THE INTERNATIONAL EPD® SYSTEM

This EPD conforms with ISO 14025 2006 and EN 15804:2012+A2:2019/AC:2021

Programme: The International EPD® System www.environdec.com

Programme operator: EPD International AB

Postura+ Chair

Environmental Product Declaration

An EPD should provide current information and may be updated if conditions change.
The stated validity is therefore subject to the continued registration and publication at www.environdec.com

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General information

Programme information

Programme:	The International EPD® System
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): *PCR 2019:14-c-PCR-021 Furniture (c-PCR to PCR 2019:14) (Adopted from EPD Norway). UN CPC code 3811*
PCR review was conducted by: Christofer Skaar Technical Committee, Norwegian EPD Foundation
Life Cycle Assessment (LCA)
LCA accountability: Mark Dowling and Robert Holdway - Giraffe Innovation
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by individual verifier Third-party verifier: :Chris Foster, EuGeos Limited Approved by: The International EPD® System
OR
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☐ EPD verification by accredited certification body Third-party verification: The certification body is accredited by: *<name of accreditation body & accreditation number, where applicable>*
OR
Independent third-party verification of the declaration and data, according to ISO 14025:2006 via: ☐ EPD verification by EPD Process Certification* Internal auditor: *<name, organisation>* Third-party verification: *<name, organisation>* is an approved certification body accountable for third-party verification. Third-party verifier is accredited by: *<name of accreditation body & accreditation number, where applicable>* *For EPD Process Certification, an accredited certification body certifies and reviews the management process and verifies EPDs published on a regular basis. For details about third-party verification procedure of the EPDs, see GPI.
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 characterisation 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

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Product information

Product name: KI Postura+ chair
Product identification: A chair moulded from 50% post-consumer recycled polypropylene. Size 6, Ink Blue Postura + chair. Product code POPC06002.

Product description: The Postura+ chair is designed to promote good posture and provide exceptional comfort. It is proven to be durable, comfortable and offers excellent value for money. The chairs are available in a range of vibrant colours, they are strong, light, stain resistant, antistatic, and easy to clean (Figure 1) (Table 1). This EPD applies to the Size 6, Ink Blue Postura + chair, product code POPC06002. The product weighs ~4kg and contains 50% post-consumer recycled polypropylene (rPP) content. The products are warrantied for 20 years. KI recommended that the product is cleaned with a soft damp cloth and mild all-purpose cleaner.

UN CPC code: 3811
Geographical scope: The chair is made, used and reaches its end of life in the United Kingdom.

LCA information

Functional unit / declared unit: The functional unit is one KI Postura+ chair size 6 Ink Blue (product code POPC06002) and used for 15 years. The chair is made from 50% post-consumer recycled polypropylene (rPP).
Reference service life: 15 years
Time representativeness: 2022/2023
Database(s) and LCA software used: Ecoinvent 3.8 and SimaPro 9.4.0.1
Description of system boundaries: Cradle to grave life cycle modules A1 to C4 and D.

Introduction

This Environmental Product Declaration (EPD) is for the KI Postura+ chair, size 6, Ink Blue, product code POPC06002 made from 50% post-consumer recycled polypropylene (rPP). This is a cradle to grave EPD based upon production information and data collected by KI from their producers in 2022/2023.

This EPD replaces an existing EPD (S-P-02067)[1] to reflect changes in the polypropylene (PP) materials used in the Postura+ chair manufacture. The original EPD modelled the Postura+ chair with 100% virgin PP which has now changed now changed to 50% virgin and 50% post-consumer recyclate (rPP). The EPD results have been updated to align to the new PCR requirements for Furniture (c-PCR to PCR 2019:14) (Adopted from EPD Norway) as well as Ecoinvent 3.8 dataset.

EPDs within the same product category but from different programmes may not be comparable. KI has the sole ownership, liability and responsibility of this EPD.

Company Profile

KI's furniture helps the world's leading organisations create happy, healthy, high performing working and learning environments for their people. Bringing together good design, advanced engineering and sustainable resources, KI's products are durable, flexible and offer excellent value. Founded in 1941 and headquartered in Green Bay, Wisconsin, KI (Krueger International, Inc.), has grown to become one of the world's largest, most respected furniture manufacturing groups. KI's EMEA headquarters and showroom in Central London is supported by an established network of manufacturing facilities and distribution partners across the UK, Europe and the Middle East. For more information, visit: www.kieurope.com.

