Layout Studio®

Europe

Environmental Product Declaration

Date of Issue: July 09, 2025

Date of Expiration: July 09, 2030

Product Category Rules

BIFMA PCR for Office Furniture Workspace Products, UNCPC 3814

Product Sub-Category: Benching

EN 15804+A2

ISO 14025/14040/14044

Functional Unit

1 m^2 of workspace maintained for a 10-year period (0.20 units of Layout Studio)

This EPD was not written to support comparative assertions. EPDs based on different PCRs or different calculation models may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results due to and not limited to the practitioner's assumptions, the source of the data used in the study, the specifics of the product modeled, and the software tool used to conduct the study.

MillerKnoll

NSF Certified Environmental Product Declaration www.nsf.org

Layout Studio

Program Operator	NSF Certification LLC 789 N. Dixboro, Ann Arbor, MI 48105 www.nsf.org
Manufacturer Name and Address	Herman Miller 855 East Main Ave. PO Box 302 Zeeland, MI 4964-0302 USA
Declaration Number	EPD11118
Declared Product and Functional Unit	Layout Studio (product codes: GEFSDNF.12051600 (frameless screen), GETRF.0816FS4M (top), GELBEN (Aero Leg – desk end), GELBSN (Aero Leg)) Functional Unit: 1 m^2 of workspace maintained for 10 years
Reference PCR and Version Number	BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814, version 1 EN 15804+A2
Product's intended Application and Use	Benching
Product RSL	10 years
Markets of Applicability	Europe
Date of Issue	July 09, 2025
Period of Validity	5 years from date of issue
EPD Type	Product Specific
Intended Audience	Business-to-Business, Business-to-Consumer
Range of Dataset Variability	N/A
EPD Scope	Cradle to Grave
Year of reported manufacturer primary data	June 2023 – May 2024
LCA Software and Version Number	Sphera LCA for Experts (fka GaBi) 10.9
LCI Database and Version Number	Sphera Managed LCA Content (fka GaBi) Database, 2024.1
LCIA Methodology and Version Number	TRACI 2.1, IPCC AR6, EN 15804 EF 3.1
The PCR review was conducted by:	Review Panel Chaired by Dr. Thomas Gloria
This declaration was independently verified in accordance with ISO 14025: 2006, the BIFMA PCR for Office Furniture Workspace Products, and EN 15804+A2 ☐ Internal ☒ External	Jack Geibig - EcoForm jgeibig@ecoform.com
This reference life cycle assessment was conducted in accordance with ISO 14044 and the reference PCRs:	WAP Sustainability Consulting
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Jack Geibig - EcoForm jgeibig@ecoform.com
References	BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814. Version 1 (2021) EN 15804+A2 (2019) ISO 14025/40/44 (2006) MillerKnoll Background Report for LCA/EPD Creation Tool v1.0

Limitations:
Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of Products using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the building energy use phase as instructed under this PCR. Full conformance with the PCR for Products allows EPD comparability only when all stages of a life cycle have been considered. However, variations and deviations are possible". Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.

Layout Studio

Product Description

It's easy for anyone to find a home base in Layout Studio. It integrates personalized work tools and storage and can take many forms across the office landscape in both seated and standing heights. Because of these options, Layout plays well with organizations too, letting them scale up or down to accommodate local preferences within a global system.

This document relates to Layout Studio workspaces. Layout Studio with four workstations divided by frameless fabric screens and includes frameless screen inline connector kit, screen brackets, hardware kit, cable trays, umbilical riser, cable wire management, Aero Leg double and fixed height desk end, Aero Leg intermediate desk with fixed height, horizontal beam, and a rectangular top is covered in this document. Note that the image above depicts storage units and differs from the configuration modeled for the LCA.

Company Description

MillerKnoll is a collective of dynamic brands that comes together to design the world we live in. The MillerKnoll brand portfolio includes Herman Miller, Knoll, Colebrook Bosson Saunders, DatesWeiser, Design Within Reach, Edelman, Geiger, HAY, HOLLY HUNT, Knoll Textiles, Maharam, Muuto, NaughtOne, and Spinneybeck|FilzFelt. MillerKnoll is an unparalleled platform that redefines modern for the 21st century by building a more sustainable, equitable, and beautiful future for all.

