

# Product Declaration



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

## Polycarbonate sheets

from

**Palram**



Programme:	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
Programme operator:	EPD International AB
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*This EPD covers multiple products and is based on a representative product (1 kg of flat polycarbonate sheet). Results are considered representative for 1 kg of corrugated and multiwall sheets. The products covered are listed on page 4 of this document.*

*EPD validity statement: 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

<b>Programme:</b>	<i>The International EPD® System</i>
<b>Address:</b>	<i>EPD International AB Box 210 60 SE-100 31 Stockholm Sweden</i>
<b>Website:</b>	<a href="http://www.environdec.com">www.environdec.com</a>
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### Accountabilities for PCR, LCA and independent, third-party verification

#### Product Category Rules (PCR)

CEN standard EN 15804:2012+A2:2019/AC:2021 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR): *2019:14 Construction products (version 2.0.1)*  
*UN CPC code 36330 - Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials*

PCR review was conducted by: *The Technical Committee of the International EPD System.*  
See [www.environdec.com](http://www.environdec.com) 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)

#### Life Cycle Assessment (LCA)



LCA accountability: *Shiri Valershtein & Eli Shmushko, Green Target*  
Contact at: [office@yaadyarok.co.il](mailto:office@yaadyarok.co.il)  
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#### 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: *Samara Gonçalves Fernandes da Costa, from PIEP (<https://www.piep.pt/>)*



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 15804:2012+A2:2019/AC:2021, 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 15804:2012+A2:2019/AC:2021 and ISO 14025:2006

## Company information

Owner of the EPD: *Palram Industries Ltd*

Contact person: *Sandra Gallant, Technology manager*

Description of the organisation: *Palram is a world-leading manufacturer of extruded thermoplastic sheets and panel systems, made primarily from Polycarbonate and PVC. Palram products are designed to suit a diverse range of applications in various markets, which include DIY, construction, architectural projects, advertising, agricultural, glazing, and fabrication. Established in 1963 at Kibbutz Ramat Yohanan in Israel, the company has grown from its humble origins into an industry leader and multinational conglomerate with branches on six continents. By focusing on advanced technologies and outstanding talent, Palram offers professionals and users the solutions and support they need for a wide variety of applications.*

Product-related or management system-related certifications: *Palram's polycarbonate sheets are designed and manufactured in compliance with international standards to ensure performance and customer satisfaction. Palram UK (POLYCARB) operates an ISO 9001 certified quality management system. In addition, relevant products are CE marked to the following standards: SUNTUF - EN 1013:2012+A1:2014; PALSUN - EN 16240:2013; SUNLITE - EN 16153-2013+A1-2015.*

Name and location of production site(s): *Palram's polycarbonate sheets are manufactured at Palram Polycarb in Doncaster, UK.*

## Product information

Product name: *Polycarbonate sheets*

Product identification: *Flat solid (PALSUN), corrugated (SUNTUF) and multiwall (SUNLITE) polycarbonate sheets.*

Product description: *Polycarbonate (PC) sheets are lightweight, impact-resistant glazing and cover materials with high light transmission. The declared products include flat solid sheets, corrugated profiles and multiwall sheets in various grades, colours and thicknesses. UV-protected grades and solar-control tints are available depending on the product type.*

Intended applications: *Polycarbonate sheets are used in building and construction applications such as roofing and canopies, skylights, cladding, architectural glazing, greenhouses/agricultural covers, and protective barriers/safety glazing. Typical applications depend on the specific product type, grade and thickness.*

Key functionalities and technical performance: *The declared products provide light transmission and weather protection while maintaining high impact resistance and low weight compared to glass. UV-protected grades are available for outdoor exposure. Multiwall sheets provide additional functionality through their cellular structure, which improves thermal insulation compared to solid sheets. Product performance depends on the product type (solid/corrugated/multiwall), grade and thickness, and is defined by the relevant product specifications and standards for the specific application.*

Product classification system: *UN CPC code: 36330 - Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials*

Geographical scope: *The study represents the manufacturing of Polycarbonate sheet in Palram Polycarb's manufacturing site in Doncaster, UK.*

