

# Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021

## Bench seat ZET, 1200x350x440mm



### AJ Produkter

Programme:	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0022729
Version date:	2025-05-08
Validity date:	2030-05-07
EPD type:	EPD of multiple products, results based on a representative product, see included products in table 1.

*An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see [www.environdec.com](http://www.environdec.com).*





## General information

### Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	<a href="http://www.environdec.com">www.environdec.com</a>
E-mail:	<a href="mailto:info@environdec.com">info@environdec.com</a>

PCR: The CEN standard EN 15804 serves as the PCR. In addition, the International EPD System PCR 2019:14 Construction products, version 1.3.4, valid until 20.12.2024.

PCR review was conducted by the Technical Committee of the International EPD® System. See <https://environdec.com/about-us/the-international-epd-system-about-the-system> for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat [www.environdec.com/contact](http://www.environdec.com/contact).

Verification: External and independent (third-party') verification of the declaration and data, according to ISO 14025:2006, via:

☒ EPD verification through an individual EPD verification

Third party verifier:

Viktor Hakkarainen, CHM-Analytics, [www.CHM-analytics.com](http://www.CHM-analytics.com)

Individual verifier approved by The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier:

☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterization factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.



#### Company information

AJ Produkter  
Transportvägen 23  
302 30 Halmstad, Sweden  
<https://www.ajproducts.com/>

#### Contact

Richard Eklund  
[Richard.eklund@ajprodukter.se](mailto:Richard.eklund@ajprodukter.se)  
Quality & Environment dep.  
+46 (0)35 180 329

### Description of the organization

AJ Products is a Swedish company specializing in manufacturing and retailing workspace solutions for offices, schools, industries, and warehouses. Founded in 1975, we aim to be a leading player in our product categories.

We design work environments that promote well-being, focusing on innovation, sustainability, and self-designed products. Operating in 19 European countries, we employ about 1,100 people and run three factories. Annually, we enhance 330,000 workplaces across Europe with over 14,500 products.

Our goal is to provide high-quality, functional, and safe products that are durable and environmentally friendly. We are committed to sustainability and high standards, holding ISO 14001 and ISO 9001 certifications since 2011.

### Product information

The EPD applies to AJ Produkter's bench seat ZET. The bench seat ZET has a simple design, but the bench is strong and stable to withstand hard wear and daily use. The frame is made of birch, and the seat is covered in high-pressure laminate. The stand is made of solid wood. The benches are certified according to EN 16139. It comes in colours such birch, white, grey, dark pink, dark green and sky blue.



Bench seat ZET, 1200x350x360 mm



Bench seat ZET, 1200x350x440 mm

Table 1. Included colours for the bench seat ZET, 1200x350 mm

Name	Birch	White	Grey	Dark pink	Dark green	Sky blue
Bench seat ZET, 1200x350x360 mm	362434	362433	362436	362437	362438	362439
Bench seat ZET, 1200x350x440 mm	362444	362443	362446	362447	362448	362449