Over the last century, Herman Miller has been guided by a commitment to problem-solving designs that inspire the best in people. Along the way, Herman Miller has forged critical relationships with the most visionary designers of the day, from mid-century greats like George Nelson, the Eames Office, and Isamu Noguchi, to research-oriented visionaries like Robert Propst and Bill Stumpf—and with today's groundbreaking studios like Industrial Facility and Studio 7.5. From the birth of ergonomic furniture to manufacturing some of the twentieth century's most iconic pieces, Herman Miller has pioneered original, timeless design that makes an enduring impact, while building a lasting legacy of design, innovation, and social good. Herman Miller is a part of MillerKnoll, a collective of dynamic brands that come together to design the world we live in. For more information, visit hermanmiller.com/about.

Our Mission

Driven by the mission to design and make the world's best products in the most sustainable way, MillerKnoll's sustainability strategy focuses on three key areas:

- **Carbon**
  Design the lowest carbon footprint products and commit to achieving net-zero carbon emissions by 2050[1].
- **Materials**
  Use sustainable, 100% bio-based or recycled materials by 2050.
- **Circularity**
  Design timeless, durable products with zero waste by 2050.

Supplier Support

At MillerKnoll, we are committed to working closely with our suppliers to reduce our collective impact on the environment. We encourage our suppliers to minimize their operations' environmental impacts and require they assist us in decreasing our facilities' environmental effects.

Manufacturing Locations

- PortalMill, Melksham, England

Warranty

Backed by MillerKnoll's 12-year warranty.

Creating Transparency on Materials

We are transparent about our materials because we believe in informed decisions. Our Ecomedes platform provides environmental product information from across our brands, including details about materials used and third-party certifications. This resource helps customers buy or specify environmentally preferable products by supplying product-level data and automating product performance calculations that can help contribute to sustainability goals. Ecomedes is linked here.

Product Environmental Data

	Value*
Recycled Content %	29%
Post-Consumer	14%
Pre-Consumer	15%
Recyclability (max %) **	43%

*The recycled content information shown may vary from ecomedes due to periodic product updates.

**This recyclability rate is the maximum amount of the product that is recyclable, based on availability of recycling facilities and ability of the product to be disassembled. Note that, per the requirements of the PCR, the End-of-Life results presented in this EPD were calculated using the US EPA's recycling rates within the 2018 Municipal Solid Waste Report for parts that can be disassembled.

Packaging

Returnable packaging blankets are available for some products. Packaging in the LCA does not include blankets and was calculated to be disposed upon installation per regional disposal rates as required by the PCR.

Additional information, including installation and recycling instructions, can be found at https://www.hermanmiller.com/en_gb/products/workspaces/workstations-and-desks/layout-studio/.

[1] MillerKnoll's net-zero commitment is subject to factors that are partly outside its control, including its value chain's ability to reduce their Scope 1 and 2 emissions (and therefore MillerKnoll's Scope 3 emissions) by 2050. In light of this, MillerKnoll is committed to achieving net-zero by 2050 and will continue to engage with stakeholders across its value chain to support them in their efforts to become net-zero by 2050.

Layout Studio

MATERIAL DECLARATION

Functional Unit

The functional unit is one m^2 of workspace, maintained over a 10-year period, including packaging materials used for the final assembled product. One workspace is 5.12 m^2. To justify the 10-year RSL, this product meets strength and durability testing standards per BS EN 527-2:2016 (desks) and BS EN 1203-2:2000 (screens). While this test does not specify a 10-year life expectancy, the combination of this testing and product warranty of 12 years is equivalent to ANSI/BIFMA testing for a 10-year RSL for workspaces as required by the PCR. To meet the functional unit, 0.2 units of Layout Studio are required.

