ENVIRONMENTAL PRODUCT DECLARATION

Smile Recycled Solid Surface

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

Products included in the EPD:

Smile Recycled Solid Surface

Product recently on the market - Results of this EPD shall be used with care as the LCI data is not yet based on 1 year of production which may result in increased uncertainty.

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

EPD of a single product from a manufacturer/service provider

EPD Owner
Smile Materials

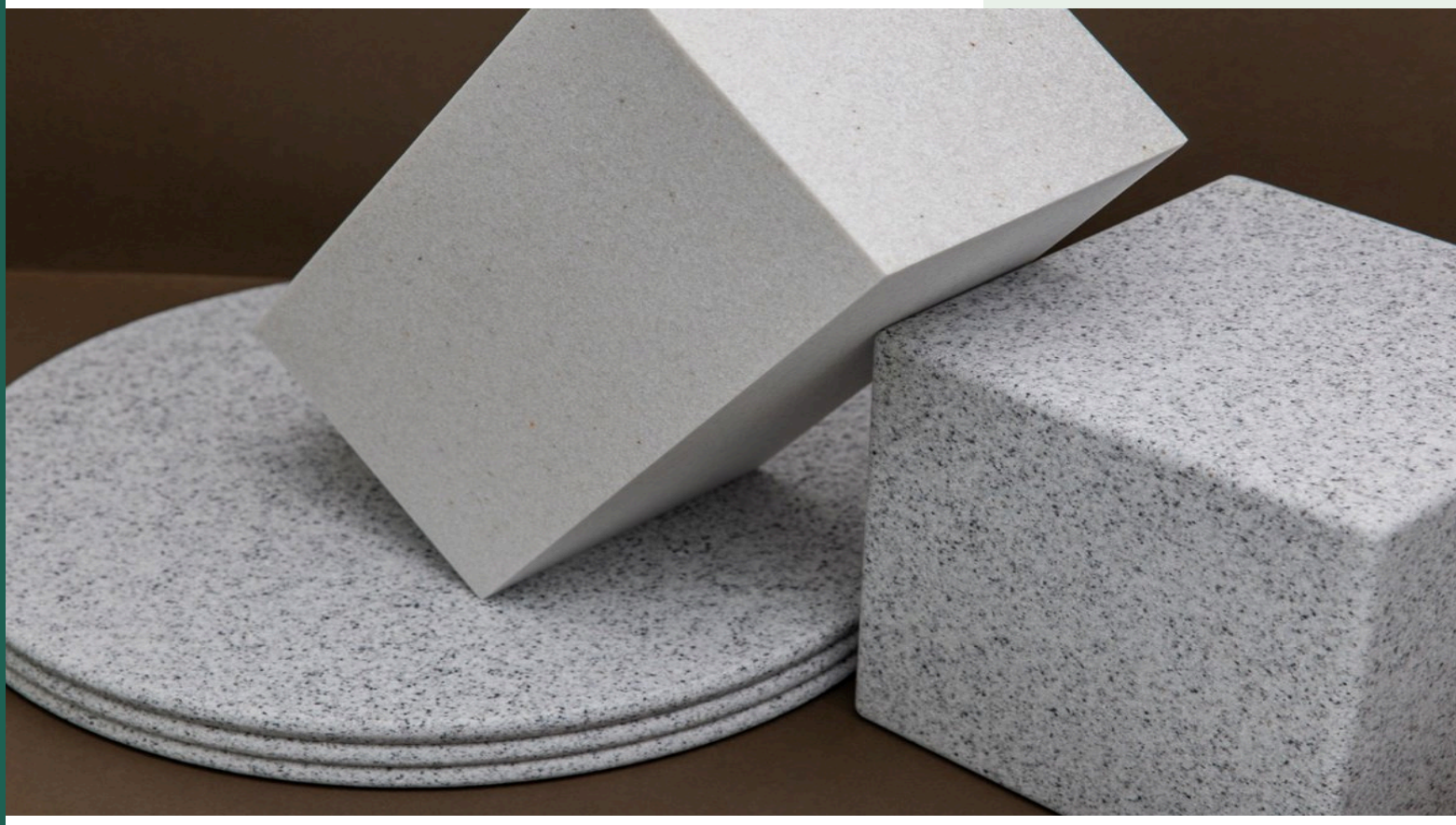
Programme
International EPD System
www.environdec.com