KI takes its environmentally responsibilities seriously through our People and Planet strategy[2] - "Our commitment to being an environmental and socially responsible business". KI recognize and embrace their responsibility to safeguard human health, preserve natural resources and protect the environment. Sustainability is a strong part of KI's 'purpose'. The "the green behind the red" icon is a symbol of our ongoing mission to "Impact Less and find green in everything we do".

Standards

The KI Postura+ chairs have been tested and approved to the following standards:

- BS EN 1729 Part 1, Furniture. Chairs and tables for educational institutions. Functional dimensions;
- BS EN 1729 Part 2, Furniture. Chairs and tables for educational institutions. Safety requirements and test methods;
- BS 5852 (Crib5) certified Methods of test for assessment of the ignitability of upholstered seating by smouldering and flaming ignition sources;
- BS EN 1022: 2018 (Size 5 & 6) certified Furniture. Seating. Determination of stability;
- BS EN 16139: 2013 Level 2 (Size 6) certified. Furniture. Strength, durability and safety. Requirements for non-domestic seating.

The chair is also FIRA certified. The safe vertical stacking for the Postura+ chair is up to 12 high.

Product Description

The Postura+ chair is designed to promote good posture and provide exceptional comfort. It is proven to be durable, comfortable and offers excellent value for money. The chairs are available in a range of vibrant colour and sizes, they are strong, light, stain resistant, antistatic, and easy to clean (Figure 1) (Table 1). This EPD applies to the Postura+ chair ,Size 6 only, in all colours, product code POPC06002. Ink Blue was chosen as the representative colour. The product weighs 3.94kg and contains 50% post-consumer recycled polypropylene (rPP) content. The products are warrantied for 20 years. KI recommended that the product is cleaned with a soft damp cloth and mild all-purpose cleaner.

[1] https://www.environdec.com/library/epd2067
[2] https://www.kieurope.com/people-planet/

Figure 1: Postura+ colour range

The product is manufactured in Tamworth, Staffordshire, UK, from high impact resistant polypropylene (PP). The chair legs are N_2 gas injected, which increases the strength and reduces product weight. The N_2 is captured from the air on the injection moulding production site.

Size	Seat height (mm)	Seat width (mm)	Overall height (mm)	Overall depth (mm)	Weight (kg)
1	260	250	500	330	1.7
2	310	280	550	365	1.8
3	350	280	645	420	2.8
4	380	340	675	440	3
5	430	360	780	530	3.9
6	460	400	805	540	4

Table 1: Postura+ size range

For delivery each chair is stacked onto a pallet with 56 units per pallet. These stacks are then secured to the pallet with two straps and polyethylene stretch wrap. 65% of the production output remains in this palletised form for distribution. 30% are stacked directly on the payload area of a vehicle without any packaging. The remaining 5% of chairs are boxed with a maximum of two chairs per box.

The distance from the factory to the warehouse is 25km.The average delivery distance to a customer is 195km using an 18 tonne Euro 5 lorry. The pallets have a typical lifespan of 10 uses[3].

Scenario information	Unit
Vehicle used	18 tonne Euro 5 lorry
Fuel type	Diesel
Distance to warehouse	25km
Capacity utilisation to warehouse	50%
Bulk density to warehouse	Varies per delivery. Impact calculated as tkm
Average distance to customer	195km
Capacity utilisation to customer	50%
Bulk density to warehouse	Varies per delivery. Impact calculated as tkm

Table 2: Transport to warehouse and customers site (A4)

The reference service life (RSL) is 15 years. More detail on usage is given below (Table 3).