**Technical specifications:**

Product	Planning Material	Material group	Thickness [mm]
PALSUN - Flat Solid Polycarbonate Sheet	PALSUN/PALTUF	PALSUN/PALTUF	2-15
		PALSUN UV2	2-15
		PALTUF FR	2
		PALSUN UV2 REGENERAT	6
		PALSUN CB/ H.COAT	3-12
SUNTUF - Corrugated Polycarbonate Sheet	SUNTUF, SUNTUF UV2	SUNTUF VARIOUS COLORS AND PROFILES	0.7-2.5
		SUNTUF UV2	0.8-2.5
		SUNTUF BIOBASE	1
SUNLITE - Multiwall Polycarbonate Sheet	SUNLITE, SUNLITE UV2	SUNLITE	4-25
		SUNLITE UV2	4-32
		SUNLITE COLORS	4-32

**Typical physical properties of the PALSUN flat solid sheet family**

Essential characteristics	Standards	Values
Mechanical resistance	EN ISO 178 EN ISO 527	Flexural modulus >2200MPa Tensile strength >60MPa
Reaction to fire	EN 13501-1	B, s1, d0
Water vapour permeability	EN 12572	$3.8 \times 10^{-5}$ mg/m.h.Pa
Thermal properties: transmittance	EN ISO 6946	U (3mm) = 5.4 W/m <sup>2</sup> /K U (4mm) = 5.3 W/m <sup>2</sup> /K U (6mm) = 5.0 W/m <sup>2</sup> /K
Radiation properties: Light transmittance	-	$\tau_V = 82.4\%$
Radiation properties: Total solar energy transmittance	-	g = 85.1%
Durability: Variation of yellowness index	EN ISO 11664	Uncolored 2.5 ( $\Delta A$ ) Colored ( $\Delta D$ )
Durability: Variation of light transmittance	EN 16240 ISO 4892-2	Uncolored 2% ( $\Delta A$ ) Colored ( $\Delta D$ )
Durability: variation of deformation behavior	EN 14963	Cu 1, Ku 1

## LCA information

Declared unit: 1 kg of product

*This EPD study was conducted per 1 kg of flat polycarbonate sheet.*

*Extrusion processes for PALSUN (flat polycarbonate sheet), SUNTUF (corrugated polycarbonate sheet), and SUNLITE (multiwall polycarbonate sheet) are identical - same materials and energy flows. Energy flows for forming processes of the different sheets were assessed and found to be similar though they are conducted using different technologies.*

*Therefore, results reported for 1 kg of flat sheet are considered representative for 1 kg of corrugated and multiwall sheets. The material composition is constant across products, ensuring materiality in linearity.*

Compliance and impact assessment method: *The Life Cycle Assessment (LCA) study underlying this EPD was performed in accordance with EN 15804:2012+A2:2019/AC:2021 and the applicable Product Category Rules (PCR): 2019:14 Construction products (version 2.0.1) (The International EPD® System). Life cycle impact assessment (LCIA) was calculated using JRC characterisation factors, namely Environmental Footprint (EF) v3.1 (2023).*

Reference service life: NA

Time representativeness: *(EN 15941, Section 7.3.3): Primary manufacturing data (Module A1-A3) is based on January-December 2024 (12 months) site data from Palram Polycarb's Doncaster facility. No deviation from the one-year data collection period was applied.*

Database(s) and LCA software used: *Open LCA v2.0.1 & Ecoinvent v3.10*

Description of system boundaries: *Cradle-to-gate (A1–A3) with construction installation and end-of-life modules C1–C4 and Module D (A1–A3 + A5 + C1–C4 + D); the use stage is not included.*

Cut-off rules: *All inputs and outputs were considered in this study. The study does not include the manufacturing processes and maintenance of capital goods or spare parts as their lifespan is more than 3 years.*

*The environmental impacts of general organizational operations and employees' activities (offices, travels etc.) were not included in this study as well, as they are relevant for Palram's entire manufacturing sites and headquarters and not only for the production lines.*

*LPG consumption associated with forklifts was excluded from the model, as it relates to general on-site logistics and cannot be clearly allocated to the specific production lines of the polycarbonate sheet product family.*