Programme operator
EPD International AB

Registration number
EPD-IES-0034376:001

Version date
2026-10-26

Validity date
2031-10-25



EPD INTERNATIONAL EPD SYSTEM

ECO PLATFORM EPD VERIFIED

SMILE MATERIALS

GENERAL INFORMATION

Programme information

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

Product category rules

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)	
Product Category Rules (PCR)	2019:14 Construction products (EN 15804+A2) (version 2.0.1) 2.0.1
PCR review was conducted by	The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Rob Rouwette (chair), Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/support.

Verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via	☑ EPD verification through an individual EPD verification ☐ EPD verification through EPD Process Certification* ☐ EPD verification through a fully pre-verified tool
Third-party verifier	Rajesh Singh (Sphera India)
Approved by	International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier	☑ Yes ☐ No

*EPD Process Certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.environdec.com.

Ownership and limitations on use of EPD

Limitations

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit 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 identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.

Ownership

The EPD Owner has the sole ownership, liability, and responsibility for the EPD.

INFORMATION ABOUT EPD OWNER

EPD Owner	Smile Materials
Contact person name	Rosalie McMillan
Contact person e-mail	marketing@smile-materials.com
Organisation address	Kingsway Swansea West Industrial Park SA5 4DL Swansea United Kingdom
LCA Practitioner	Jyoti Jyotsana, jyoti.jyotsana@metsims.com

Description of the organisation of the EPD Owner

Smile Materials is a UK-based manufacturer of decorative surface materials for commercial interiors. For more than three decades, the company has transformed discarded resources, including plastics and textiles such as denim, into durable, design-led panels and solid-surface products that visibly celebrate their recycled origins. Its portfolio includes the Smile Plastics and Smile Fibres ranges, alongside Smile Recycled Solid Surface, all designed to support recovery and recycling at the end of their useful life. Serving a global community of brands, architects and designers, Smile Materials' products are specified in award-winning commercial interior projects worldwide.

Our mission is a fully circular materials economy. Every product is designed for lasting performance and recovery at end of life, demonstrating that responsible material choices need not compromise on aesthetics or function. We hold ISO 14001 and ISO 9001 accreditations, reflecting our commitment to environmental responsibility and quality management. In that spirit, we are proud to share our environmental data through this declaration.

PRODUCT INFORMATION

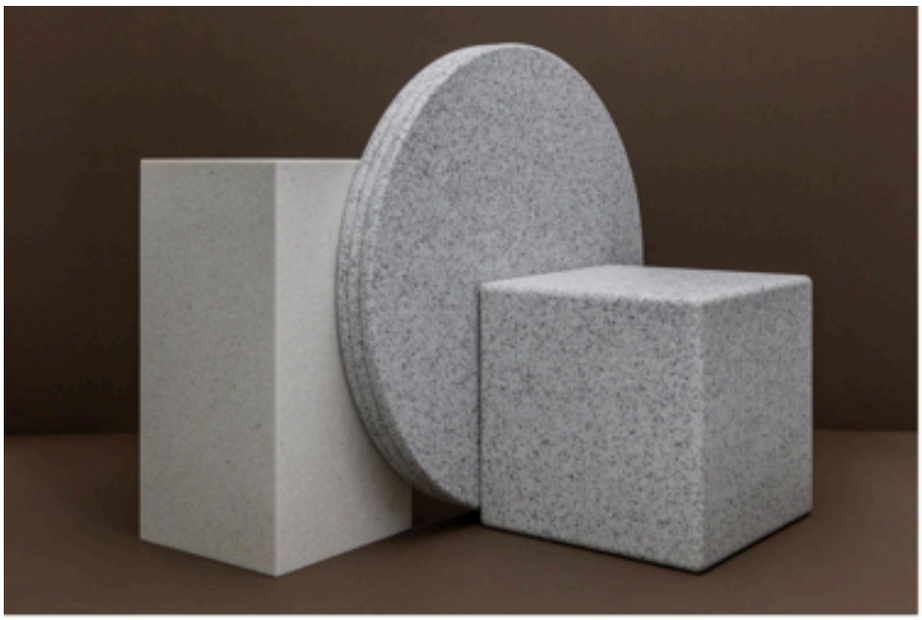
Product recently on the market.