Reference Flow and Product Specifications

One Layout Studio (product codes: GEFSDNF.12051600 (frameless screen), GETRF.0816FS4M (top), GELBEN (Aero Leg – desk end), GELBSN (Aero Leg)) with four workstations divided by frameless fabric screens and includes frameless screen inline connector kit, screen brackets, hardware kit, cable trays, umbilical riser, cable wire management, Aero Leg double and fixed height desk end, Aero Leg intermediate desk with fixed height, an horizontal beam, and a rectangular top was modeled for this EPD. This workspace is determined to be a representative product based on sales of the variations. The results in this EPD are only representative of this configuration. While the exact configuration purchased may be slightly different, it is expected to have impacts within 10% of this representative configuration. The results presented on the subsequent pages consist of the impacts of Layout Studio made at PortalMill, Melksham, UK. The product composition table to the right is relevant for the product made in PortalMill, Melksham, UK.

System Boundary

Cradle-to-Grave

Content Declaration

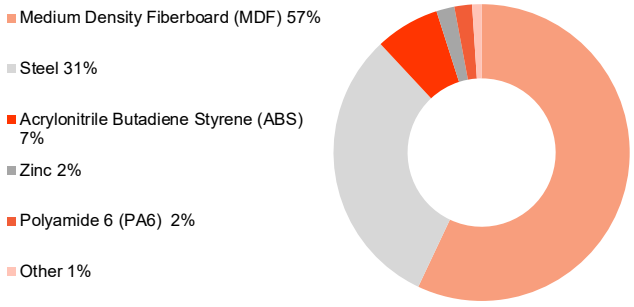
The table to the right details the materials included in a specific SKU for the product made in the United Kingdom, summarized in the chart below. In order to achieve the functional unit, 0.20 units of product are required.

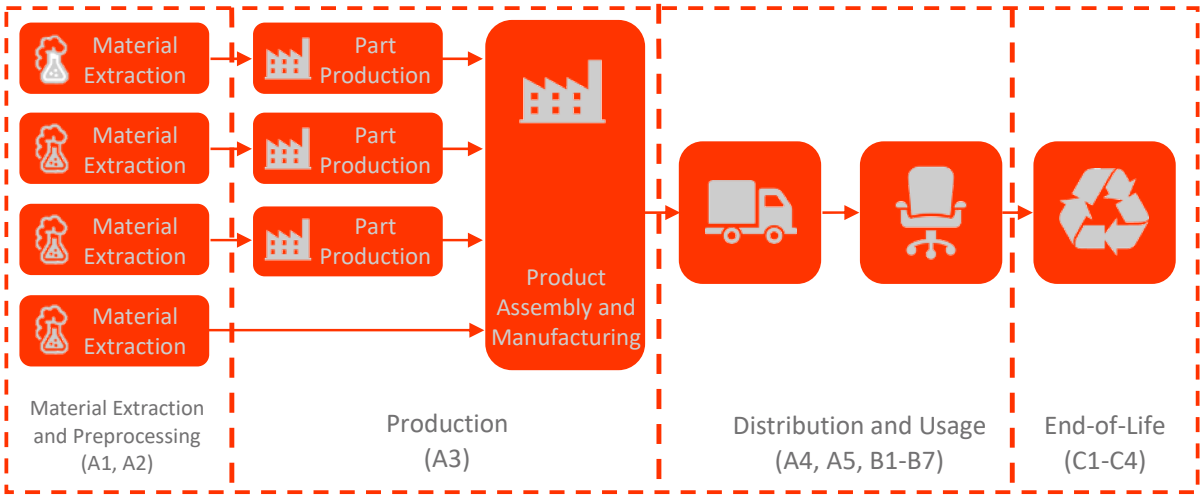
Material	Mass (kg)	Mass (%)	Resource
Medium Density Fiberboard (MDF)	105.86	57%	Virgin Renewable and Recycled Content
Steel	57.58	31%	Virgin Non-renewable and Recycled Content
Acrylonitrile Butadiene Styrene (ABS)	13.02	7%	Virgin Non-renewable
Zinc	3.67	2%	Virgin Non-renewable
Polyamide 6 (PA6)	3.57	2%	Virgin Non-renewable
Other	1.91	1%	Virgin Non-renewable
Total	**185.62**	**100%**	

Packaging*	Mass (kg)	Mass (%)	Resource
Corrugate	17.06	93%	Recycled Content
PE Foam	0.61	3%	Virgin Non-Renewable
PP Banding	0.27	1%	Virgin Non-Renewable
PE Bag	0.23	1%	Virgin Non-Renewable
PE Film	0.11	<1%	Virgin Non-Renewable
Total	**18.28**	**100%**	

*Returnable/reusable shipping blankets also available. Packaging in the LCA does not include blankets and was calculated to be disposed upon installation per regional disposal rates as required by the PCR.

