

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

# **OFFECCT MEET Ottoman**



# OFFECCT

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The Norwegian EPD Foundation

**Owner of the declaration:** Flokk AS

Product: OFFECCT MEET Ottoman

**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:** 

**Registration number:** 

Issue date:

Valid to:

**EPD Software:** LCA.no EPD generator ID: 84340

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# **General information**

Product OFFECCT MEET Ottoman

### 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:** 

# 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 OFFECCT MEET Ottoman

# Declared unit (cradle to gate) with option:

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

# Functional unit:

OFFECCT MEET Ottoman (Gabriel/Cura) - Including Packaging

# 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:

### Owner of the declaration:

Flokk AS Contact person: Atle Thiis-Messel Phone: 0047 98 25 68 30 e-mail: atle.messel@flokk.com

### Manufacturer:

Flokk AS Drammensveien 145, 0277 Oslo, Norway

# Place of production:

Flokk - Turek ul. Górnicza 8 62-700 Turek, Poland

# Management system:

ISO 14001, ISO 9001, ISO 50001(Norway, Sweden)

# **Organisation no:**

No 928 902 749

# Issue date:

Valid to:

# 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: Damian Bakowski

Reviewer of company-specific input data and EPD: Monika Kuczynska

#### Approved:

Elisabet Amat, GREENIZE projects (no signature required) Håkon Hauan, CEO EPD-Norge

# Product

### **Product description:**

"When we work on projects aimed at the environment between office and residential space, we always raise our gaze to look at the surroundings. We don't want to see only the product. We want to see and feel how this product will actually work in a space so it can be of full service to the people who will use it.

We wanted to design Meet so that its functions feature Offecct's main areas, the sustainability aspect and the sound absorbing qualities of their products, the importance to inject life through plants in indoor environments and Offecct's craftsmanship in working with wood and fabrics", says Robin Rizzini.

# **Product specification**

The model studied in detail in this declaration is the OFFECCT MEET Ottoman upholstered in the Cura fabric from Gabriel - including packaging. The key environmental indicators are presented separately for the product and packaging on a table page 12 of this declaration

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Adhesive	0,50	1,22	0,00	0,73
Paint, water-based	0,04	0,09	0,00	0,00
Glue for wood	0,02	0,04	0,00	1,21
Chemical	0,19	0,47	0,00	0,00
Wood - Chipboard	14, 18	34,64	0,00	0,00
Plastic - Polypropylene (PP)	0,01	0,03	0,00	0,00
Metal - Zinc	0,03	0,07	0,00	0,00
Wood - Solid oak	0,75	1,83	0,00	0,00
Wood - Medium Density Fibreboard (MDF)	8,75	21,39	0,00	0,00
Wood - Plywood	4,56	11,15	0,00	0,00
Metal - Steel	6,18	15, 10	0,01	0,08
Textile - Polyester (PE)	1,56	3,81	0,78	50,16
Plastic - Polyurethane (PUR)	4,16	10, 17	0,00	0,00
Total	40,93		0,79	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Cardboard	3,69	50,61	0,00	0,00
Packaging - Plastic straps	0,02	0,33	0,00	0,00
Packaging - Plastic	0,30	4,11	0,00	0,00
Packaging - Paper	0,01	0,07	0,00	34,31
Recycled cardboard	3,28	44,88	3,28	100,00
Total incl. packaging	48,23		4,07	

#### **Technical data:**

Wooden frame with cut foam. Fixed upholstery in fabric. Fully upholstered corner divider, available in right and left versions. Base in black stained MDF.

Dimensions: H 410, W 860, D 860

# Market:

Worldwide

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

5 years

Reference service life, building

# **LCA: Calculation rules**

# Declared unit:

1 pcs OFFECCT MEET Ottoman

# 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.

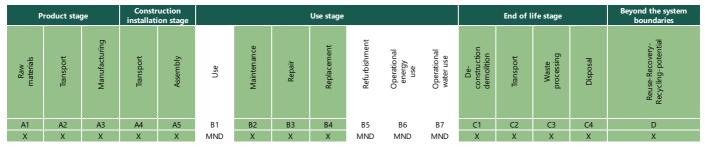
# Data quality:

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.