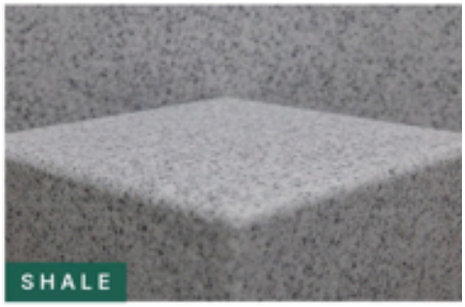
Results of this EPD shall be used with care as the LCI data for this products are not yet based on 1 year of production which may result in increased uncertainty.

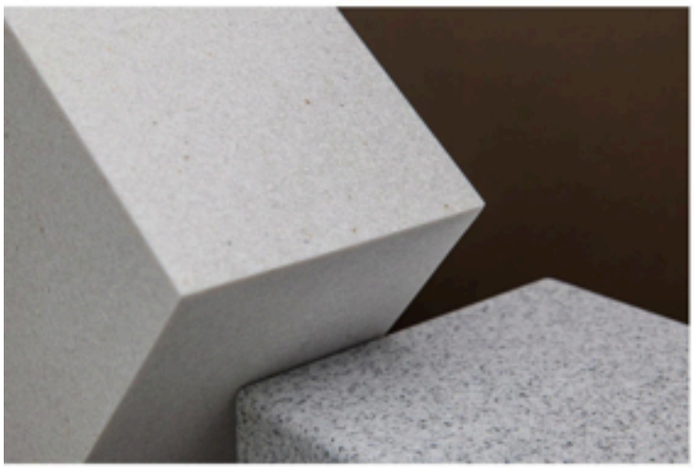
Product name	Smile Recycled Solid Surface
Product identification	Smile Recycled Solid Surface is a decorative solid-surface panel material developed for commercial and residential interior applications. The product is manufactured entirely from recycled material streams, comprising recovered solid-surface material diverted from landfill and recycled polyethylene terephthalate (PET) plastic.
Product description	Smile Recycled Solid Surface is manufactured in Swansea, South Wales, primarily from recovered solid-surface waste and recycled PET plastic. It contains 99.6% recycled material by mass, with the remaining 0.4% comprising virgin pigments used to achieve the required colour and finish. The visible reclaimed fragments create a distinctive appearance in every panel. The material is hard, dense, rigid, waterproof, and with good durability, and can be cut, CNC routed, hand-finished, and fabricated using standard workshop techniques for interior applications. Smile Materials also recycles production waste in-house. Independently chamber-tested for European and North American markets. RSS has very low VOC and formaldehyde emissions, with independent European and US testing demonstrating compliance with French A+, AgBB, CDPH, Indoor Air Comfort and Indoor Air Comfort GOLD emission limits, and BREEAM International's Exemplary Level VOC requirements. Its verified emissions performance, chemical screening, EPD, very low embodied carbon and 100% recycled content can support LEED, WELL and BREEAM objectives through product-level evidence, rather than product certification under these schemes. A take-back programme, covering 5% of panels at end of life, enables returned panels to be recovered, reprocessed and remanufactured into new products. However, Smile Materials can accept all clean recycled solid surface material returned to its manufacturing facility, beyond the proportion covered for the EPD.
Technical purpose of product	Smile Recycled Solid Surfaces is intended for use as a decorative and functional interior surface material where a robust, repairable, waterproof, and formable finish is required. The product may be fabricated using standard solid-surface and workshop techniques to create seamless details, profiles, and bespoke forms. Typical applications include: Worktops and countertops. Reception desks and counters. Wall cladding and feature panels. Furniture and cabinetry. Joinery elements and interior fittings. Hospitality, workplace, retail, and residential interior installations.
Manufacturing or service provision description	Smile Recycled Solid Surfaces are manufactured at Smile Materials' facility in Swansea, South Wales, using recovered solid-surface waste and recycled PET plastic. Incoming recycled feedstocks are received, sorted, inspected, and prepared for production. The material fractions are blended in accordance with the defined product formulation and processed under controlled heat and pressure to form solid-surface panels. Reclaimed fragments remain visibly embedded within the finished surface, creating the distinctive flecked appearance of the product.