[3] https://circulareconomy.europa.eu/platform/en/good-practices/reuse-and-recycling-loading-pallets

RSL Information	Unit
Declared product property	Product meets standards as declared
Outdoor environment	N/A
Indoor environmental	Normal office working conditions 16 to 23C, 45% to 60% Relative Humidity.
Usage condition	8 to 12 hours a day 5 days a week
Maintenance	Product is cleaned with a soft damp cloth and mild all-purpose cleaner

Table 3: RSL information

At the end of life, the products can be reused, recycled or disposed of. For this EPD it is assumed that 15% of the items are reused and 84% recycled and 1% landfilled. It is assumed that the product packaging is either recycled, incinerated or sent to landfill. The percentage of each is dependent upon the different types of material[4] (Table 4). The distance 'end of life' products travel for recycling, reuse or disposal is assumed to average 50km.

Material	% incineration / landfill rate
Polymers	44.4% / 55.6%
Wood	44.4% / 55.6%

Table 4: Packaging material recovery and recycling rates

Materials

The polypropylene used to manufacture the Postura+ is sourced from Europe and contains 50% post-consumer recycled content. The corrugated carton box board used in packaging is assumed to contain 75% recycled content as defined in the Ecoinvent dataset.

KI has confirmed that Postura+ will begin a transition to a circular economy, with all one-piece chairs manufactured from December 2022 set to contain at least 30% recycled polypropylene. Following over 3 years of trials and testing, this achievement sets an important milestone on KI's journey towards taking a leading position in the circular economy. Over the coming years, KI will work towards increasing this percentage to future milestones at 80% and ultimately 100% recycled content, bringing all standard colours into line with the increasingly popular Jet Black Postura+ chairs which are already made with 100% recycled content.[5,6]

Figure 2: Postura+ chair recycled plastic (rPP)

[4] Defra UK statistics on waste March 2022
[5] https://www.kieurope.com/about-us/pressroom/press-release/2022/postura-recycled/
[6] https://www.kieurope.com/products/by-name/postura-one-piece-chair/

Products

This EPD covers the Postura+ chair, Size 6, Ink Blue (product code POPC06002). A breakdown of the product including packaging is given below (Table 3).

Product components	Total Weight (kg)	Post-consumer material (Weight - %)	Biogenic material (Weight - % and kg C/kg)
Polypropylene	3.941	1.97-5kg (50%)	0
Packaging materials	**Weight (kg)**	**Weight - % (Versus the product)**	**Weight biogenic carbon (kgC/kg)**
Wood	0.034	0.86	0.017
Polyethylene	0.014	0.36	0
Packaging Total	**0.048**	**1.22**	**0.017**

Table 5: Postura+ chair material and packaging by mass (%)

EPD Scope

This is a cradle to grave EPD (A1 to C4 and D). The inputs and outputs and distribution captured in each process is shown in the system boundary (Figure 3). This is a cradle to grave EPD which is broken down as required into the following processes:

- Upstream processes (cradle to gate) - material and parts production;
- Core processes (gate to gate) - moulding of the chair, packaging, storage and recycling of waste plastic; and
- Downstream process (gate to grave) distribution, use and end of life recycling or disposal.