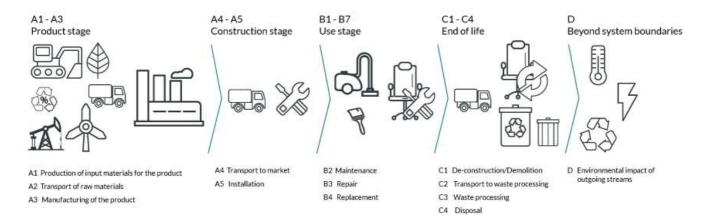
Materials	Source	Data quality	Year
Chemical	ecoinvent 3.6	Database	2019
Glue for wood	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Metal - Zinc	ecoinvent 3.6	Database	2019
Packaging - Paper	ecoinvent 3.6	Database	2019
Packaging - Plastic	ecoinvent 3.6	Database	2019
Packaging - Plastic straps	ecoinvent 3.6	Database	2019
Paint, water-based	ecoinvent 3.6	Database	2019
Plastic - Polypropylene (PP)	ecoinvent 3.6	Database	2019
Plastic - Polyurethane (PUR)	ecoinvent 3.6	Database	2019
Textile - Polyester (PE)	ecoinvent 3.6	Database	2019
Wood - Chipboard	ecoinvent 3.6	Database	2019
Wood - Medium Density Fibreboard (MDF)	ecoinvent 3.6	Database	2019
Packaging - Cardboard	Modified ecoinvent 3.6	Database	2019
Recycled cardboard	Modified ecoinvent 3.6	Database	2019
Textile - Polyester (PE)	Modified ecoinvent 3.6	Database	2019
Wood - Plywood	modified ecoinvent 3.6	Database	2019
Wood - Solid oak	modified ecoinvent 3.6	Database	2019
Adhesive	Modified ecoinvent 3.6	Database/Supplier	2019

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



# System boundary:



### Additional technical information:

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# LCA: Scenarios and additional technical information

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

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, EURO 5 (km)	53,3 %	1000	0,023	l/tkm	23,00
Assembly (A5)	Unit	Value			
Waste, packaging, cardboard, 100 % recycled, to average treatment (kg)	kg	3,28			
Waste, packaging, corrugated board box, 0 % recycled, to average treatment (kg)	kg	3,69			
Waste, packaging, paper printed, to average treatment (kg)	kg	0,01			
Waste, packaging, PET straps, to average treatment - A5 (kg)	kg	0,02			
Waste, packaging, plastic film (LDPE), to average treatment - A5 (kg)	kg	0,30			
Maintenance (B2)	Unit	Value			
Electricity, European average (kWh)	kWh/DU	10,53			
Electricity, World average (kWh)	kWh/DU	1,17			
Water, tap water (m3)	m3/DU	0,78			
Repair (B3)	Unit	Value			
Electricity, European average (kWh)	kWh/DU	0,50			
Electricity, World average (kWh)	kWh/DU	0,06			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 5 (km)	36,7 %	85	0,044	l/tkm	3,74
Waste processing (C3)	Unit	Value			
Waste treatment per kg Hazardous waste, incineration (kg)	kg	0,71			
Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg)	kg	0,03			
Waste treatment per kg Polypropylene (PP), incineration with fly ash extraction - C3 (kg)	kg	0,01			
Waste treatment per kg Polyurethane (PU), incineration (kg)	kg	4,16			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	6,18			
Waste treatment per kg Textile, incineration with fly ash extraction (kg)	kg	1,56			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	28,25			
Waste, materials to recycling (kg)	kg	2,10			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	4,08			
Landfilling of ashes from incineration of Hazardous waste, from incineration (kg)	kg	0,13			
Landfilling of ashes from incineration of Non- hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0,01			
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 Polyurethane (PU), process per kg ashes and residues - C4 (kg)	kg	0,16			
Landfilling of ashes from incineration of Textile, soiled, process per kg ashes and residues (kg)	kg	0,08			
andfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0,32			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity, in Norway (MJ)	MJ	26,94			
Substitution of primary steel with net scrap (kg)	kg	0,93			
Substitution of thermal energy, district heating, in					
Norway (MJ)	MJ	407,64			