*The UK site uses electricity from two sources:*

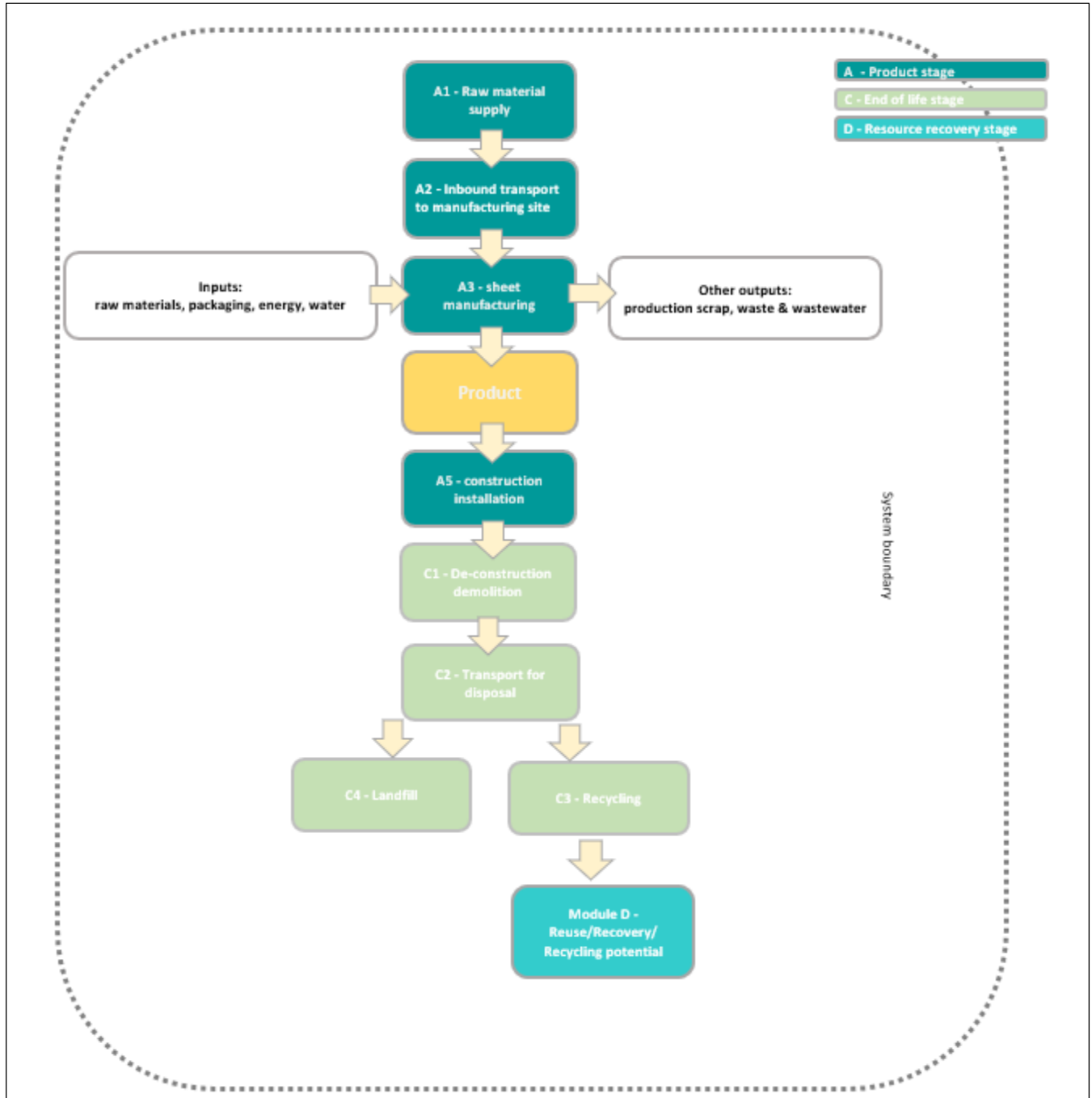
*A) Purchased electricity (Smartest Energy, UK): Palram's power supply is from the UK grid. The power mix was modelled according to the data available in Ecoinvent V3.10 (electricity residual mix in UK: 0.435 kgCO<sub>2</sub>eq/kWh).*

*(B) On-site solar PV (company-owned): Company-owned PV arrays supply electricity for on-site direct consumption. Under the applied method, this generation is treated as having zero associated emissions (0 kgCO<sub>2</sub>eq/kWh); therefore, this portion of electricity use was excluded from the LCA calculation.*

Allocations: *According to EN 15804:2012+A2:2019/AC:2021, allocations in this LCA were avoided where possible. Energy and waste data have been allocated on physical criteria of mass as this data in the process level was not available.*

System diagram:

Stage A4 and Module B were excluded from this LCA study.



The variation in GWP-GHG results for modules A1-A3 between the polycarbonate sheets products listed above is equal to zero for 1 kg of product since all the characteristics per kilogram of product are the same for all the included products.