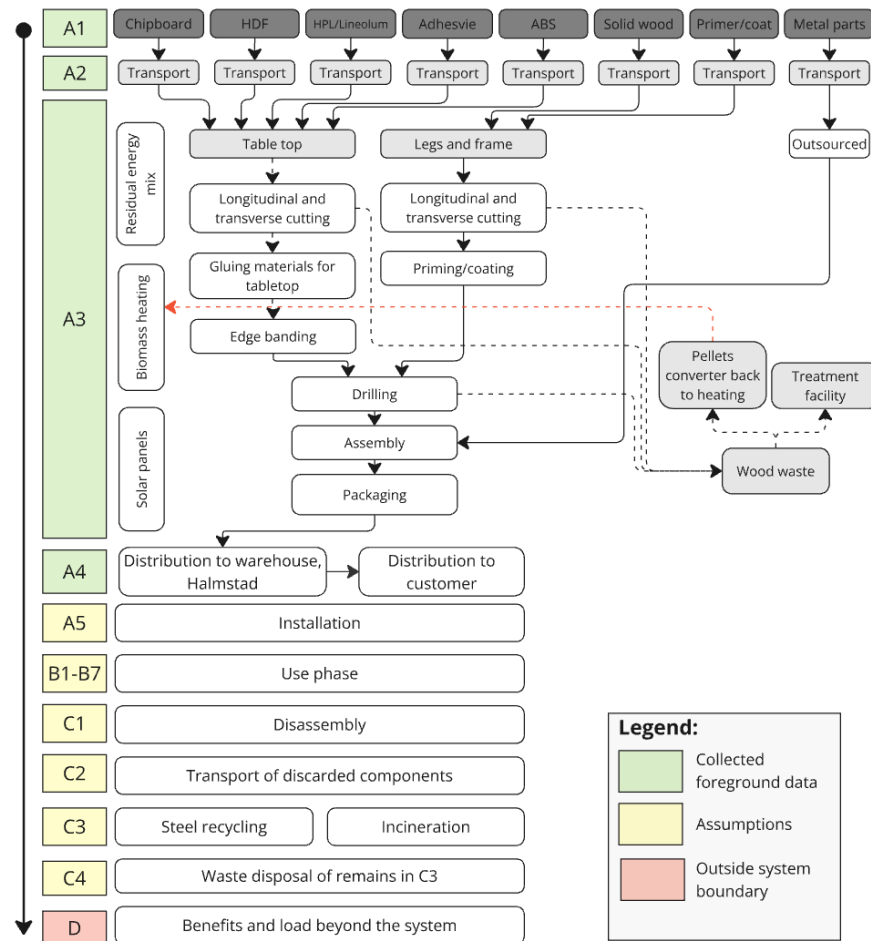
## LCA information

Functional Unit	1 piece of bench seat ZET, 1200x350x440 mm. The total weight is 11.91 kg.
Product group classification	CPC 3814 – Other furniture (excluding those for medical, surgical, dental, or veterinary purposes)
Manufacturing location	Poland
Geographical scope	Europe
Compliant with	<p>In accordance with ISO 14025, ISO 14040-14044 and GPI 4.0 (EPD International, 2024).</p> <p>EPD also follows International's EPD System PCR 2019:14 Construction products, version 1.3.4 (2024.04.30) and PCR 2019:14-c-NPCR-021:2024 Furniture (c-PCR to PCR 2019:14) (Adopted from EPD Norway).</p>
Estimated Service Life (ESL) and Reference Service Life (RSL)	<p>The declared Reference Service Life (RSL) for the Europa, Decibel, and Zet is 15 years, in line with the requirements set forth in c-PCR-021 Furniture 2.0 and NPCR 026 Furniture. This lifespan is based on compliance with the EN 15372, 1729 and 16139 standards, which specifies rigorous testing protocols for safety, strength, durability, and stability of non-domestic storage furniture.</p> <p>Approved according to EN 15372, 1729 &amp; 16139 – non-domestic furniture – Requirements for safety, strength, durability, and stability, demonstrating a lifespan that can reasonably be expected to be at least 15 years.</p>
Background data	The data quality is considered high. All site-specific data for raw materials, auxiliary materials, as well as energy use during the manufacturing process are from 2024 and have been represented using Ecoinvent datasets. All other relevant environmental aspects have been modelled with generic Ecoinvent data for the end-of-life processes. The data in Ecoinvent covers the specific geographical regions relevant to this study.
Cut-Off Rules	<p>The cut-off criteria are in accordance with the EN 15804 standard, meaning that max 1% of the renewable and non-renewable primary energy use and max 1% of the total mass input of a specific unit process are allowed to be cut-off (excluded). Particular care should be taken to include material and energy flows known to have the potential to cause significant emissions into air and water or soil related to the environmental indicators of EN 15804+A2.</p> <p>Cut-offs for consumables used in production have been applied in this study.</p>
Allocations	Allocation has been done in this study. See allocation procedure, page 6.
Description of system boundaries	Cradle to grave and module D (A + B + C + D).
LCA accountability	Richard Eklund, AJ Produkter AB
Software and database	The database used is Ecoinvent 3.10. SimaPro Analyst ver. 9.6.0.1.
Characterization Factors (CF)	The Characterization Factors used in this report is based on Environmental Footprint (EF) 3.1.