# 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		A1-A3	A4	A5	B2	B3
P	GWP-total	kg CO <sub>2</sub>	-eq	3,23E+01	4,39E+00	1,20E+01	5,67E+00	2,54E-01
P	GWP-fossil	kg CO <sub>2</sub>	kg CO <sub>2</sub> -eq		4,39E+00	1,39E-01	5,62E+00	2,52E-01
P	GWP-biogenic	kg CO <sub>2</sub>	-eq	-5,80E+01	1,80E-03	1,18E+01	3,61E-02	1,62E-03
P	GWP-luluc	kg CO <sub>2</sub>	-eq	1,85E-01	1,28E-03	3,93E-05	1,27E-02	5,74E-04
Ò	ODP	kg CFC1	1 -eq	1,05E-05	1,01E-06	2,54E-08	4,39E-07	1,95E-08
(Fr	АР	mol H+	-eq	5,39E-01	1,84E-02	5,66E-04	3,22E-02	1,44E-03
-	EP-FreshWater	kg P -	eq	5,33E-03	3,35E-05	9,79E-07	5,47E-04	2,47E-05
	EP-Marine	kg N -	eq	1,20E-01	5,55E-03	2,06E-04	4,31E-03	1,91E-04
	EP-Terrestial	mol N	-eq	1,26E+00	6,14E-02	2,03E-03	5,22E-02	2,32E-03
	РОСР	kg NMVC	PC -eq	4,28E-01	1,97E-02	5,87E-04	1,35E-02	5,94E-04
45D	ADP-minerals&metals <sup>1</sup>	kg Sb	kg Sb -eq		7,50E-05	2,88E-06	4,34E-05	1,69E-06
B	ADP-fossil <sup>1</sup>	MJ		1,47E+03	6,83E+01	1,68E+00	1,08E+02	4,87E+00
<b>%</b>	WDP <sup>1</sup>	m <sup>3</sup>		1,80E+04	5,24E+01	2,38E+00	1,51E+03	6,70E+01
	Indicator	Unit	B4	C1	C2	C3	C4	D
EN					-		•••	-
P	GWP-total	kg CO <sub>2</sub> -eq	0	0	6,85E-01	6,31E+01	1,30E-01	-3,48E+00
¢	GWP-total GWP-fossil	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq	0					
				0	6,85E-01	6,31E+01	1,30E-01	-3,48E+00
P	GWP-fossil	kg CO <sub>2</sub> -eq	0	0 0	6,85E-01 6,84E-01	6,31E+01 1,32E+01	1,30E-01 1,30E-01	-3,48E+00 -3,39E+00
P	GWP-fossil GWP-biogenic	kg CO <sub>2</sub> -eq	0	0 0 0	6,85E-01 6,84E-01 2,79E-04	6,31E+01 1,32E+01 4,99E+01	1,30E-01 1,30E-01 8,04E-05	-3,48E+00 -3,39E+00 -5,45E-03
P	GWP-fossil GWP-biogenic GWP-luluc	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq	0	0 0 0 0	6,85E-01 6,84E-01 2,79E-04 2,39E-04	6,31E+01 1,32E+01 4,99E+01 5,21E-04	1,30E-01 1,30E-01 8,04E-05 2,33E-05	-3,48E+00 -3,39E+00 -5,45E-03 -8,19E-02
P P P	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 CFC11 -eq	0 0 0 0 0 0 0 0	0 0 0 0 0	6,85E-01 6,84E-01 2,79E-04 2,39E-04 1,56E-07	6,31E+01 1,32E+01 4,99E+01 5,21E-04 2,67E-07	1,30E-01 1,30E-01 8,04E-05 2,33E-05 1,96E-08	-3,48E+00 -3,39E+00 -5,45E-03 -8,19E-02 -1,72E-01