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

	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	ND	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	EUR	UK	UK	ND	UK	ND	ND	ND	ND	ND	ND	ND	EUR	EUR	EUR	EUR	EUR
Specific data used	6.37%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Specific data:**

Product components	Source type	Source	Year	Data type	Percentage of primary GWP-GHG data results for A1-A3
Production of raw materials	Database	Ecoinvent 3.10	2024	Representative secondary data	0.00%
Transportation of raw materials to the production site	Information collected	SAP	2024	Primary data	0.63%
Manufacture of the product	Database	Ecoinvent 3.10	2024	Representative secondary data	5.74%
<b>Total percentage of primary data from GWP-GHG results for A1-A3</b>					<b>6.37%</b>

*The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories*

**Data quality assessment**

Data quality level was assessed separately for each declared module, using the criteria of the Product Environmental Footprint Category Rules (EN 15804:2012+A2:2019/AC:2021 – Annex E).

Geographical representativeness is rated good-very good, where “Good” corresponds to “Average data from larger area in which the area under study is included” and “Very good” corresponds to “Data from area under study”.

Technical representativeness is rated good-very good, where “Good” corresponds to “Average data from larger area in which the area under study is included” and “Very good” corresponds to “Data from processes and products under study” / “Data from area under study”.

Temporal representativeness is rated very good for all modules (“Less than 3 years”).

**Product stage (A1-A3):**Module A1 – Raw material supply

The product consists mainly from polymer components. This module includes the raw materials and packaging materials extraction and their manufacturing operations.

Module A2 – Transport (materials)

This module covers inbound transport of raw materials, additives, and related packaging from suppliers in the UK and Germany to the manufacturing site. Transport is calculated according to the origin of the sourced materials as both overseas and land transportation are accounted for.

Module A3 – Manufacturing

Polycarbonate sheets are manufactured at Palram’s Doncaster (UK) site through sheet extrusion, cutting to size and on-site packaging. The A3 stage includes the on-site manufacturing operations and associated consumption of purchased electricity and water, as well as on-site generated outputs such as production scrap, waste and wastewater sent to treatment.

Module A5 – Construction installation

Packaging waste treatment was calculated according to average common waste treatment methods per each material.

**End of Life stage (C1-C4):**Module C1 – De-construction and demolition

De-construction of the sheets is done using manpower alone. Thus, it is assumed that energy used for the de-construction is negligible and the environmental impacts of this module as well.

Module C2 – Transport

Estimated average distance from de-construction site to disposal facility is assumed to be a 100 km by truck.

Module C3 – Waste processing

The product is made entirely of a single polymer. As the end-of-life recycling rate is unknown and user-dependent, a conservative scenario is applied: no reuse/recovery/recycling. Accordingly, Module C3 has no declared impacts; disposal is reported under Module C4.

Module C4 – Disposal

This module covers the disposal of plastic waste to sanitary landfill; all end-of-life waste from the product is assumed to follow this treatment.

**Benefits and loads beyond the system boundary:**Module D - Reuse-Recovery-Recycling-potential

No potential for reuse, recovery, or recycling is considered since, at their end of life, the Polycarbonate sheets are landfilled as plastic waste at a sanitary landfill.

## Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Virgin polycarbonate resin	6.81E-01	0	0
In-house polycarbonate re-grind (closed loop)	2.92E-01	0	0
UV additive	2.67E-02	0	0
<b>TOTAL</b>	<b>1.00E+00</b>	<b>0</b>	<b>0</b>
Packaging materials	Weight, kg	Weight% (versus the product)	Weight biogenic carbon, kg C/kg
Polyethylene sheets	3.68E-03	0.33	0
Corrugated board boxes	5.33E-03	0.48	2.67E-03
Wooden pallets	9.51E-02	8.62	4.76E-02
<b>TOTAL</b>	<b>1.04E-01</b>	<b>9.43</b>	<b>5.02E-02</b>

Biogenic carbon containing materials in the product are less than 5% of the products' mass, thus the declaration of biogenic carbon content in the product is omitted.

The product declared in this LCA study does not contain substances from the SVHC list.

