EUKLIDES

MILJØDOKUMENTASJON

FRAMERY FOUR

Framery



Sammendrag fra Euklides og originaldokumentene fra produsent og sertifiseringsorgan, samlet i én fil.

SAMLET 5. NOVEMBER 2026
EUKLIDES.NO/PRODUKTER/FRAMERY-FOUR

Kort fortalt

KLIMAAVTRYKK

1 710 kg CO_2e

Framery Four Meet (inkl. bord og sete)

OM TALLENE

Klimaavtrykket er GWP-total for fasene A1-A3 per stk (GWP-total, EN 15804+A2): råvarer, transport til fabrikken og produksjon, oppgitt i kilo CO_2-ekvivalenter. Tallene gjelder den representative stolen i miljødeklarasjonen. Andre utførelser ligger ifølge deklarasjonen innenfor 10 %.

HVA SOM GJELDER

Sammendraget er laget av Euklides for oversikt. Ved prosjektdokumentasjon og anbud er det originaldokumentene i denne filen som gjelder.

Dokumentene

DOKUMENT	UTSTEDT AV	GYLDIG TIL	SIDE
Miljødeklarasjon (EPD) EPD-IES-0012872	EPD International AB (The International EPD System)	21.02.2029	4

FINN DOKUMENTENE SELV

Miljødeklarasjon (EPD)
environdec.com/library/epd12872

OM PRODUSENTEN

Spørsmål om dokumentasjonen: post@euklides.no

Environmental Product Declaration

THE INTERNATIONAL EPD® SYSTEM

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

Framery Four

from

framery

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-12872
Publication date:	2024-03-20
Revised:	1st 2025-06-30, 2nd 2026-03-06
Valid until:	2029-02-21

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



Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 + A2 serves as the Core Product Category Rules (PCR) PCR 2019:14 Construction Products (v.1.3.3.) Product Category Rules (PCR): PCR 2019:14-c-PCR-021 Furniture (c-PCR to PCR 2019:14) (Adopted from EPD Norway)
PCR review was conducted by: Diogo Aparecido Lopes Silva, Universidade Federal de São Carlos
Life Cycle Assessment (LCA)
LCA accountability: UseLess Company Oy
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: Original EPD: Daniel Böckin, Miljögiraff AB, daniel@miljogiraff.se Updated EPD: Viktor Hakkarainen, CHM Analytics AB, viktor.hakkarainen@chm-analytics.com 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 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 ISO 14025.

Company information

Owner of the EPD: Framery Group Oyj, Patamäenkatu 7, 33900 Tampere, Finland
Contact: sustainability@framery.com
Description of the organisation: Framery is an industry pioneer and global leader engineering and manufacturing soundproof pods, services and solutions that enable people at work to focus on what really matters and get things done. Framery was born from a necessity to re-think the office and will continue to shape the world of work with innovative technology and inspired engineering . With focus on continuous innovation and improvement, we set the standard when it comes to delivering more value more sustainably.
Product-related or management system-related certifications: Framery's management system is certified against ISO 9001, ISO 14001, and ISO 45001
Name and location of production site: Framery Group Oyj, Tampere, Finland