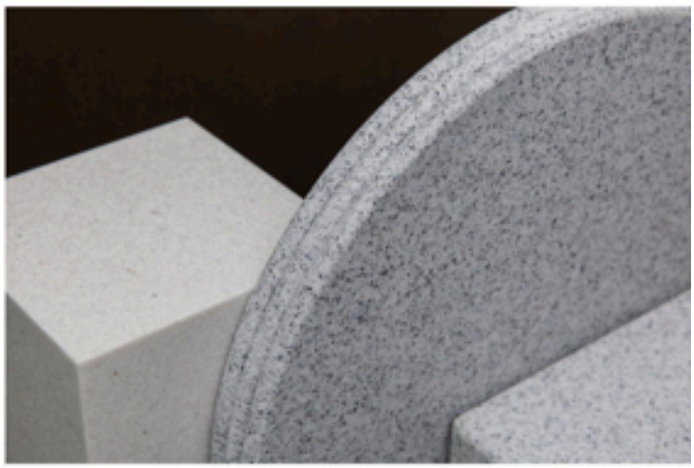
	The formed panels are cooled, inspected, and supplied ready for fabrication. Where required, panels may be cut, routed, or hand-finished using standard workshop techniques. Suitable production offcuts and process waste are recycled in-house and returned to the manufacturing system. The declared product is manufactured with the use of nominal virgin material.
Material properties	Thickness: 0.012 m Area density: 17.4 kg/m^2
Manufacturing site	Smile Materials Ltd Swansea Industrial Park Kingsway Swansea West Industrial Park SA5 4DL Swansea United Kingdom
UN CPC code	36390. Other plates, sheets, film, foil and strip, of plastics
Geographical scope(s)	Global
Actual or technical lifespan	10 year(s)

PRODUCT IMAGES









CONTENT DECLARATION

Hazardous and toxic substances	The product does not contain any substances from the SVHC candidate list in concentrations exceeding 0.1% of its weight.

PRODUCT CONTENT

Content name	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material[1], kg C/declared unit
Recycled PET	8.42	48.4	0	0
Reclaimed Solid Surface	7.99	45.9	0	0
Pigments	0.07	0	0	0
Secondary Recycled Solid Surface	0.93	5.3	0	0
Total	**17.41**	**99.6**	**0**	**0**
Note 1	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2			

PACKAGING MATERIALS

Material name	Mass, kg	Mass-% (versus the product)	Biogenic material[1], kg C/declared unit
Cardboard	0.13	0.75	0.01
Wooden pallets	1.31	7.54	0.11
LDPE film	0.01	0.06	0
Total	**1.45**	**8.35**	**0.12**
Note 1	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2		