## Environmental Information

### Potential environmental impact – mandatory indicators according to EN 15804:2012+A2:2019/AC:2021

Results per functional or declared unit								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	5.55E+00	1.02E-02	0.00E+00	1.90E-02	0.00E+00	1.20E-01	0.00E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	-9.97E-02	1.02E-01	0.00E+00	1.32E-05	0.00E+00	9.20E-05	0.00E+00
GWP-luluc	kg CO <sub>2</sub> eq.	3.60E-03	9.25E-07	0.00E+00	6.31E-06	0.00E+00	6.40E-06	0.00E+00
GWP-total	kg CO <sub>2</sub> eq.	5.45E+00	1.12E-01	0.00E+00	1.90E-02	0.00E+00	1.20E-01	0.00E+00
GWP-GHG*	kg CO <sub>2</sub> eq.	5.56E+00	1.50E-02	0.00E+00	1.90E-02	0.00E+00	1.20E-01	0.00E+00
ODP	kg CFC 11 eq.	1.59E-07	4.69E-11	0.00E+00	3.78E-10	0.00E+00	2.89E-10	0.00E+00
AP	mol H <sup>+</sup> eq.	2.12E-02	2.09E-05	0.00E+00	3.96E-05	0.00E+00	7.97E-05	0.00E+00
EP-freshwater	kg P eq.	1.49E-03	8.17E-07	0.00E+00	1.29E-06	0.00E+00	1.19E-06	0.00E+00
EP-marine	kg N eq.	4.03E-03	2.36E-05	0.00E+00	9.51E-06	0.00E+00	2.65E-04	0.00E+00
EP-terrestrial	mol N eq.	4.08E-02	9.80E-05	0.00E+00	1.03E-04	0.00E+00	3.25E-04	0.00E+00
POCP	kg NMVOC eq.	2.20E-02	3.05E-05	0.00E+00	6.58E-05	0.00E+00	1.41E-04	0.00E+00
ADP-minerals&metals**	kg Sb eq.	5.67E-05	7.08E-09	0.00E+00	6.33E-08	0.00E+00	2.53E-08	0.00E+00
ADP-fossil**	MJ	1.14E+02	3.56E-02	0.00E+00	2.67E-01	0.00E+00	2.49E-01	0.00E+00
WDP**	m <sup>3</sup>	1.30E+00	2.57E-03	0.00E+00	1.31E-03	0.00E+00	1.18E-03	0.00E+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						

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

Disclaimer: The results of the end-of-life stage (modules C1–C4) should be considered when using the results of the product stage (modules A1–A3).

\* The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A2:2019/AC:2021

\*\*Disclaimer: 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

## Use of resources

		Results per functional or declared unit						
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
PERE	MJ	7.19E+00	6.98E-04	0.00E+00	4.59E-03	0.00E+00	3.73E-03	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
PERT	MJ	7.19E+00	6.98E-04	0.00E+00	4.59E-03	0.00E+00	3.73E-03	0.00E+00
PENRE	MJ	1.06E+02	3.27E-02	0.00E+00	2.42E-01	0.00E+00	2.26E-01	0.00E+00
PENRM	MJ.	7.47E+00	2.95E-03	0.00E+00	2.48E-02	0.00E+00	2.29E-02	0.00E+00
PENRT	MJ	1.14E+02	3.56E-02	0.00E+00	2.67E-01	0.00E+00	2.49E-01	0.00E+00
SM	kg	3.18E-01	6.68E-05	0.00E+00	3.06E-04	0.00E+00	1.97E-04	0.00E+00
RSF	MJ	1.59E-01	8.68E-06	0.00E+00	8.54E-05	0.00E+00	3.47E-05	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
FW	m <sup>3</sup>	3.55E-02	-1.14E-04	0.00E+00	3.59E-05	0.00E+00	-3.70E-03	0.00E+00
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							

The primary energy use indicators were calculated according to the rules defined in Annex 3 of the PCR for construction products V2.0.1. The option A was used for the calculation, in which the energy used as raw material was declared as an input to the model where it enters the product system and as an equally large output from the product system where it exits the system.

## Waste production

		Results per functional or declared unit						
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.91E-01	4.80E-04	0.00E+00	2.65E-04	0.00E+00	3.10E-04	0.00E+00
Non-hazardous waste disposed	kg	6.20E+00	2.50E-01	0.00E+00	2.94E-03	0.00E+00	4.96E+00	0.00E+00
Radioactive waste disposed	kg	1.54E-04	1.10E-08	0.00E+00	8.61E-08	0.00E+00	6.15E-08	0.00E+00