Product information

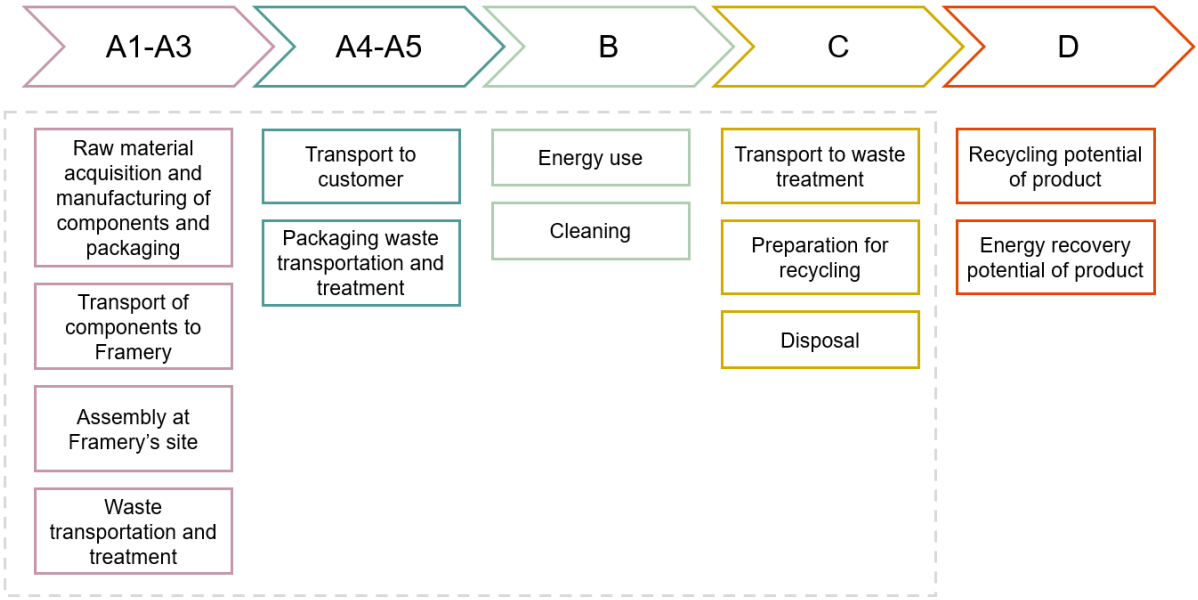
Product name: Framery Four
Product identification: Framery Four Meet (including table and seat).
Product description: Framery Four is an advanced meeting pod for up to 4 people. The sound insulation standards and echo-free acoustics keep you free from outside noise or distractions. Ventilation speeds ensure high air quality inside the pod, keeping you fresh and focused. You can also adjust the direction of the airflow. The pod offers optimal and adjustable lighting for hybrid and face-to-face meetings. The sofas of Framery Four have been designed with attention to detail. You can add pillows to gain even more comfort. The pod has a proper-sized table. The pod's exterior panels are made from powder coated steel. The matte black framing structures are made from aluminum and it also has sound control laminated glass. The interior walls and roof are made of a light steel structure with PET sound-absorbing material. The floor is an anti-static and stain resistant low loop pile carpet.
Technical data: The weight of the product is 640 kg including packaging and exterior size is 232,9 cm x 235,2 cm x 129,2 cm (h, w, d).
UN CPC code: 3812
Geographical scope: Global
The geographical scope is global based on the actual sales data to different countries which has been taken into account in the calculation.
Market where the declared product is distributed: Global

Energy source of the electricity used in manufacturing processes of module A3 (Framery's own factory) is wind power with emission factor 10,1 g CO_2 eq. / kWh. For component manufacturing, the use of electricity depends on the supplier's location and process information.

LCA information

Functional unit / declared unit: The lifetime of one Framery Four.
Reference service life: 10 years.
Time representativeness: Data was collected between October 2025 and January 2026. It is based on production years 2025, 2024, 2023 and 2022, depending on the process. Secondary data represents the best available data in January 2026.
Database(s) and LCA software used: Sphera LCA for experts, with Managed LCA Content (MLC) database 2025.2.
Description of system boundaries: Cradle to grave (A-C), and module D.

System diagram:



Excluded lifecycle stages: All modules included in the scope. Modules B1, B3-B5, B7 and C1 were deemed irrelevant for this product (see justifications below on Calculation assumptions). These are presented as zero in result tables.

More information: LCA practitioner: UseLess Company Oy, Lapinlahdenkatu 16, 00180 Helsinki, Finland. tel. +358 44 2161 611, maija.leino@useless.fi

Calculation assumptions:

The scope of calculations includes all known life cycle stages of the Framery pod, with cut-off criteria according to EN 15804:2012+A2:2019 standard. Assessment considers the most typical version of the product, so possible customization is not considered and the results are not valid in such situations. Allocation is based on mass, except for energy consumption at Framery's production site, which is based on working hours per pod. Calculation follows the previously mentioned standards and PCR, and the results are characterized in Gabi using EN15804 based on EF 3.1 factors. To enable results comparison, main assumptions follow the EPD of previous Framery pod model (Framery One, EPD registration number S-P-09430). However, full comparability cannot be guaranteed. Assumptions are needed in several stages, to complement data gaps or predict future operations. Conservative assumptions are used if supplier specific data is missing. The representativeness of secondary data depends on the available data sets in the MLC database. All the assumptions and limitations are specified in the background documentation of this study.