P P D D E	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 CFC11 -eq mol H+ -eq	0 0 0 0 0 0	0 0 0 0 0 0	6,85E-01 6,84E-01 2,79E-04 2,39E-04 1,56E-07 2,80E-03	6,31E+01 1,32E+01 4,99E+01 5,21E-04 2,67E-07 1,67E-02	1,30E-01 1,30E-01 8,04E-05 2,33E-05 1,96E-08 5,28E-04	-3,48E+00 -3,39E+00 -5,45E-03 -8,19E-02 -1,72E-01 -2,46E-02
	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 CFC11 -eq mol H+ -eq kg P -eq	0 0 0 0 0 0 0	0 0 0 0 0 0 0	6,85E-01 6,84E-01 2,79E-04 2,39E-04 1,56E-07 2,80E-03 5,37E-06	6,31E+01 1,32E+01 4,99E+01 5,21E-04 2,67E-07 1,67E-02 4,77E-05	1,30E-01 1,30E-01 8,04E-05 2,33E-05 1,96E-08 5,28E-04 1,37E-06	-3,48E+00 -3,39E+00 -5,45E-03 -8,19E-02 -1,72E-01 -2,46E-02 -2,73E-04
	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 CFC11 -eq mol H+ -eq kg P -eq kg N -eq	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	6,85E-01 6,84E-01 2,79E-04 2,39E-04 1,56E-07 2,80E-03 5,37E-06 8,30E-04	6,31E+01 1,32E+01 4,99E+01 5,21E-04 2,67E-07 1,67E-02 4,77E-05 8,18E-03	1,30E-01 1,30E-01 8,04E-05 2,33E-05 1,96E-08 5,28E-04 1,37E-06 1,73E-04	-3,48E+00 -3,39E+00 -5,45E-03 -8,19E-02 -1,72E-01 -2,46E-02 -2,73E-04 -7,42E-03
	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 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 0	6,85E-01 6,84E-01 2,79E-04 2,39E-04 1,56E-07 2,80E-03 5,37E-06 8,30E-04 9,17E-03	6,31E+01 1,32E+01 4,99E+01 5,21E-04 2,67E-07 1,67E-02 4,77E-05 8,18E-03 8,13E-02	1,30E-01 1,30E-01 8,04E-05 2,33E-05 1,96E-08 5,28E-04 1,37E-06 1,73E-04 1,94E-03	-3,48E+00 -3,39E+00 -5,45E-03 -8,19E-02 -1,72E-01 -2,46E-02 -2,73E-04 -7,42E-03 -7,96E-02
	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 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 0	6,85E-01 6,84E-01 2,79E-04 2,39E-04 1,56E-07 2,80E-03 5,37E-06 8,30E-04 9,17E-03 2,81E-03	6,31E+01 1,32E+01 4,99E+01 5,21E-04 2,67E-07 1,67E-02 4,77E-05 8,18E-03 8,13E-02 1,97E-02	1,30E-01 1,30E-01 8,04E-05 2,33E-05 1,96E-08 5,28E-04 1,37E-06 1,73E-04 1,94E-03 5,52E-04	-3,48E+00 -3,39E+00 -5,45E-03 -8,19E-02 -1,72E-01 -2,46E-02 -2,73E-04 -7,42E-03 -7,96E-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