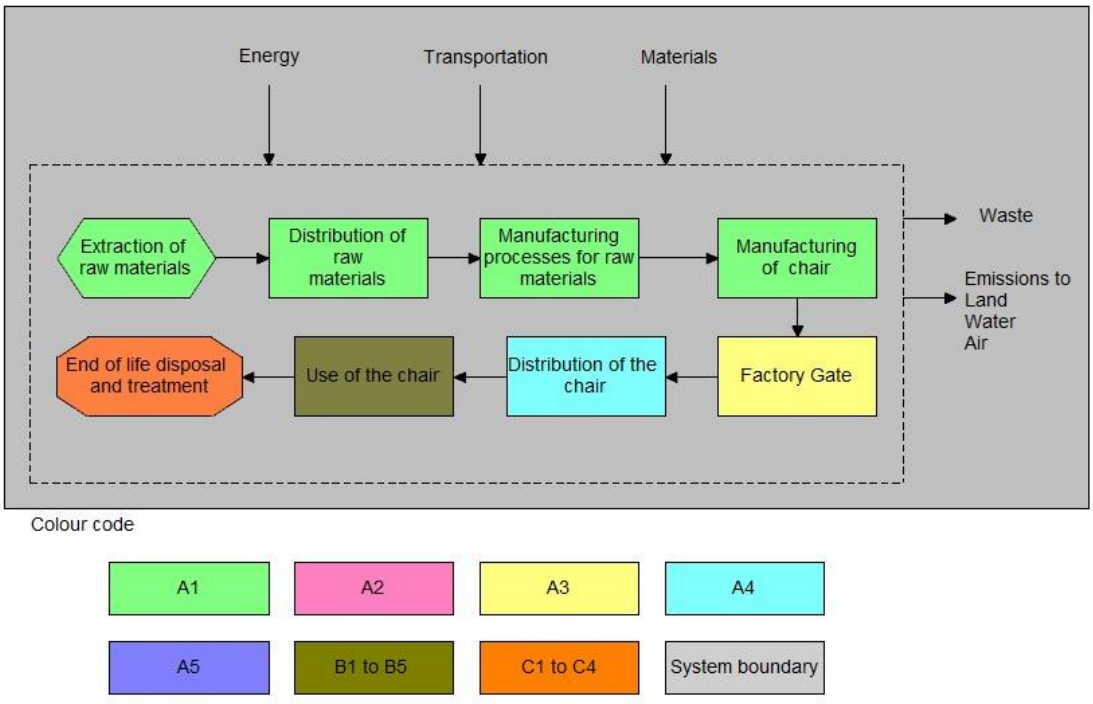

Figure 3: System Boundary

Data Source and Data Quality

The analysis conforms to ISO 14040 Environmental management – Life cycle assessment – Principles and framework ISO 14044 Environmental management – Life cycle assessment – Requirements and guidelines.

ISO 14044 acknowledges the life cycle assessment requirements of key phases beginning with goal and scope definition, inventory, analysis, impact assessment, and interpretation. Each of these phases, along with their associated databases and models, can have associated uncertainties. It is important to acknowledge these uncertainties in decisions regarding design development and improvement, strategic planning, public policy making, or product marketing.

The key sources of data used for the LCA were as follows:

- Primary data supplied by KI and their manufacturing contractors;
- Ecoinvent v3.8 database (2022), standard data sets on energy, environmental impacts of moulding processes, material production, waste disposal and recycling;
- Primary data was collected for the energy consumption of the injection moulding and this was used to replace the energy data (country of energy source and kWh) in the standard ecoinvent data set
- Data on materials and material sourcing, production energy, waste, logistics and use were collected from KI based upon 2022 production (January to December), giving a year's average data set.

Exclusions and Cut-Off Criteria

When building a life cycle inventory, it is typical to exclude items considered to have a negligible contribution to results. To do this in a robust manner there must be confidence that the exclusion is fair and reasonable. Therefore, cut-off criteria are defined, which allow items to be neglected if they meet the criteria. In this study exclusions could be made if they were expected to be within the below criteria:

- Mass: if a flow is anticipated to be less than 1% of the mass of the product it may be neglected;
- Energy: if a flow is anticipated to be less than 1% of the cumulative energy it may be neglected; and
- Environmental significance: if a flow is anticipated to be less than 1% of the key impact categories it may be excluded.

If an item meets one of the criteria but is expected to be significant to one of the other criteria it may not be neglected. For example, if a chemical is small in mass but is expected to have a notable contribution to the environmental results then it may not be excluded.

Life cycle stages that have been omitted from the scope of the study include the following:

- Human energy inputs to processes;
- Infrastructure and capital goods; and
- Transport of employees to and from their normal place of work.

Allocation

Ecoinvent default allocation was applied to all processes, except for secondary material use, where cut off allocation is applied.

Assumptions and Estimates

The following assumptions were made:

- Indicative transport modes including lorry and ship type used for the transportation of the materials;
- Production losses through all of the processes and these have been based upon supplied data;
- Primary energy used as materials was calculated based upon the gross calorific values of materials. A figure of 16MJ was used for wood pallets;
- Primary energy used as fuel was calculated by deducting the energy used as materials from the primary energy demand; and
- Secondary materials include carton board content and the used pallets.