Module A1-A3:
The product is assembled from components that are manufactured by various suppliers. Supplier specific data was requested from the suppliers, and 78 % of them delivered enough information for LCA. For this product (Framery Four), 99 % of components' total mass is modelled based on supplier specific data. The remaining 1 % relies on supplementary information given by Framery. Component production covers e.g. raw materials and their further processing, energy and water consumption, transportations, waste, and emissions. 30 % of suppliers reported packaging materials for their

components, which was also accounted for. This does not include reusable packaging. After modelling the components, their transportation to Framery warehouse was added.

The assessment of Framery production is based production year 2024, except for the warehouse where the data originates from year 2022. The included operations are warehousing, internal logistics, assembly at Framery's production site, packaging, and waste management. As earlier stated, mass allocation is used to scale the annual data against one pod, except for production site energy consumption where working hours allocation was deemed more representative. Framery uses renewable diesel and biogas trucks for internal logistics, but basic gas and diesel trucks were used in modelling due to the absence of such data sets in the MLC database.

Module A4:
Transportation to users was calculated as a weighted average of different distribution routes, based on the share of sales into certain areas. For domestic transport legs in Finland, 7.5-16 t truck (Euro 6) was assumed similarly to previous Framery LCAs. For international trucks and shipping, same default assumptions were used as elsewhere in this study (Diesel truck, Euro 5, 26-28t capacity, 18.4 t payload; Container ship, 5,000 to 200,000 dwt payload capacity, deep sea). One of the distribution routes also includes a train freight, which was modelled with a global average diesel train data set.

Module A5:
When the pods are delivered to their use locations, they are installed. Installation is mostly manual work, so its environmental impact is assumed zero for this study. In the installation phase, the pod delivery packaging materials are removed. It is assumed that all the packaging materials end up in waste management. Waste transportation and treatment modelling follows the same principles as described in the end-of-life stage (modules C2-C4).

Module B1-B7:
The use of pods produces no direct environmental impacts (emissions or uptake), so module B1 is considered zero according to the PCR. The B2 module consists of cleaning the pod every two weeks with electric-powered vacuum cleaner. The pod surfaces are also wiped during cleaning, but that is excluded from this LCA due to minimal impact. The data set for electricity is a weighted average of grid mixes in the expected use areas. As with module A4, this is based on the share of sales declared by Framery. Replacement of parts, or refurbishment of the pod, are not expected during the use phase, and there is no data of possible repair operations. Following the PCR, modules B3-B5 are considered zero in this study.

The B6 module consists of electricity used by the pod itself, mainly for lighting and fans. There are three different power levels for the pod, depending on the use type: Stand-by / Idle energy usage, Refresh hours usage, Default work hours usage and Default video hours usage. The average temporal share of these use types was based on actual data, and the total electricity use for pod lifetime (10 years) was counted based on that. The data set for B6 electricity is the same as described in module B2.

There is no operational water consumption in the pod, which makes module B7 irrelevant for this product.

Module C1-C4:
The pod's demolition (module C1) is mostly manual work, and thus considered zero. The waste transportations are accounted for the pod materials in module C2. Following the assumption of previous Framery LCA, the default distance is 50 km and vehicle is Euro 5 class Diesel truck. Actual waste transportation routes and vehicles depend on the use phase location but cannot be tracked

precisely in advance. To assess recyclability, the pod was roughly divided to its main materials. Expected share of recycling, incineration and landfilling was then assumed for each fraction, based on PEF default recycling factors in Europe. No credits were given for materials and energy recovery in C modules; they were separately assessed in module D.