"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** 

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Additional environmental impact indicators										
	Indicator	Unit		A1-A3	A4	A5	B2	B3		
	PM	Disease incidence		8,98E-06	3,86E-07	8,45E-09	1,14E-07	4,75E-09		
	IRP <sup>2</sup>	kgBq U235 -eq		4,65E+00	2,98E-01	7,23E-03	8,90E-01	4,03E-02		
	ETP-fw <sup>1</sup>	CTUe		3,94E+03	4,99E+01	2,21E+00	8,66E+01	3,84E+00		
40 * ****	HTP-c <sup>1</sup>	CTUh		5,80E-07	0,00E+00	6,50E-11	2,79E-09	9,70E-11		
88 E	HTP-nc <sup>1</sup>	CTUh		2,13E-06	4,83E-08	2,74E-09	8,81E-08	3,37E-09		
	SQP <sup>1</sup>	dimensionless	dimensionless		7,83E+01	1,24E+00	2,53E+01	1,13E+00		
h	ndicator	Unit	B4	C1	C2	C3	C4	D		
	PM	Disease incidence	0	0	4,93E-08	1,24E-07	7,78E-09	-1,26E-06		
	IRP <sup>2</sup>	kgBq U235 -eq	0	0	4,51E-02	4,30E-02	6,79E-03	-2,12E-01		
	ETP-fw <sup>1</sup>	CTUe	0	0	7,60E+00	6,86E+01	1,84E+00	-2,41E+02		
	HTP-c <sup>1</sup>	CTUh	0	0	0,00E+00	3,54E-09	8,70E-11	-8,29E-09		
48- 25-	HTP-nc <sup>1</sup>	CTUh	0	0	8,21E-09	9,22E-08	2,94E-09	-6,90E-08		
	SQP <sup>1</sup>	dimensionless	0	0	7,11E+00	3,56E+00	3,76E+00	-2,27E+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)

"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
i di seconda di second	PERE		Ν	IJ	5,13E+02	8,59E-01	2,87E-02	1,99E+01	9,05E-01
	PERM		Ν	٨J	3,42E+02	0,00E+00	-7,80E+01	0,00E+00	0,00E+00
ି 📬	PERT		Ν	٨J	8,56E+02	8,59E-01	-7,80E+01	1,99E+01	9,05E-01
A	PENRE		Ν	٨J	1,30E+03	6,83E+01	1,68E+00	1,08E+02	4,88E+00
Å2	PENRM		Ν	٨J	1,79E+02	0,00E+00	-1,33E+01	0,00E+00	0,00E+00
IA	PENRT		Ν	NJ	1,48E+03	6,83E+01	-1,16E+01	1,08E+02	4,88E+00
	SM		k	g	4,07E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
1	RSF		Ν	٨J	2,87E+00	3,01E-02	9,32E-04	1,38E+00	6,27E-02
Ū.	NRSF	M.		٨J	1,52E+01	1,01E-01	3,74E-03	3,70E-01	1,51E-02
\$	FW		n	n <sup>3</sup>	1,56E+00	7,77E-03	8,01E-04	8,69E-01	3,99E-03
	ndicator	U	nit	B4	C1	C2	C3	C4	D
in the second se	PERE	N	٨J	0	0	1,46E-01	1,42E+00	6,65E-02	-2,09E+02
æ	PERM	Ν	٩J	0	0	0,00E+00	-2,57E+02	0,00E+00	0,00E+00
° <b>₹</b> ₂	PERT	Ν	٩J	0	0	1,46E-01	-2,55E+02	6,65E-02	-2,09E+02
B	PENRE	Ν	۲N	0	0	1,03E+01	1,42E+01	1,55E+00	-4,24E+01
Å	PENRM	Ν	٩	0	0	0,00E+00	-1,65E+02	0,00E+00	0,00E+00
IA	PENRT	Ν	۲N	0	0	1,03E+01	-1,51E+02	1,55E+00	-4,24E+01
	SM	k	¢g	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	RSF	Ν	٩J	0	0	5,21E-03	3,16E-02	1,46E-03	4,74E-04
<u>I</u>	NRSF	Ν	۲N	0	0	1,86E-02	0,00E+00	1,46E-01	-1,13E+01
٢	FW	n	n <sup>3</sup>	0	0	1,09E-03	2,89E-02	1,64E-03	-2,54E-01