This product contains no substances prohibited by the regulations applicable at the time of EPD publication. It respects the restrictions on use of hazardous substances as defined in the REACH directive EC 1907/2006.





Overview of Life Cycle Stages

Layout Studio

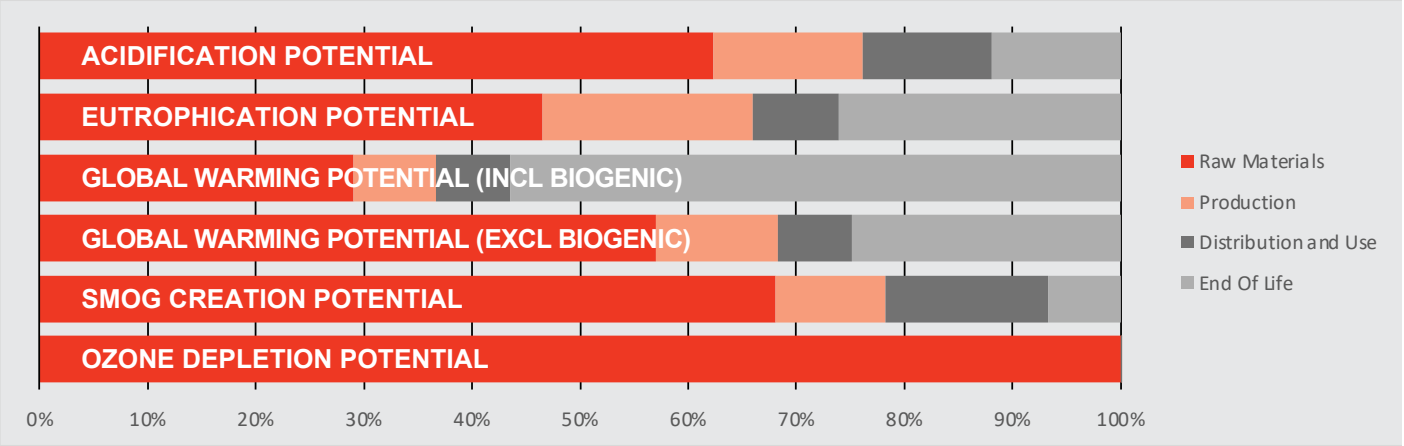
Life Cycle Impact Assessment – BIFMA PCR for Production in Europe

Environmental Impacts were calculated using the GaBi software platform. Impact results according to the BIFMA PCR have been calculated using IPCC AR6 GWP_{100} and TRACI 2.1 characterization factors. Additionally, LCI indicators have been calculated for primary energy, water usage, renewable and non-renewable resources used as energy carriers and materials, and recovered energy. Results presented in this report are for 1 m^2 of workspace maintained for 10 years. To meet the functional unit, 0.2 units of Layout Studio are required.

The results presented here are for Layout Studio workspace (product codes: GEFSDNF.12051600 (frameless screen), GETRF.0816FS4M (top), GELBEN (Aero Leg – desk end), GELBSN (Aero Leg)). Additionally, the results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks.