In the C3 module, preparation for recycling (sorting, shredding, etc.) was accounted for. The standard EN15804 states that wastes should be modelled until their end-of-waste state, and this was expected to happen after such treatments. Recycling process data was taken from various sources, since there was a lack of representative data sets in the MLC database. The recycled content was then counted in "materials for recycling" EPD indicator, and the rejects were assumed to be incinerated in module C4. Module C4 includes landfill and incineration processes for all the disposed waste fractions. Existing data sets from the MLC database were utilized for all the materials. For some specific material types, there was no exact data set available and the closest possible approximation was chosen.

The above-described method also applies for wastes in the A1-A3 and A5 modules, though there are some differences regarding the expected waste treatment methods in A1-A3 module in situations where supplier specific data was available.

Module D:
Potentially avoided burdens from waste utilization are assessed in module D. The scope of assessment is material and energy recovery in modules A5 (for pod packaging materials), and C3 and C4 (for pod material contents). Following the previous Framery LCA, production phase (module A1-A3) wastes are not considered in the D module of this study. For material recovery, the substitutions are assessed directly for materials at their end-of-waste state. No further processing is included in the calculations, so also the substituted materials are of unrefined quality. Only partial substitution is expected for some materials, due to lower quality or value. Credits are not given for materials with uncertain substitution potential or missing reference data. The valuable energy outputs are electricity and heat. Exported electricity is assumed to replace the average electricity mix of Framery pods' use locations. Exported thermal energy replaces heat from natural gas, as assumed in the previous Framery LCA as well.

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	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	1 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	0 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	0 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Modules that have zero as entries are presented in separate tables for the rest of this document.

Content declaration

Product

Product components	Weight, kg	Post-consumer recycled material, mass-% of product[1]	Biogenic material, weight-% and kg C/kg
Steel parts	147	7 %	
Laminated glass	190	8 %	
Aluminum parts	54	17 %	
Electronics and other metals	20	0 %	
Synthetic fibers and textile (PET, PA)	28	55 %	
Plastics (PC, ABS, PP, PA)	3	0 %	
Plywood	66	0 %	82 %; 0,4 kg C/kg
Synthetic rubber / thermoplastic elastomers (SBS, PP/EPDM)	7	0 %	
TOTAL	515	10 %	11 %; 0,052 kg C/kg

[1] Post consumer material according to applied PCR excludes pre-consumer scrap. According to ISO 14021:2016, the average recycled content, which includes external pre- and post-consumer recycled scrap, is approximately 10 %. Recycled contents including also internal scrap recycling in the supply chain is approximately 15 %.

Packaging materials	Weight, kg	Post-consumer recycled material, mass-% of packaging materials	Bio-based material, mass-% of packaging materials	Weight-% (vs. the product)	Weight biogenic carbon, kg C/kg
Wood	49	0 %	100 %	4,0 %	0,5
Plywood	43	0 %	100 %	0,0 %	0,5
Corrugated board	21	61 %	100 %	8,3 %	0,4
Steel	10	82 %	0 %	9,5 %	n.a.
Plastic (PE-LD, PE)	3	0 %	0 %	1,9 %	0,4
Total	125	17 %	98 %	24,3 %	0,45

There are no SVHC substances in the product, or their amounts are below EU regulation limits.

Recycled material

Provenience of recycled materials (pre-consumer or post-consumer) in the product: Some of the components and product packaging include recycled materials. The share of post-consumer recycled materials is presented in the table above.

Results of the environmental performance indicators

All environmental impacts are given per functional unit, one Framery Four. Usage of results from A1 – A3 without considering the results of module C is not encouraged.