- At the end of life, the products can be reused recycled or disposed of. For this analysis it is assumed that 15% of the items are reused and 84% recycled and 1% landfilled. It is assumed that the product packaging is either recycled, incinerated or sent to landfill. The percentage of each is dependent upon the different types of material
- . The distance end of life products travel for recycling, reuse or disposal is assumed to average 50km.
- Module D was modelled as 85% recovery and recycling of polypropylene and polyethylene. 15% landfill of polypropylene and polyethylene, 26.4% incineration with energy recovery for wood and 73.6% landfill.

Material	% incineration / landfill rate
Polymers	44.4% / 55.6%
Wood	44.4% / 55.6%

Table 6: Packaging material recovery and recycling rates

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

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	GLO	GLO	GB	GB	GB	GB	GB	GB	GB	GB	GB	GB	GB	GB	GB	GB	GB
Specific data used	>90%			>90%	>90%	>90%	>90%	>90%	>90%	>90%	>90%	>90%	>90%	>90%	>90%	>90%	>90%
Variation – products	0%			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Variation – sites	0%			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table 7: EPD Modules Declared

Results of the environmental performance indicators

Mandatory impact category indicators according to EN 15804

The results of the environmental analysis in accordance with the Product Category Rules (PCRs) are shown in the tables below.

		Results per Posture+ chair size 6										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3 to B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO_2 eq.	5.81E+00	7.64E-02	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	2.59E-02	1.25E+00	4.77E+00	-2.16E+00
GWP-biogenic	kg CO_2 eq.	-1.94E-01	1.96E-04	0.00E+00	0.00E+00	-4.45E-02	0.00E+00	0.00E+00	7.89E-05	-2.54E-03	2.99E-01	-1.32E-02
GWP-luluc	kg CO_2 eq.	3.85E-03	2.28E-05	0.00E+00	0.00E+00	3.05E-02	0.00E+00	0.00E+00	9.36E-06	8.99E-04	4.01E-05	-8.24E-04
GWP-total	kg CO_2 eq.	5.62E+00	7.66E-02	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	2.60E-02	1.25E+00	4.79E+00	-2.17E+00
ODP	kg CFC 11 eq.	2.38E-07	1.82E-08	0.00E+00	0.00E+00	4.46E-09	0.00E+00	0.00E+00	6.00E-09	8.81E-08	1.08E-08	2.29E-08
AP	mol H^+ eq.	2.42E-02	3.19E-04	0.00E+00	0.00E+00	7.59E-04	0.00E+00	0.00E+00	1.05E-04	3.51E-03	7.95E-04	-1.02E-02
EP-freshwater	kg P eq.	1.30E-03	4.70E-06	0.00E+00	0.00E+00	3.05E-05	0.00E+00	0.00E+00	1.65E-06	1.64E-04	9.40E-06	-4.00E-04
EP-marine	kg N eq.	4.49E-03	9.72E-05	0.00E+00	0.00E+00	4.19E-04	0.00E+00	0.00E+00	3.17E-05	1.36E-03	1.19E-03	-1.22E-03
EP-terrestrial	mol N eq.	4.83E-02	1.06E-03	0.00E+00	0.00E+00	1.86E-03	0.00E+00	0.00E+00	3.46E-04	1.07E-02	3.77E-03	-1.66E-02
POCP	kg NMVOC eq.	2.38E-07	1.82E-08	0.00E+00	0.00E+00	5.84E-04	0.00E+00	0.00E+00	1.06E-04	3.49E-03	2.14E-07	-7.65E-03
ADP-minerals & metals*	kg Sb eq.	3.20E-05	1.62E-07	0.00E+00	0.00E+00	1.20E-06	0.00E+00	0.00E+00	8.20E-08	1.91E-05	9.85E-01	-1.40E-05
ADP-fossil*	MJ	1.76E+02	1.19E+00	0.00E+00	0.00E+00	2.06E+00	0.00E+00	0.00E+00	3.91E-01	1.23E+01	2.66E-02	-9.61E+01
WDP*	m^3	2.36E+00	4.28E-03	0.00E+00	0.00E+00	7.67E-01	0.00E+00	0.00E+00	1.25E-03	2.59E-01	0.00E+00	-1.13E+00

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

Caution: *The results of the ADP mineral and metals should be used with care as the uncertainties of these results are high or as there are limited experiences with the indicator*