## Product Life Cycle

### System diagram

System diagram and detailed life cycle stages are shown below.



### Module Description

**A1 – Raw Material Extraction:** Extraction and production of raw materials and energy resources used in the product's manufacturing process. It also includes the environmental impact from the pre-treatment of recycled materials.

**A2 – Transport:** Transport of raw materials and semi-finished products from their original location to the production facility. It covers the energy use and emissions related to transportation.

**A3 – Manufacturing:** Energy use, waste management, and emissions occurring during the manufacturing process. Also, production of by-products and any emissions related to the manufacturing site.

**A4 – Transport to customer:** Impact from the transport of the finished product from the manufacturing site to the end-user. The modelling assumptions and parameters is shown below.

**A5 – Assembly:** The assembly process, covering energy use and waste management of potentially packaging materials during assembly or installation. The modelling assumptions and parameters is shown below.

Module	Amount	Unit	Activity description
A4 Distribution of components to customer	778	km	The bench is transported to a Swedish and EU customer.
A5 Installation (waste)	1.17	kg	The packaging waste from installation is assumed to be treated by municipal incineration or similar.

**B1-B7 – Use Phase:** The product's use, maintenance, repair, replacement, and operation, as well as any energy consumption during its lifetime. B1 & B3-B7 does not have any activity.

Module	Amount	Unit	Activity description
B2 Use phase (cleaning soluble)	1.51	ml	Cleaning soluble is assumed to be used for cleaning
B2 Use phase (tap water)	3.78	ml	Water is assumed to be used for cleaning



**C1 – Deconstruction/Demolition:** Energy and emissions involved in dismantling the product at the end of its life.

**C2 – Transport of Waste:** Environmental impact from transporting the product as waste to treatment facilities.

**C3 – Waste Processing:** Emissions and energy use from processing waste for recycling or energy recovery.

**C4 – Final Disposal:** Environmental impact from disposing of non-recyclable materials, typically in landfill. The modelling assumptions and parameters for the C modules are shown below.

	Module	Amount	Unit	Activity description
C1	Disassembly	-	-	The bench is assumed to be manually dismantled.
C2	Transport of discarded components	50	km	Assumed distance to a treatment facility, 50% load capacity.
C3	Amount assumed for incineration	11.48	kg	Once the steel is removed from the bench 100% of the remaining product is assumed to go to incineration.
C3	Amount of product assumed for recycling	0.37	kg	85% of the total steel in the product is assumed to reach the recycling process.
C4	Amount assumed for landfill	0.07	kg	15% of the total steel in the product is assumed to reach landfill.

**D – Benefits and Loads Beyond the System Boundary:** Potential benefits from recycling, reuse, and energy recovery from the product's materials and energy after its lifecycle ends.

	Module	Amount	Unit	Activity description
D	Amount of material exiting the system boundary	0.37	kg	Amount of steel potentially reaching a new lifecycle

## Energy source

Scenario parameter	Value	Dataset
Electricity, Poland, residual mix	0.910 kg CO <sub>2e</sub> / kWh	Electricity, medium voltage {PL}  electricity, medium voltage, residual mix   Cut-off, U
Biomass usage for thermal heating, Poland, kg CO <sub>2e</sub> /kWh	0.063 kg CO <sub>2e</sub> / kWh	Heat, central or small-scale, other than natural gas {RoW}  heat production, wood pellet, at furnace 300kW   Cut-off, U
Electricity, solar panels	0.091 kg CO <sub>2e</sub> / kWh	Electricity, low voltage {PL}  electricity production, photovoltaic, 3kWp slanted-roof installation, multi-Si, panel, mounted   Cut-off, S
Electricity AJP, residual mix	0.045 kg CO <sub>2e</sub> / kWh	Electricity, medium voltage {SE}  electricity, medium voltage, residual mix   EN15804, U
Solar cells AJP, solar panels	0.102 kg CO <sub>2e</sub> / kWh	Electricity, low voltage {SE}  electricity production, photovoltaic, 3kWp slanted-roof installation, multi-Si, panel, mounted   EN15804, S

## Allocation procedures:

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. In this study, as per EN 15804, allocation is conducted in the following order;

1. Allocation should be avoided.
2. Allocation should be based on physical properties (e.g. mass, volume) when the difference in revenue is small.
3. Allocation should be based on economic values.