Mandatory impact category indicators according to EN 15804

	Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B6**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO_2 eq.	2,00E+03	1,09E+02	7,77E+00	1,14E+01	5,07E+02	2,89E+00	1,43E+00	5,66E+01	-5,62E+02
GWP-biogenic	kg CO_2 eq.	-2,96E+02	2,45E-01	1,98E+02	8,66E-02	3,84E+00	6,40E-02	1,08E-02	9,74E+01	7,63E+01
GWP-luluc	kg CO_2 eq.	6,44E+00	6,34E-01	1,16E-02	5,35E-02	2,37E+00	2,97E-02	6,67E-03	1,76E-02	-1,85E-01
GWP-total	kg CO_2 eq.	1,71E+03	1,10E+02	1,26E+02	1,16E+01	5,14E+02	2,85E+00	1,45E+00	2,53E+02	-4,86E+02
ODP	kg CFC 11 eq.	9,52E-05	1,66E-11	1,54E-11	1,50E-10	6,64E-09	4,79E-13	1,87E-11	2,35E-11	-1,25E-09
AP	mol H^+ eq.	9,39E+00	1,29E+00	3,89E-02	4,49E-02	1,99E+00	1,49E-02	5,61E-03	6,54E-02	-3,42E+00
EP-freshwater	kg P eq.	3,76E-02	1,15E-04	2,29E-04	1,33E-05	5,92E-04	7,79E-06	1,67E-06	3,94E-04	-2,11E-04
EP-marine	kg N eq.	2,19E+00	5,56E-01	2,38E-02	7,01E-03	3,11E-01	7,33E-03	8,76E-04	3,46E-02	-4,69E-01
EP-terrestrial	mol N eq.	2,46E+01	6,09E+00	1,74E-01	8,00E-02	3,55E+00	7,96E-02	1,00E-02	2,64E-01	-4,99E+00
POCP	kg NMVOC eq.	5,67E+00	1,47E+00	6,06E-02	1,98E-02	8,76E-01	1,42E-02	2,47E-03	7,84E-02	-1,50E+00
ADP-minerals&metals*	kg Sb eq.	2,02E-02	6,81E-06	2,27E-07	1,65E-06	7,33E-05	1,92E-07	2,06E-07	1,66E-07	-1,11E-03
ADP-fossil*	MJ	3,53E+04	1,34E+03	7,11E+01	1,97E+02	8,74E+03	3,70E+01	2,47E+01	1,16E+02	-6,69E+03
WDP*	m^3	7,34E+02	4,35E-01	7,04E+00	3,02E+00	1,34E+02	1,32E-02	3,77E-01	1,06E+01	-5,24E+01
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								

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.*

	Modules with zero entries - results per functional or declared unit						
Indicator	**Unit**	**B1**	**B3**	**B4**	**B5**	**B7**	**C1**
GWP-fossil	kg CO_2 eq.	0	0	0	0	0	0
GWP-biogenic	kg CO_2 eq.	0	0	0	0	0	0
GWP-luluc	kg CO_2 eq.	0	0	0	0	0	0
GWP-total	kg CO_2 eq.	0	0	0	0	0	0
ODP	kg CFC 11 eq.	0	0	0	0	0	0
AP	mol H^+ eq.	0	0	0	0	0	0
EP-freshwater	kg P eq.	0	0	0	0	0	0
EP-marine	kg N eq.	0	0	0	0	0	0
EP-terrestrial	mol N eq.	0	0	0	0	0	0
POCP	kg NMVOC eq.	0	0	0	0	0	0
ADP-minerals&metals*	kg Sb eq.	0	0	0	0	0	0
ADP-fossil*	MJ	0	0	0	0	0	0
WDP*	m^3	0	0	0	0	0	0
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					

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.*

Additional mandatory and voluntary impact category indicators

	Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B6**	**C2**	**C3**	**C4**	**D**
GWP-GHG*	kg CO_2 eq.	2,03E+03	1,10E+02	5,69E+01	1,16E+01	5,14E+02	2,93E+00	1,45E+00	9,15E+01	-5,63E+02
Particulate matter	Disease incidences	1,38E-04	2,99E-05	2,65E-07	5,21E-07	2,31E-05	8,44E-08	6,50E-08	5,79E-07	-4,85E-05
Ionising radiation, human health**	kBq U235 eq.	3,26E+02	2,46E-01	3,36E-01	3,20E+00	1,42E+02	1,00E-02	4,00E-01	4,66E-01	-3,07E+01
Ecotoxicity, freshwater***	CTUe	2,40E+04	1,16E+03	6,43E+01	4,75E+01	2,11E+03	4,81E+01	5,98E+00	1,18E+02	-2,77E+03
Human toxicity, cancer***	CTUh	1,83E-05	1,71E-08	2,40E-09	2,77E-09	1,23E-07	6,50E-10	3,47E-10	2,90E-09	-8,56E-06
Human toxicity, non-cancer***	CTUh	2,99E-05	5,36E-07	2,38E-07	5,58E-08	2,47E-06	3,63E-08	6,97E-09	1,94E-07	-4,37E-06
Land Use***	Pt	7,42E+04	2,38E+02	1,42E+01	5,62E+01	2,49E+03	1,64E+01	7,01E+00	2,29E+01	-1,22E+03