### Output flows

		Results per functional or declared unit						
Indicator	Unit	A1-A3	A5	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
Material for recycling	kg	2.87E-01	4.59E-05	0.00E+00	2.77E-04	0.00E+00	1.36E-04	0.00E+00
Materials for energy recovery	kg	7.13E-05	3.90E-09	0.00E+00	3.83E-08	0.00E+00	1.56E-08	0.00E+00
Exported energy, electricity	MJ	2.06E-01	5.07E-06	0.00E+00	4.54E-05	0.00E+00	2.36E-05	0.00E+00
Exported energy, thermal	MJ	3.96E-02	1.15E-05	0.00E+00	6.43E-05	0.00E+00	2.84E-05	0.00E+00

### Environmental impact potentials

		Results per functional or declared unit						
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
PM	Disease Incidence	2.11E-07	3.02E-10	0.00E+00	1.40E-09	0.00E+00	1.80E-09	0.00E+00
IRP*	kBq U235 eq.	6.38E-01	4.45E-05	0.00E+00	3.47E-04	0.00E+00	2.51E-04	0.00E+00
ETP-fw**	CTUe	2.47E+02	1.09E-01	0.00E+00	7.27E-02	0.00E+00	3.88E-01	0.00E+00
HTP-c**	CTUh	7.67E-08	3.06E-11	0.00E+00	1.35E-10	0.00E+00	6.54E-11	0.00E+00
HTP-nc**	CTUh	5.53E-08	2.48E-10	0.00E+00	1.73E-10	0.00E+00	1.16E-09	0.00E+00
SQP**	CTUh	2.66E+01	3.61E-02	0.00E+00	1.61E-01	0.00E+00	5.80E-01	0.00E+00
Acronyms	PM = Potential incidence of disease due to PM emissions; IRP = Potential Human exposure efficiency relative to U235; ETP-fw = Potential Comparative Toxic Unit for ecosystems; HTP-c = Potential Comparative Toxic Unit for humans - cancer effects; HTP-nc = Potential Comparative Toxic Unit for humans - non-cancer effects; SQP = Potential Soil quality index							

\* Disclaimer: 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.

\*\*Disclaimer: 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.

Abbreviation	Definition
EN	European Standard
EF	Environmental Footprint
ISO	International Organization for Standardization
CEN	European Committee for Standardization
CPC	Central Product Classification.
SVHC	Substances of Very High Concern
ND	Not Declared
CRU	Components for re-use
EEE	Exported electrical energy
EET	Exported thermal energy
EoL	End of life
EPD ®	Environmental Product Declaration
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, fraction of nutrients reaching terrestrial end compartment
Eq.	Equivalent(s)
ET-freshwater	Ecotoxicity, freshwater
EU	European union
FW	Use of net fresh water
GWP-biogenic	Global Warming Potential biogenic
GWP-fossil	Global Warming Potential fossil fuels
GWP-GHG	Global Warming Potential greenhouse gases
GWP-luluc	Global Warming Potential land use and land use change
GWP-total	Global Warming Potential total
ODP	Ozone Depletion Potential
AP	Acidification Potential
POCP	Photochemical Ozone Creation Potential
ADP-minerals&metals	Abiotic Depletion Potential, minerals and metals
ADP-fossil	Abiotic Depletion Potential, fossil resources
WDP	Water Deprivation Potential
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials

<b>PERM</b>	Use of renewable primary energy resources used as raw materials
<b>PERT</b>	Total use of renewable primary energy resources
<b>PENRE</b>	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials
<b>PENRM</b>	Use of non-renewable primary energy resources used as raw materials
<b>PENRT</b>	Total use of non-renewable primary energy resources
<b>SM</b>	Use of secondary material
<b>RSF</b>	Use of renewable secondary fuels
<b>NRSF</b>	Use of non-renewable secondary fuels
<b>PCR</b>	Product Category Rules
<b>LCIA</b>	Life Cycle Impact Assessment
<b>kg</b>	kilogram
<b>km</b>	kilometer
<b>LCA</b>	Life cycle assessment

## References

- General Program Instructions of the International EPD® System. Version 5.0.
- PCR 2019:14 Construction products (version 2.0.1)
- ISO14020:2000 Environmental labels and declarations – General principles
- ISO14025:2006 Environmental labels and declarations – Type III environmental declarations – principles and procedures
- ISO14040:2006 Environmental management – Life cycle assessment – principles and framework
- ISO14044:2006 Environmental management – Life cycle assessment – requirements and guidelines
- EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.
- JRC characterisation factors, namely Environmental Footprint (EF) v3.1 (2023).
- <https://landfill-site.com/list-of-landfill-sites-uk/>
- Ecoinvent database V3.10 + EN 15804:2012+A2:2019/AC:2021 Add-on.