This LCA study is conducted in accordance with all methodological considerations, such as performance, system boundaries, data quality, allocation procedures, and decision rules to evaluate inputs and outputs.

All data used for the bench is provided by technicians directly from the factories. There are no data gaps which should be filled with estimates and conservative assumptions with average or generic data. The allocation is performed in which the product output fixed to 1 functional unit and the corresponding amount of product is used in the calculations.

All the raw material type, weights and packaging materials used in this study are precise weights, taken from business system. The raw material distances to the manufacturing site are based on averages from google maps. Energy usage in the factory is based on economic allocation. The distances out to the customer from the factory based on sales from the business system and weighted based on Swedish and the rest of EU.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):



	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	EU	EU	PL	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Share of specific data	49%					-	-	-	-	-	-	-	-	-	-	-	-
Variation products	<10% variation*																-
Variation – sites	0% variation					-	-	-	-	-	-	-	-	-	-	-	-

\* This EPD covers two products, varying in leg height. The difference between the lightest and heaviest product is 3% in weight.

## Additional information

The manufacturing process for the Europa, decibel and Zet series uses wood-based materials like solid wood, chipboard and HDF and cork. The solid wood-based frame and legs are coated and primed. The chipboard, HDF, cork and HPL are all cut lengthwise and crosswise. These materials are then glued together and the edge band with ABS plastic is glued on. Lastly the holes for the frame and legs are drilled, also where the frame is mounted with screws and fittings before its packaged with cardboard and tape. The legs are put inside the package separately together with the rest of the metal parts. The factory machines are always optimizing to reduce production waste and to always work as efficient as possible. The Zet product is then shipped from the AJ factory to AJ Produkter's warehouse in Halmstad, Sweden, then transported to the customer by lorries and sea freight depending on location.

## Content information

Product components	Weight, kg	Weight interval (min-max)	Post-consumer material, weight-%	Biogenic material, weight of DU	Biogenic material, kg C/DU
Raw Chipboard	5.91	5.91 – 5.91	0	4.91	2.45
Solid wood	4.25	3.88 – 4.25	0	2.33	1.17
HPL	0.56	0.55 – 0.56	0	0	0
Metal	0.43	0.43 – 0.43	0	0	0
Adhesive	0.11	0.11 – 0.11	0	0	0
ABS edge tape	0.20	0.20 – 0.20	0	0	0
Topcoat	0.23	0.23 – 0.24	0	0	0
Primer	0.22	0.22 – 0.22	0	0	0
<b>TOTAL</b>	<b>11.91</b>	<b>11.55 – 11.91</b>	<b>0</b>	<b>7.24</b>	<b>3.62</b>
Packaging materials	Weight, kg	Weight interval (min-max)	Weight-% (versus the product)	Weight biogenic carbon, kg C/DU	
Cardboard	1.12	1.12 - 1.12	9%	0.47	
Plastic tape	0.05	0.05 - 0.05	0%	0	
<b>TOTAL</b>	<b>2.78</b>	<b>1.17 - 1.17</b>	<b>9%</b>	<b>0.47</b>	

Dangerous substances from the candidate list of SVHC for Authorization	EC No.	CAS No.	Weight-% per functional or declared unit
No dangerous substances included in the product			



## Results of the environmental performance indicators

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks. Do not use results in A1-A3 without considering impacts in C1-C4.