** 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 CO2 is set to zero. Disclaimer for all optional impact category indicators: 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 experience 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.*

**** 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 experience with the indicator.*

	Modules with zero entries - results per functional or declared unit						
Indicator	**Unit**	**B1**	**B3**	**B4**	**B5**	**B7**	**C1**
GWP-GHG*	kg CO_2 eq.	0	0	0	0	0	0
Particulate matter	Disease incidences	0	0	0	0	0	0
Ionising radiation, human health	kBq U235 eq.	0	0	0	0	0	0
Ecotoxicity, freshwater	CTUe	0	0	0	0	0	0
Human toxicity, cancer	CTUh	0	0	0	0	0	0
Human toxicity, non-cancer	CTUh	0	0	0	0	0	0
Land Use	Pt	0	0	0	0	0	0

Resource use indicators

	Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B6**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1,71E+04	4,57E+01	1,29E+01	1,23E+02	5,45E+03	2,79E+00	1,53E+01	2,20E+01	-2,55E+03
PERM	MJ	3,84E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-8,99E+02	0,00E+00	0,00E+00
PERT	MJ	2,09E+04	4,57E+01	1,29E+01	1,23E+02	5,45E+03	2,79E+00	-8,83E+02	2,20E+01	-2,55E+03
PENRE	MJ	3,65E+04	1,34E+03	7,11E+01	1,97E+02	8,74E+03	3,70E+01	2,47E+01	1,16E+02	-6,69E+03
PENRM	MJ	1,07E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-4,55E+02	0,00E+00	0,00E+00
PENRT	MJ	3,76E+04	1,34E+03	7,11E+01	1,97E+02	8,74E+03	3,70E+01	-4,31E+02	1,16E+02	-6,69E+03
SM	kg	8,06E+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
RSF	MJ	1,95E+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
NRSF	MJ	1,62E-24	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	2,97E+01	3,33E-02	1,70E-01	1,42E-01	6,31E+00	1,38E-03	1,77E-02	2,49E-01	-6,69E+03
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								

Modules with zero entries - results per functional or declared unit							
Indicator	**Unit**	**B1**	**B3**	**B4**	**B5**	**B7**	**C1**
PERE	MJ	0	0	0	0	0	0
PERM	MJ	0	0	0	0	0	0
PERT	MJ	0	0	0	0	0	0
PENRE	MJ	0	0	0	0	0	0
PENRM	MJ	0	0	0	0	0	0
PENRT	MJ	0	0	0	0	0	0
SM	kg	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0
FW	m^3	0	0	0	0	0	0
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 functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B6**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1,62E+00	7,03E-08	1,18E-08	1,88E-07	8,33E-06	1,48E-09	2,34E-08	2,46E-08	-1,48E-05
Non-hazardous waste disposed	kg	2,43E+02	1,35E-01	2,52E+01	1,16E-01	5,16E+00	5,17E-03	1,45E-02	2,61E+02	-5,94E+01
Radioactive waste disposed	kg	3,02E+00	2,07E-03	2,29E-03	2,39E-02	1,06E+00	6,99E-05	2,98E-03	3,02E-03	-1,70E-01

Modules with zero entries - results per functional or declared unit							
Indicator	**Unit**	**B1**	**B3**	**B4**	**B5**	**B7**	**C1**
Hazardous waste disposed	kg	0	0	0	0	0	0
Non-hazardous waste disposed	kg	0	0	0	0	0	0
Radioactive waste disposed	kg	0	0	0	0	0	0

Output flow indicators

	Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B6**	**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
Material for recycling	kg	6,83E+01	0,00E+00	5,00E+01	0,00E+00	0,00E+00	0,00E+00	1,91E+02	0,00E+00	- 7,38E-01
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
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	2,35E+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

