kg		8,44E-01	0,00E+00	3,38E-02	0,00E+00	0
DF	MER	kg		5,80E-01	0,00E+00	1,40E-03	0,00E+00	0
50	EEE	Ν	МЈ		0,00E+00	1,93E-02	0,00E+00	0
DI	EET	Ν	۲J	6,97E+00	0,00E+00	2,93E-01	0,00E+00	0
Indicator	r	Unit	B4	C1	C2	C3	C4	D
$\otimes$	CRU	kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
3	MFR	kg	0	0	0,00E+00	9,15E-01	0,00E+00	0,00E+00
Þ₹	MER	kg	0	0	0,00E+00	9,35E+00	0,00E+00	0,00E+00
5D	EEE	MJ	0	0	0,00E+00	4,06E+00	0,00E+00	0,00E+00
	EET	MJ	0	0	0,00E+00	6,15E+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	3,57E-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	Data source	Amount	Unit
Electricity, Finland (kWh)	ecoinvent 3.6	255,20	g CO2-eq/kWh
Electricity, Poland (kWh)	ecoinvent 3.6	1060,47	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 indicators	Unit	A1-A3	A4	A1-C4	A1-D
GWPtotal	kg CO <sub>2</sub> -eq	36,63	1,88	47,92	46,28
Total energy consumption	MJ	559,29	27,88	594,47	538,63
Amount of recycled materials	%	55,19			

Additional environmental impact indicators required in NPCR Part A for construction products							
Indicator	Unit		A1-A3	A4	A5	B2	B3
GWPIOBC	kg CO <sub>2</sub> -eq	kg CO <sub>2</sub> -eq		1,88E+00	0,00E+00	8,38E-02	0
Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO <sub>2</sub> -eq	0	0	1,59E-01	8,09E+00	5,35E-02	-1,91E+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 (%)	
Face Table screen 80×65 with brackets	5,40	22,70	363,31	40,71	
Face Table screen 160×65 (round corners) with brackets	6,30	24,52	382,15	41,26	
Face Table screen 120x65 with brackets	6,30	26,40	424,08	44,46	
Face Table screen 160×65 with brackets	7,20	28,93	473,33	46,46	
Face Floor screen 80×130 with castor legs	6,50	27,26	432,29	48,94	
Face Floor screen 120x130 with T-legs	8,20	34,68	536,91	52,80	
Face Floor screen 140×130 with T-legs	8,80	33,97	525,97	53,70	
Face Floor screen 160×130 with T-legs	9,20	38,05	582,89	54,08	

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 (%)	
Metal brackets to Face Table screen	2,06	9,81	136,60	0,00	
Metal legs to Face Floor screen	1,62	7,71	107,42	0,00	
Metal legs with castors to Face Floor screen	4,24	19,84	282,82	0,00	
Wooden legs for Face Floor screen	0,62	0,41	22,65	0,00	
80x65 hood for Face (Cura)	1,11	3,86	36,16	98,06	
80x65 hood for Face (Remix)	1,21	42,15	239,41	0,00	
140x130 hood for Face (Cura)	1,11	6,91	64,73	98,01	
140x130 hood for Face (Remix)	1,21	77,02	437,45	0,00	

## 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

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