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 renewable primary energy resources; PENRE = Use of non renewable primary energy resources; SM = Use of secondary materials; PERT = Total use of non renewable primary energy resources; SM = Use of secondary materials; REF = Use of renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of renewable primary energy resources; SM = Use of non-renewable primary energy resources; SM = Use of secondary fuels; REF = Use of non-renewable primary energy resources; SM = Use of non-renewable primary energy ener

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

End of life - Waste									
	Indicator		Unit		A1-A3	A4	A5	B2	B3
Â	HWD		k	g	6,08E-01	3,74E-03	0,00E+00	1,87E-02	8,39E-04
Ū	NHWD		k	g	2,08E+01	5,94E+00	7,30E+00	4,24E-01	1,73E-02
æ	RWD		kg		4,62E-03	4,66E-04	0,00E+00	7,21E-04	3,26E-05
In	dicator		Unit	B4	C1	C2	C3	C4	D
à	HWD		kg	0	0	5,26E-04	0,00E+00	4,42E+00	-6,92E-03
Ū	NHWD		kg	0	0	4,93E-01	7,35E-01	3,69E-01	-1,22E+00
8	RWD		kg	0	0	7,03E-05	0,00E+00	7,65E-06	-1,74E-04

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	•										
Indio	ator		Unit	t	A1-A3	A4	A5	B2	B3		
$\otimes \triangleright$	CRU		kg		0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00		
\$\$D	MFR		kg		1,03E+00	0,00E+00	6,65E+00	0,00E+00	0,00E+00		
DF	MER		kg		8,93E-04	0,00E+00	3,89E-04	0,00E+00	0,00E+00		
FD	EEE		MJ		4,62E-01	0,00E+00	3,99E-01	0,00E+00	0,00E+00		
DI	EET		MJ		6,99E+00	0,00E+00	6,04E+00	0,00E+00	0,00E+00		
Indicator		Unit		B4	C1	C2	C3	C4	D		
$\otimes$	CRU	kg		0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00		
432	MFR	kg		0	0	0,00E+00	2,10E+00	0,00E+00	0,00E+00		
Þ₽	MER	kg		0	0	0,00E+00	4,09E+01	0,00E+00	0,00E+00		
5D	EEE	MJ		0	0	0,00E+00	2,68E+01	0,00E+00	0,00E+00		
	EET	MJ		0	0	0,00E+00	4,05E+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	1,30E+01						
kg C	3,23E+00						

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, high voltage, hydro (kWh) - PL	ecoinvent 3.6	4,02	g CO2-eq/kWh

#### **Dangerous substances**

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

#### Indoor environment

# **Additional Environmental Information**

Additional environmental impact indicators required in NPCR Part A for construction products									
Indicator	Unit	Unit			A5	B2	B3		
GWPIOBC	kg CO <sub>2</sub> -eq	kg CO <sub>2</sub> -eq			8,35E-02	5,99E+00	2,69E-01		
Indicator	Unit	B4	C1	C2	C3	C4	D		
GWPIOBC	kg CO <sub>2</sub> -eq	0	0	6,85E-01	1,58E+01	1,36E-01	-3,95E+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 (%)
OFFECCT MEET Ottoman (Gabriel/Cura) - No Packaging	40,93	35,86	1624,96	1,93

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 (%)
OFFECCT MEET Ottoman / 1-seater with O2asis - Packaging	7,30	-3,54	208,04	44,90

### **Key Environmental Indicators**

Indicator	Unit	A1-A3	A4	A1-C4	A1-D
GWPtotal	kg CO <sub>2</sub> -eq	32,32	4,39	118,53	115,06
Total energy consumption	MJ	1833,00	69,26	2067,67	1804,52
Amount of recycled materials	%	8,43			

# 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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