LCA Impact Category	Unit	Total	Raw Material Production	Product Production	Distribution and Retail	End of Life
Acidification Potential	kg SO_2 eq	2.80E-01	1.74E-01	3.88E-02	3.35E-02	3.33E-02
Eutrophication Potential	kg N eq	3.76E-02	1.75E-02	7.33E-03	2.99E-03	9.80E-03
Global Warming Potential Including Biogenic Carbon	kg CO_2 eq	1.06E+02	3.08E+01	8.18E+00	7.25E+00	5.99E+01
Global Warming Potential Excluding Biogenic Carbon	kg CO_2 eq	1.06E+02	6.05E+01	1.20E+01	7.25E+00	2.64E+01
Photochemical Ozone Creation Potential (Smog)	kg O_3 eq	5.11E+00	3.48E+00	5.20E-01	7.68E-01	3.41E-01
Ozone Depletion Potential	kg CFC-11 eq	1.00E-06	1.00E-06	1.50E-12	1.84E-14	6.97E-14
LCI Impact Category	**Unit**	**Total**	**Raw Material Production**	**Product Production**	**Distribution and Retail**	**End of Life**
Primary Energy Demand (Renewable and Non-Renewable)	MJ (net cal value)	9.51E+02	5.97E+02	2.24E+02	1.00E+02	3.02E+01
Fresh Water Consumption	kg	2.43E+02	1.45E+02	6.06E+01	1.40E+01	2.34E+01
Renewable Primary Resources Used as Energy Carrier	MJ (net cal value)	4.82E+02	4.28E+02	5.42E+01	0.00E+00	0.00E+00
Renewable Primary Resources Used as Materials	MJ (net cal value)	-4.88E+01	-1.18E+02	6.21E+01	4.15E+00	2.70E+00
Non-renewable Primary Resources Used as Energy Carrier	MJ (net cal value)	1.50E+02	1.39E+02	1.04E+01	0.00E+00	0.00E+00
Non-renewable Primary Resources Used as Materials	MJ (net cal value)	1.00E+03	7.15E+02	1.61E+02	9.58E+01	2.74E+01
Recovered Energy	MJ (net cal value)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Life Cycle Impacts of Layout Studio



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APPENDIX: EN 15804+A2

Additionally, results have been calculated using LCIA methodologies for core environmental impact categories specified in EN 15804+A2, as well as LCI indicators required by EN15804+A2 reference package EF 3.1. The results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks. Values in the scenario tables below are reported per functional unit, which is 1 m^2 of workspace covered for 10 years. To fulfill this functional unit, 0.20 units of product are required.

LCA Scenario Details

Functional Unit

Parameter	Value
Declared Unit	1 m^2
Number of Occupants	4
Reference Service Life Required	10 years
Biogenic Carbon in Product	7.20 kg C
Biogenic Carbon in Packaging	1.83 kg C
Floorspace Area	5.12 m^2
Worksurface Area	5.12 m^2
Storage Volume	0 m^3

Reference Service Life

Parameter	Value per functional unit
Reference Service Life	10 Years
Design Application Parameters	Use as indicated in product brochure and warranty
Declared Product Properties	Properties given in product description on page 4
Indoor environment	Typical office environment
Use conditions	Typical office use

A4: Transport to the Building Site

Parameter	Value per functional unit
Transportation Type	Diesel Truck
Fuel Consumption	0.621 L/km
Distance	2,253 km
Capacity Utilization	61%
Capacity utilization volume factor	1
Weight of product (kg)	36.3
Volume (m^3)	4.73

A5: Installation in the Building

Parameter	Value per functional unit
Packaging Waste Produced	3.57 kg
Installation Assumptions	No product waste, Installed with hand tools.

B1: Use

Parameter	Value per functional unit
There are no emissions related to the expected use of this product.	

B2: Maintenance

Parameter	Value per functional unit
Maintenance Process	No maintenance is expected for this product
Maintenance cycle	0
Ancillary Materials for maintenance (kg/cycle)	0
Waste materials resulting from maintenance (kg)	0
Net fresh water consumption during maintenance (m^3)	0
Energy input during maintenance (kWh)	0

B3: Repair

Parameter	Value per functional unit
Repair process	No repairs expected for product
Inspection process	No repairs expected for product
Repair cycle (#/RSL)	0
Ancillary materials (kg)	0
Waste materials from repair (kg)	0
Net freshwater consumption during repair (m^3)	0
Energy input during repair (kWh)	0

B4: Replacements

Parameter	Value per functional unit
Replacement cycle (#/RSL)	0
Energy input during replacement (kWh)	0
Exchange of worn parts during the products life cycle (kg)	0

B5: Refurbishment

Parameter	Value per functional unit
Refurbishment process	No refurbishment is expected for this product
Refurbishment cycle (#/RSL)	0
Energy input during refurbishment (kWh)	0
Material input for refurbishment (kg)	0
Waste material resulting from refurbishment (kg)	0

B6 and B7: Use of energy and Use of Water

Parameter	Value per functional unit
Ancillary materials (kg)	0
Net freshwater consumption (m^3)	0
Power output of equipment (kW)	0
Characteristic performance	n/a
The table does not utilize electricity to adjust its height.	