### Mandatory impact category indicators according to EN 15804+A2

Results per 1 unit of bench seat ZET, 1200x350x440 mm																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	1,94E+01	1,54E+00	1,59E-01	0,00E+00	6,22E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,25E-02	2,98E+00	1,90E-04	-6,38E-01
GWP-Biogenic	kg CO <sub>2</sub> eq.	-1,28E+01	4,95E-04	1,77E+00	0,00E+00	4,03E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,96E-05	1,49E+01	6,36E-08	-1,57E-04
GWP-LULUC	kg CO <sub>2</sub> eq.	2,16E-01	3,79E-05	6,41E-06	0,00E+00	5,22E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,27E-06	2,49E-05	9,32E-09	-9,55E-05
GWP-total	kg CO <sub>2</sub> eq.	6,82E+00	1,55E+00	1,93E+00	0,00E+00	6,78E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,25E-02	1,78E+01	1,90E-04	-6,38E-01
ODP	kg CFC 11 eq.	2,93E-07	3,15E-08	4,94E-10	0,00E+00	1,57E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,89E-09	2,35E-09	2,82E-12	-2,49E-09
AP	mol H <sup>+</sup> eq.	1,23E-01	1,80E-03	3,33E-04	0,00E+00	4,07E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,30E-04	2,08E-03	1,73E-06	-2,13E-03
EP-freshwater	kg P eq.	9,57E-04	1,30E-06	2,75E-07	0,00E+00	4,35E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,75E-08	1,40E-06	6,83E-10	-3,11E-05
EP-marine	kg N eq.	2,31E-02	3,99E-04	1,50E-04	0,00E+00	1,30E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,83E-05	1,04E-03	7,85E-07	-4,57E-04
EP-terrestrial	mol N eq.	2,45E-01	4,37E-03	1,55E-03	0,00E+00	8,92E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,66E-04	1,09E-02	8,60E-06	-5,37E-03
POCP	kg NMVOC eq.	8,27E-02	3,90E-03	4,01E-04	0,00E+00	2,68E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,02E-04	2,69E-03	2,60E-06	-1,88E-03
ADP-minerals & metals <sup>1,2</sup>	kg Sb eq.	4,04E-06	5,10E-08	1,77E-08	0,00E+00	2,43E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,05E-09	7,99E-08	7,52E-12	-9,65E-08
ADP-fossil <sup>1</sup>	MJ	2,79E+02	2,04E+01	2,22E-01	0,00E+00	1,03E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E+00	1,37E+00	2,44E-03	-6,57E+00
WDP <sup>1</sup>	m <sup>3</sup>	2,24E+01	2,14E-02	5,90E-02	0,00E+00	1,08E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,28E-03	2,06E-01	3,48E-06	-4,65E-02
Acronyms	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															

<sup>1</sup> **Disclaimer 1:** The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

<sup>2</sup> **Disclaimer 2:** The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, noncancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

### Additional mandatory and voluntary impact category indicators





### Results per 1 unit of bench seat ZET, 1200x350x440 mm

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>3</sup>	kg CO <sub>2</sub> e	2,00E+01	1,54E+00	1,59E-01	0,00E+00	6,22E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,25E-02	2,98E+00	1,90E-04	-6,38E-01
Particulate matter	disease inc.	9,44E-07	9,14E-08	2,69E-09	0,00E+00	4,39E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,07E-09	1,68E-08	4,87E-11	-4,26E-08
Ionising radiation <sup>2</sup>	kBq U-235 eq	5,44E-01	2,78E-03	1,63E-04	0,00E+00	1,44E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,66E-04	5,20E-04	2,58E-07	-2,40E-03
Ecotoxicity, freshwater <sup>1, 4</sup>	CTUe	1,95E+02	6,98E-01	2,16E+00	0,00E+00	8,93E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,14E-02	6,66E+00	1,15E-04	-5,53E+01
Human toxicity, cancer <sup>1, 4</sup>	CTUh	3,25E-07	1,09E-10	1,38E-10	0,00E+00	2,39E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,00E-12	8,04E-10	4,16E-14	-2,10E-07
Human toxicity, non-cancer <sup>1, 4</sup>	CTUh	1,82E-07	1,03E-08	4,01E-09	0,00E+00	4,58E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,12E-10	2,79E-08	2,60E-13	-5,77E-09
Land use <sup>1</sup>	Pt	7,10E+02	4,57E-02	3,08E-02	0,00E+00	9,69E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,73E-03	1,39E-01	2,89E-03	-6,08E-01

<sup>1</sup> **Disclaimer 1:** The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

<sup>2</sup> **Disclaimer 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.