Modules with zero entries - results per functional or declared unit							
Indicator	**Unit**	**B1**	**B3**	**B4**	**B5**	**B7**	**C1**
Components for re-use	kg	0	0	0	0	0	0
Material for recycling	kg	0	0	0	0	0	0
Materials for energy recovery	kg	0	0	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0

Additional LCA results for Framery Four

In addition to the main environmental performance results presented earlier, additional results are reported based on alternative assumptions for use-phase electricity in modules B2 and B6. These additional results are provided to assess the influence of the electricity supply mix during the use phase on the climate change impact (global warming potential) over the product life cycle. The scenario results illustrate the potential impacts when renewable or nuclear electricity is used during the use phase. Two additional use-phase electricity scenarios are considered:

1. renewable electricity, and
2. nuclear electricity.

1) Renewable electricity during use phase

Use case	Indicator	Unit	A1-A3	A4	A5	B2	B6	C2	C3	C4
Reported use phase* (main environmental performance results)	GWP - fossil	kg CO2 eq.	2 005	109	8	11	507	3	1	57
Renewable electricity in use phase	GWP - fossil	kg CO2 eq.	2 005	109	8	1	23	3	1	57
Difference, total	GWP - fossil	kg CO2 eq.	0	0	0	-11	-485	0	0	0
Difference, %	GWP - fossil	kg CO2 eq.	0 %	0 %	0 %	-95 %	-95 %	0 %	0 %	0 %

* The data set for use phase electricity is a weighted average of grid mixes in the expected use areas.

2) Nuclear electricity during use phase

Use case	Indicator	Unit	A1-A3	A4	A5	B2	B6	C2	C3	C4
Reported use phase* (main environmental performance results)	GWP - fossil	kg CO2 eq.	2 005	109	8	11	507	3	1	57
Nuclear electricity in use phase	GWP - fossil	kg CO2 eq.	2 005	109	8	0	6	3	1	57
Difference, total	GWP - fossil	kg CO2 eq.	0	0	0	-11	-501	0	0	0
Difference, %	GWP - fossil	kg CO2 eq.	0 %	0 %	0 %	-99 %	-99 %	0 %	0 %	0 %

* The data set for use phase electricity is a weighted average of grid mixes in the expected use areas.

The results indicate that the selection of electricity supply during the use phase has a significant influence on the total life-cycle climate change impact of the product.

Differences versus previous versions

2024-03-20: Initial version of EPD

2025-06-30

The main differences from initial version are

- more supplier specific data for A1-A3 modules resulting in fewer assumptions for these life cycle stages,
- more accurate assumptions could be made for the use phase electricity consumption.

Also, minor change (approximately 1 %) in the results was due to the updates in the modelling database. As a result of these changes, the total sum (A1-C4) for indicator EN 15804 GWP fossil decreased 14 %.

2026-03-06

The main differences from most recent version are

- Completely new and also updated supplier specific data for A1-A3 modules resulting in fewer assumptions for these life cycle stages,
- Increased resource use efficiency in supply chain,
- Average electricity production emissions have decreased in Framery markets resulting in reduced emissions in use phase.

As a result of these changes, the total sum (A1-C4) for indicator EN 15804 GWP fossil decreased 6 %.

Some calculation parameters were updated between the verification and the publication of this EPD. As a result, the GWP-fossil result has changed by -0.1% compared to the value reviewed during verification.

References

General Programme Instructions of the International EPD® System. Version 4.0.

NPCR 026:2022 Part B for Furniture (references to EN 15804 +A2)

EN 15804:2012 + A2:2019, Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

EPD international. PCR 2019:14 for Construction products.

ISO 14040:2006, Environmental management - Life cycle assessment - Principles and framework

ISO 14044:2006, Environmental management - Life cycle assessment - Requirements and guidelines

Environmental product declaration (EPD) of Framery One. Registration number: S-P-09430

European Commission, PEFCR Guidance document, Annex C (v. 2.1, May 2020) – default recycling factors

UseLess Company 2025. Life cycle assessment of Framery pods: One, One Compact, Four, Six.

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