C1-C4: End-of-Life

Parameter	Value per functional unit
Weight of Product Collected (kg)	36.3
Weight to Recycling (kg)	2.94
Weight to Energy Recovery (kg)	6.66
Weight to Landfill (kg)	26.6
Distance to Recycling (km)	50
Distance to Energy Recovery (km)	100
Distance to Landfill (km)	50

D: Benefits and Loads Beyond the System Boundary

Parameter	Value per functional unit
Includes all flows leaving the system not allocated as co-products and have passed the end-of-waste state. Includes loads from processing recycled materials. Credits are calculated based on the amount of useable material and energy sent to the next product system. Credits not applied to the portion of flows derived from secondary sources.	

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Life Cycle Stages

The results are provided according to the following life cycle modules:

Module	Description
A1	Product Stage: Raw Material Supply
A2	Product Stage: Transport
A3	Product Stage: Manufacturing
A4	Construction Process Stage: Transport
A5	Construction Process Stage: Installation
B1	Use Stage: Use
B2	Use Stage: Maintenance
B3	Use Stage: Repair
B4	Use Stage: Replacement
B5	Use Stage: Refurbishment
B6	Operational Energy Use
B7	Operational Water Use
C1	EOL: Deconstruction
C2	EOL: Transport
C3	EOL: Waste Processing
C4	EOL: Disposal
D	Benefits beyond system

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Life Cycle Impact Assessment – EN 15804+A2 (EF 3.1) for Production in Europe

EN 15804+A2 Results – 1 m^2 physical workspace maintained for 10 Years

Impact Category	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP_{Total} [kg CO_2 eq]	3.90E+01	7.25E+00	6.95E+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	1.87E-01	7.24E+00	4.56E+01	-9.90E+00
GWP_{Fossil} [kg CO_2 eq]	7.21E+01	7.25E+00	1.43E-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	1.87E-01	1.90E+00	1.41E+00	-9.89E+00
$GWP_{Biogenic}$ [kg CO_2 eq]	-3.32E+01	3.01E-03	6.81E+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	7.79E-05	5.34E+00	4.41E+01	0.00E+00
GWP_{LULUC} [kg CO_2 eq]	5.86E-02	4.08E-03	3.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	1.08E-04	2.74E-03	-3.18E-03
ODP [kg CFC 11 eq]	7.03E-07	9.21E-13	2.59E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-14	5.06E-13	2.94E-12	-3.88E-08
AP [Mole H+ eq]	2.18E-01	3.59E-02	1.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.68E-04	4.56E-03	8.58E-03	-3.12E-02
EP, freshwater [kg PO_4 eq]	6.66E-04	3.70E-05	3.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.59E-07	-2.83E-07	9.70E-05	-2.78E-04
EP, marine [kg N eq]	7.53E-02	1.79E-02	3.84E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-04	1.99E-03	1.14E-02	-7.47E-03
EP, terrestrial [Mole N eq]	7.32E-01	1.98E-01	4.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-03	2.43E-02	3.19E-02	-7.08E-02
POCP [kg NMVOC eq]	2.37E-01	3.66E-02	8.88E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-04	5.13E-03	1.92E-02	-2.36E-02
Resource Use, mineral and metals* [kg Sb eq]	2.76E-03	9.75E-07	3.20E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-08	-2.42E-08	6.25E-08	-8.90E-04
Resource Use, fossil* [MJ]	1.03E+03	9.58E+01	3.98E-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	2.48E+00	3.74E+00	2.08E+01	-1.29E+02
Water use* [m^3 world eq]	7.59E+00	4.30E-01	1.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	7.79E-01	1.68E-01	-1.47E+00