LCA INFORMATION

EPD based on declared or functional unit	Declared unit
Declared unit and reference flow	Smile Recycled Solid Surface Area: 1 m^2
Conversion factor to mass	0.06
Are infrastructure or capital goods included in any upstream, core or downstream processes?	☐ Yes ☑ No
Data sources used for this EPD	ecoinvent database (general) ecoinvent 3.11 database
LCA Software	SimaPro 10.2
Additional information about the underlying LCA-based information	**Cut-Off rules:** The cut-off criteria were applied in accordance with PCR 2019:14, Construction products, version 2.0.1 defined as 1% of all material and energy flows to a single unit process and 5% of total inflows (mass and energy) per module. No cut-offs is applied exceeding to this rule. The below aspects is ommited from the study: Use Stage due to not being mandatory according to PCR 2019:14 v.2.0.1. Input of employees such as commuting. Machinery/infrastructure and their maintenance cycle due to the fact that these impacts are assumed to have negligible impacts according to the relevant PCR. **Allocation:** No allocation is applied for the calculation.
Version of the EN 15804 reference package	EF Reference Package 3.1
Characterisation methods	Characterisation factors according to EN 15804:2012+A2:2019 and the Environmental Footprint (EF 3.1) method, based on ISO 14040 and ISO 14044.
Technology description including background system	For the declared unit of 1 m^2, recycled solid-surface waste and recycled PET are sorted, inspected, blended, and formed into panels under controlled heat and pressure. Visible reclaimed fragments create the product's distinctive flecked appearance. The finished panels are then cooled, inspected, and supplied ready for fabrication or installation.
Scrap (recycled material) inputs contribution level	More than 10% of the GWP-GHG results in modules A1-A3 come from scrap inputs

SCRAP (RECYCLED MATERIAL) INPUTS DATA

Material scrap name	Material scrap value
Recycled plastics	38.31, kg CO_2 eq./tonne
The share of the total scrap input that was assumed to come with an environmental burden	2.6 %

Data quality assessment

Description of data quality assessment and reference years	Declaration (EPD) is based on both primary and secondary data. Estimated primary data was collected directly from the manufacturer's production team for the reference year 2026. The quality and representativeness of all data used for the EPD has been evaluated in terms of time, geography, and technology according to the principles outlined in EN 15804:2012+A2:2019, Annex E, and the data quality requirements specified in EN 15941:2010 for life cycle data. All relevant datasets were reviewed for completeness, consistency, and reliability, and the assessment confirmed that no data was classified as "poor" or "very poor" in quality.

DATA QUALITY ASSESSMENT

Process name	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Manufacturing of product	Collected data	EPD Owner	2026	Primary data	75%
Transport of the raw materials to manufacturing locations	Collected data	EPD Owner	2026	Primary data	0.7%
Total share of primary data, of GWP-GHG results for A1-A3					**75.7%**
Note	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.				

ELECTRICITY USED IN THE MANUFACTURING PROCESS IN A3 (A5 FOR SERVICES)

Type of electricity mix	Residual electricity mix on the market	
Energy sources	Hydro	0%
	Wind	0%
	Solar	0%
	Biomass	0%
	Geothermal	0%
	Waste	0%
	Nuclear	16.7%
	Natural gas	81%
	Coal	1.3%
	Oil	0.9%

	Peat	0%
	Other	0%
Climate impact (GWP-GHG):	0.46 kg CO_2 eq./kWh	

SYSTEM BOUNDARY

Description of the System boundary	b) Cradle to gate with options, modules C1-C4, module D and with optional modules (A1-A3 + C + D and additional modules).
Excluded modules	Yes, there is an excluded module, or there are excluded modules
Justification for omission of modules	B1-B7 modules are excluded. The use stage is not relevant as it is not applicable.