<sup>3</sup> **Disclaimer 3:** This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

<sup>4</sup> **Disclaimer 4:** The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, noncancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

## Resource use indicators

Option B from EN 15804, ANNEX 3 describes the use of primary energy used in this study such as: The energy used as raw material shall be declared as an input to the module where it enters the product system (often in module A1) and as an output from the product system if it exits the product system as useful energy (often from modules A5 or C3). Energy content that is wasted (e.g. in landfill or in incineration), remains as part of the indicator for energy used for raw materials, and shall not (in contrast to option A) be reported as an input of energy used for energy carriers. The rationale behind this option is that the indicator for energy used as raw materials shall reflect the energy used for the purpose of being raw material in the product or packaging, that is not subsequently transferred in useable form to another product system. In this option, energy used as raw material will often not be zero over the product life cycle.

### Results per 1 unit of bench seat ZET, 1200x350x440 mm

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1,68E+02	7,02E-02	8,02E-03	0,00E+00	3,69E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,19E-03	2,66E-02	1,15E-05	-7,92E-02
PERM	MJ	1,53E+02	0,00E+00	-1,23E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-8,66E+01	0,00E+00	0,00E+00
PERT	MJ	3,21E+02	7,02E-02	-1,23E+01	0,00E+00	3,69E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,19E-03	-8,66E+01	1,15E-05	-7,92E-02
PENRE	MJ	1,66E+02	2,11E+01	2,43E-01	0,00E+00	1,12E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,26E+00	1,47E+00	2,60E-03	-6,93E+00
PENRM	MJ	2,82E+01	0,00E+00	-7,88E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,47E+01	0,00E+00	0,00E+00
PENRT	MJ	1,94E+02	2,11E+01	-5,45E-01	0,00E+00	1,12E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,26E+00	-2,32E+01	2,60E-03	-6,93E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m <sup>3</sup>	2,35E-04	5,17E-03	0,00E+00	0,00E+00	8,21E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,41E-05	2,69E-02	2,67E-08	-9,98E-04
Acronyms	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; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

## Waste indicators

**Results per 1 unit of bench seat ZET, 1200x350x440 mm**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

**Output flow indicators****Results per 1 unit of bench seat ZET, 1200x350x440 mm**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,66E-01	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	1,97E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,58E+01	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	1,11E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,89E+01	0,00E+00	0,00E+00

**VERSION HISTORY**

2025-05-08 Original version of the EPD

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## Abbreviations

EPD: Environmental Product Declaration  
ISO: International Organization for Standardization  
EN: European Norm  
RSL: Reference Service Life  
ESL: Estimated Service Life  
PCR: Product Category Rules  
LCA: Life Cycle Assessment  
CF: Characterization Factors  
GWP: Global Warming Potential  
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: Ozone Depletion Potential  
AP: Acidification Potential  
EP: Eutrophication Potential  
EP-freshwater: Eutrophication Potential freshwater  
EP-marine: Eutrophication Potential marine  
EP-terrestrial: Eutrophication Potential terrestrial  
POCP: Photochemical Ozone Creation Potential  
ADP: Abiotic Depletion Potential  
ADP-minerals & metals: Abiotic Depletion Potential for minerals and metals  
ADP-fossil: Abiotic Depletion Potential for fossil resources  
WDP: Water Deprivation Potential  
EAF: Electric Arc Furnace  
BOF: Basic Oxygen Furnace  
SVHC: Substances of Very High Concern  
CTUh: Comparative Toxic Unit human  
CTUe: Comparative Toxic Unit ecological