Table 7: Environmental impacts

		Results per Posture+ chair size 6										
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3 to B7	C1	C2	C3	C4	D
GWP-GHG[7]	kg CO_2 eq.	5.82E+00	7.64E-02	0.00E+00	0.00E+00	1.55E-01	0.00E+00	0.00E+00	2.59E-02	1.25E+00	4.77E+00	-2.16E+00

Table 8: GWP Results

Additional indicators

		Results per Posture+ chair size 6										
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3 to B7	C1	C2	C3	C4	D
Land use	**Pt**	5.55E+01	1.36E+00	0.00E+00	0.00E+00	**3.45E+00**	**0.00E+00**	0.00E+00	2.69E-01	9.57E+00	1.44E+00	**4.88E+00**
Particulate matter	Disease inc.	2.21E-07	9.02E-09	0.00E+00	0.00E+00	7.83E-09	0.00E+00	0.00E+00	2.25E-09	7E-08	1.01E-03	-6.29E-08
Ionising radiation, human health*	kBq U-235 eq	7.16E-01	6.04E-03	0.00E+00	0.00E+00	7.52E-03	0.00E+00	0.00E+00	2.02E-03	0.00E+00	3.48E-03	-2.30E-02
Ecotoxicity, freshwater**	CTUh	0.00E+00	9.30E-01	0.00E+00	0.00E+00	4.16E+00	0.00E+00	0.00E+00	3.06E-01	1.22E+01	1.65E+00	-2.24E+01
Human toxicity, non-cancer**	CTUh	4.44E-08	1.01E-09	0.00E+00	0.00E+00	2.52E-09	0.00E+00	0.00E+00	3.15E-10	0.00E+00	7.06E-09	-1.08E-08
Human toxicity, cancer**	CTUh	1.82E-09	2.35E-11	0.00E+00	0.00E+00	2.43E-10	0.00E+00	0.00E+00	9.01E-12	0.00E+00	6.49E-09	5.74E-10

Table 9: Additional indicators

Disclaimers

*This impact category deals mainly with the eventual impact of low dosing 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 radiative waste in underground facilities. Potential ionizing radiation from soil, from radon and from some materials is also not measured by this indicator.

** The results of these environmental impact indicators should be used with care as the uncertainties of these results are high or as there are limited experiences with the indicator.

[7] 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_2 is set to zero.

Resource use indicators

		Results per Posture+ chair size 6										
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3 to B7	C1	C2	C3	C4	D
PERE	MJ	7.06E+00	1.54E-02	0.00E+00	0.00E+00	1.14E+00	0.00E+00	0.00E+00	5.66E-03	6.04E-01	2.00E-02	0.00E+00
PERM	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	-2.39E+00
PERT	MJ	7.06E+00	1.54E-02	0.00E+00	0.00E+00	1.14E+00	0.00E+00	0.00E+00	5.66E-03	6.04E-01	2.00E-02	-2.39E+00
PENRE	MJ	1.88E+02	1.26E+00	0.00E+00	0.00E+00	2.26E+00	0.00E+00	0.00E+00	4.15E-01	1.31E+01	1.06E+00	0.00E+00
PENRM	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	-2.59E+02
PENRT	MJ	1.88E+02	1.26E+00	0.00E+00	0.00E+00	2.26E+00	0.00E+00	0.00E+00	4.15E-01	1.31E+01	1.06E+00	-2.59E+02
SM	kg	1.97E+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	0.00E+00
RSF	MJ	5.24E+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	7.06E+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^3	1.47E-04	0.00E+00	0.00E+00	0.00E+00	2.04E-02	0.00E+00	0.00E+00	4.60E-05	6.95E-03	8.73E-04	-6.31E-02

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

Table 10: Resource use indicators

Waste indicators

			Results per Posture+ chair size 6									
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3 to 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
Non-hazardous waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E+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

Table 11: Waste Indicators

Output flow indicators

			Results per Posture+ chair size 6									
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3 to 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	5.31E-01	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	3.99E+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	3.48E-02	0.00E+00
Exported energy, electricity	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	8.41E+00	2.94E-02	0.00E+00
Exported energy, thermal	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

Table 12: Output flow indicators

EPD®

giraffe

References

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