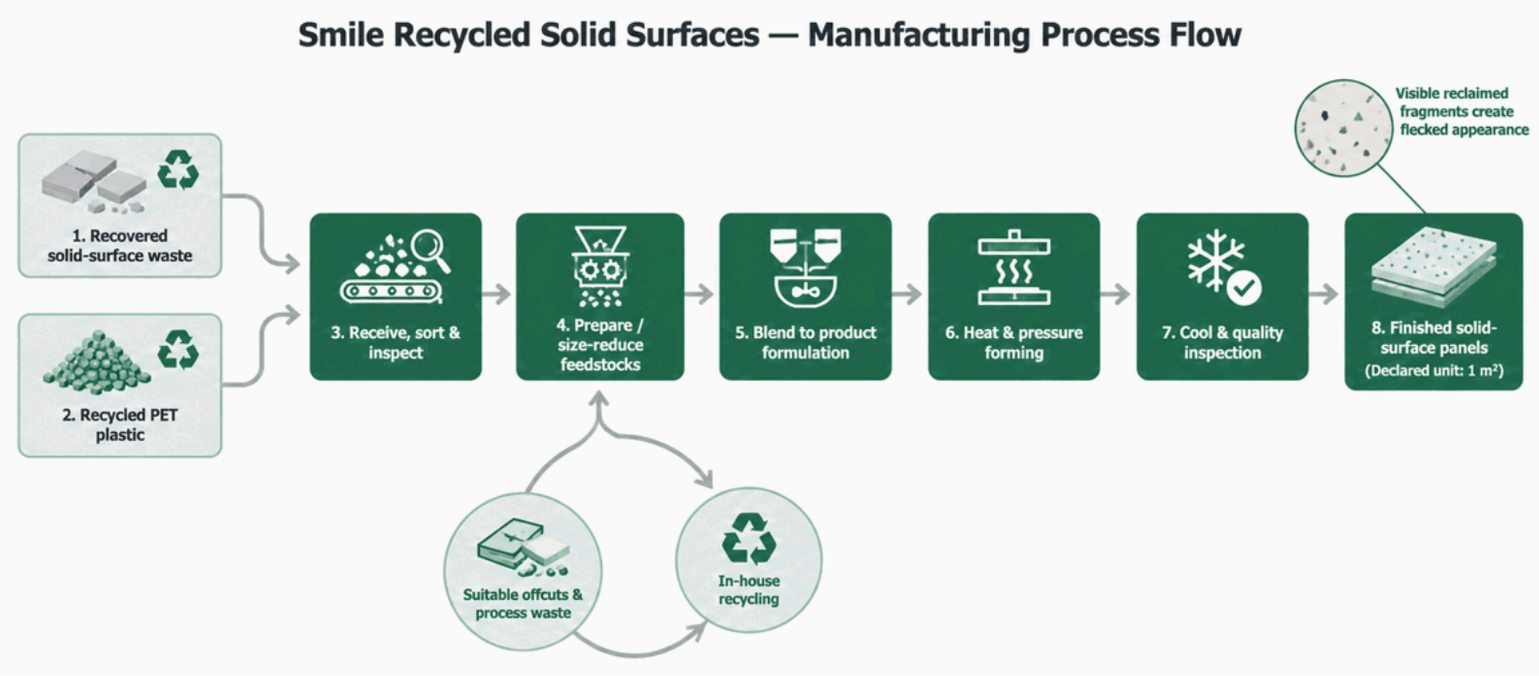
	Product stage			**Construction process stage**		**Use stage**							**End of life stage**				**Beyond product life cycle**
	Raw material supply	Transport	Manufacturing	Transport to site	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water 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	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	Global	Europe	United Kingdom	Global	Global	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Global	Global	Global	Global	Global
Share of specific data	75.7%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disclaimer	The share of specific/primary data and both variations (products and sites) refer to GWP-GHG results only.																

Description of the process flow diagram(s)

Smile Recycled Solid Surfaces are manufactured using recovered solid-surface waste and recycled PET plastic. The materials are received, sorted, inspected, and size-reduced before being blended into the required product formulation. The mixture is then formed into panels at Smile's premises under heat and pressure, followed by cooling and quality inspection.

The process supports circularity by returning suitable production offcuts and process waste to the in-house recycling loop for reprocessing. This reduces material waste and helps limit the need for virgin raw materials. The product is packed for the further use with cardboards, wooden pallets and LDPE films. The impacts of packaging wooden pallets are amortised with the number of use in its lifetime.

Process flow diagram(s) related images



DEFAULT SCENARIO

Name of the default scenario	Main Scenario
Description of the default scenario	This scenario was developed using actual estimated site specific data collected from Smile Materials for the year 2026.

Module A4: Transport to the building site

Explanatory name of the default scenario in module A4	Module A4
Description of the default scenario in module A4	In Module A4, the transportation of Smile Recycled Solid Surface from the production site to the relevant sales destinations/building sites is assessed.