GWP=Global Warming Potential; LULUC=Land Use and Land Use Change; ODP=Ozone Depletion Potential; EP=Eutrophication Potential; AP=Acidification Potential; POCP=Photochemical ozone creation potential

*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

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Resource Use and Waste – 1 m^2 physical workspace maintained for 10 years

Impact Category	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE [MJ]	4.27E+02	4.15E+00	2.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-01	2.69E-01	2.30E+00	-7.39E+01
PERM [MJ]	-5.57E+01	4.15E+00	2.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-01	2.69E-01	2.30E+00	-7.37E+01
PERT [MJ]	3.71E+02	8.30E+00	5.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E-01	5.38E-01	4.60E+00	-1.48E+02
PENRE [MJ]	1.03E+03	9.58E+01	3.98E-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	2.48E+00	3.74E+00	2.08E+01	-1.29E+02
PENRM [MJ]	1.50E+02	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
PENRT [MJ]	1.18E+03	9.58E+01	3.98E-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	2.48E+00	3.74E+00	2.08E+01	-1.29E+02
SM [kg]	4.43E+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^3]	2.06E-01	1.40E-02	2.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-04	1.80E-02	4.68E-03	-3.79E-02
HWD [kg]	5.75E-05	1.30E-08	6.65E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-10	6.51E-10	3.89E-09	-3.10E-08
NHWD [kg]	1.60E+00	9.46E-03	2.02E-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	2.45E-04	4.62E-01	1.94E+01	-4.82E-01
RWD [kg]	2.64E-02	2.48E-04	2.99E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.43E-06	9.87E-05	2.61E-04	-4.56E-03
HLRW [kg]	3.65E-05	2.94E-07	3.17E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.61E-09	1.17E-07	2.27E-07	-5.63E-06
ILLRW [kg]	2.63E-02	2.48E-04	2.99E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.42E-06	9.85E-05	2.60E-04	-4.56E-03
CRU [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
MFR [kg]	2.29E+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	7.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER [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	6.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE [MJ]	1.86E-02	0.00E+00	3.67E-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	1.62E+01	1.06E+01	0.00E+00
PM [Disease Incidence]	2.22E-06	3.65E-07	1.19E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E-09	2.39E-08	8.46E-08	-3.66E-07
IRP**([kBq U235 eq]	1.55E+00	2.10E-02	3.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-04	8.40E-03	3.82E-02	-3.61E-01
ETP-fw* [CTUe]	3.86E+02	7.48E+01	4.55E-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	1.94E+00	1.85E+00	3.90E+01	-4.60E+01
HTP-c* [CTUh]	2.35E-07	1.86E-09	8.29E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-11	9.30E-11	3.88E-10	-1.99E-08
HTP-nc* [CTUh]	2.86E-07	2.96E-08	2.73E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.56E-10	6.14E-09	4.97E-08	-4.68E-08
SQP* [no unit]	2.49E+02	1.87E+01	6.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-01	4.68E-01	2.32E+00	-9.80E+01

PERE=Renewable Primary Energy from Non-Materials; PERM=Renewable Primary Energy from Materials; PERT=Total Renewable Primary Energy; PENRE=Non-Renewable Primary Energy from Non-Materials; PENRM=Non-Renewable Primary Energy from Materials; PENRT=Total Non-Renewable Primary Energy; SM=Use of Secondary Materials; RSF=Use of Renewable Secondary Fuels; NRSF=Use of Non-Renewable Secondary Fuels; FW=Net Use of Fresh Water; HWD=Hazardous Waste Disposed; NHWD=Non-Hazardous Waste Disposed; RWD=Radioactive Waste Disposed; HLRW=High Level Radioactive Waste; ILLRW=Intermediate- and Low-Level Radioactive Waste; CRU=Components for Reuse; MFR=Materials for Recycling; MER=Materials for Energy Recovery; EE=Exported Energy; PM=Particulate Matter; IRP=Ionizing Human Radiation; ETP-fw=Eco-toxicity freshwater; HTP-c=Human toxicity - Cancer; HTP-nc=Human toxicity - Noncancer; SQP=Land use related impacts / soil quality

*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
**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.

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