Module A4 information	Value	Unit
Distance	900	km
Capacity utilization (including empty returns)	50	%
Bulk density of transported products	1450	kg/m^3
Volume capacity utilization factor (factor: =1 or <1 or ≥1 for compressed or nested packaged products)	1	N/A
Vehicle type	Transport, freight, lorry, 16-32 metric ton, diesel, EURO 5 {RER}| transport, freight, lorry, 16-32 metric ton, diesel, EURO 5 | EN15804, U	N/A
Fuel consumption	0.037 kg/tonnekm	N/A

Module A5: Installation in the building

Explanatory name of the default scenario in module A5	Module A5
Description of the default scenario in module A5	The wooden pallets, cardboards are incinerated with energy recovered in module D while the LDPE film is landfilled. The impacts of wooden pallets are amortised with the number of use (assumed to be 5 times) in its lifetime.

Module A5 information	Value	Unit
Net fresh water consumption during installation	0	N/A
End of life of packaging materials(Incineration)	1.44	kg
End of life of packaging materials (landfilled)	0.01	kg

Reference service life

Description of the default scenario in reference service life	The product is rated for an Estimated Service Life (ESL) of at least 10 years; however, it is important to note that this ESL is distinct from a Reference Service Life (RSL) as defined by ISO 15686.

Module C: End-of-life

Explanatory name of the default scenario in module C	End of Life
Description of the default scenario in module C	5% of the product is returned to industry (Smile Materials) for in house recycling (to maintain circularity with no use of virgin materials), 32% is downcycled to lower grade materials, 44% is incinerated with the energy recovery and rest 19% is landfilled (Plastics Europe, 2022).

Module D: Beyond product life cycle

Explanatory name of the default scenario in module D	Module D
Description of the default scenario in module D	The benefits from incineration are accounted in the form of electrical and thermal energy.

ADDITIONAL SCENARIO 1

Name of the additional scenario	100% Incineration
Description of the additional scenario	The entire product is incinerated and the benefit from the energy recovery in the form of electrical and heat energy is recovered in module D.

Module A4: Transport to the building site

Description of the additional scenario in module A4	Same as default module.

Module A5: Installation in the building

Description of the additional scenario in module A5	Same as default module.

Reference service life

Description of the additional scenario in reference service life	The product is rated for an Estimated Service Life (ESL) of at least 10 years; however, it is important to note that this ESL is distinct from a Reference Service Life (RSL) as defined by ISO 15686.

Module C: End-of-life

Description of the additional scenario in module C	C1 and C2 are same as default module. C3 includes the processing impact, D accounts the benefits from incineration of the product and packaging.

Module D: Beyond product life cycle

Description of the additional scenario in module D	The benefits from incineration are accounted in the form of electrical and thermal energy.

ADDITIONAL SCENARIO 2

Name of the additional scenario	100% Landfill
Description of the additional scenario	The entire product is landfilled as the worst-case scenario.

Module A4: Transport to the building site

Description of the additional scenario in module A4	Same as default scenario.

Module A5: Installation in the building

Description of the additional scenario in module A5	Same as default scenario.

Reference service life

Description of the additional scenario in reference service life	The product is rated for an Estimated Service Life (ESL) of at least 10 years; however, it is important to note that this ESL is distinct from a Reference Service Life (RSL) as defined by ISO 15686.

Module C: End-of-life

Description of the additional scenario in module C	C1 and C2 are same as default scenario. C4 includes the impact of landfill.

Module D: Beyond product life cycle

Description of the additional scenario in module D	Module D accounts the impact of incineration of the packaging materials.

ADDITIONAL SCENARIO 3

Name of the additional scenario	100% Downcycle
Description of the additional scenario	The entire product is downcycled to lower grade product. No materials credits are accounted since the product is already made from recycled materials, only processing impact is accounted in C3.

Module A4: Transport to the building site

Description of the additional scenario in module A4	Same as default scenario.

Module A5: Installation in the building

Description of the additional scenario in module A5	Same as default scenario.

Reference service life

Description of the additional scenario in reference service life	The product is rated for an Estimated Service Life (ESL) of at least 10 years; however, it is important to note that this ESL is distinct from a Reference Service Life (RSL) as defined by ISO 15686.

Module C: End-of-life

Description of the additional scenario in module C	C1 and C2 are same as default scenario. C3 accounts the processing impact while there are no material credits.

Module D: Beyond product life cycle

Description of the additional scenario in module D	The module D accounts only the benefits from the incineration of packaging materials.

ENVIRONMENTAL PERFORMANCE

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.

Mandatory environmental performance indicators according to EN 15804

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Climate change - total	GWP-total	kg CO_2 eq.	5.12E+0	6.80E-1	5.85E-1	ND	ND	ND	ND	ND	ND	ND	6.50E-3	2.12E-4	4.58E-1	1.19E-2	-4.83E+0
Climate change - fossil	GWP-fossil	kg CO_2 eq.	5.68E+0	6.80E-1	2.50E-3	ND	ND	ND	ND	ND	ND	ND	6.49E-3	2.12E-4	4.58E-1	1.19E-2	-4.82E+0
Climate change - biogenic	GWP-biogenic	kg CO_2 eq.	-5.62E-1	1.26E-6	5.83E-1	ND	ND	ND	ND	ND	ND	ND	1.40E-5	1.12E-7	2.85E-5	2.43E-7	-6.52E-3
Climate change - land use and land-use change	GWP-luluc	kg CO_2 eq.	5.25E-3	1.07E-5	6.91E-7	ND	ND	ND	ND	ND	ND	ND	2.67E-7	3.36E-9	3.92E-5	5.82E-7	-7.94E-3
Ozone depletion	ODP	kg CFC-11 eq.	1.73E-7	1.54E-8	2.64E-11	ND	ND	ND	ND	ND	ND	ND	9.87E-11	4.82E-12	4.71E-10	9.21E-11	-7.62E-8
Acidification	AP	mol H^+ eq.	1.69E-2	1.75E-3	2.33E-5	ND	ND	ND	ND	ND	ND	ND	5.99E-5	5.48E-7	2.50E-4	4.93E-5	-1.43E-2
Eutrophication aquatic freshwater	EP-freshwater	kg P eq.	1.40E-3	3.50E-6	1.01E-6	ND	ND	ND	ND	ND	ND	ND	5.41E-8	1.09E-9	1.23E-5	9.08E-8	-2.44E-3
Eutrophication aquatic marine	EP-marine	kg N eq.	4.03E-3	6.70E-4	1.78E-5	ND	ND	ND	ND	ND	ND	ND	2.83E-5	2.09E-7	1.12E-4	1.82E-4	-2.90E-3
Eutrophication terrestrial	EP-terrestrial	mol N eq.	3.95E-2	7.31E-3	1.16E-4	ND	ND	ND	ND	ND	ND	ND	3.10E-4	2.28E-6	1.06E-3	2.49E-4	-2.59E-2
Photochemical ozone formation	POCP	kg NMVOC eq.	1.32E-2	2.90E-3	2.94E-5	ND	ND	ND	ND	ND	ND	ND	9.24E-5	9.07E-7	2.96E-4	7.72E-5	-1.13E-2
Depletion of abiotic resources - minerals and metals	ADP-minerals&metals[1]	kg Sb eq.	4.04E-6	1.77E-8	4.09E-9	ND	ND	ND	ND	ND	ND	ND	2.27E-10	5.53E-12	6.43E-9	3.31E-10	-1.85E-7
Depletion of abiotic resources - fossil fuels	ADP-fossil[1]	MJ, net calorific value	1.06E+2	9.03E+0	2.07E-2	ND	ND	ND	ND	ND	ND	ND	8.48E-2	2.82E-3	4.95E-1	7.95E-2	-9.72E+1
Water use	WDP[1]	m^3 world eq. deprived	9.85E-1	7.17E-3	7.94E-4	ND	ND	ND	ND	ND	ND	ND	1.07E-4	2.24E-6	2.72E-2	-1.25E-2	-1.47E+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																
General 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/A1-A5 for services).																
Disclaimer 1	The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator																

Additional mandatory environmental performance indicators

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Climate change - GWP-GHG	GWP-GHG[1]	kg CO_2 eq.	5.70E+0	6.80E-1	2.51E-3	ND	ND	ND	ND	ND	ND	ND	6.50E-3	2.12E-4	4.58E-1	1.19E-2	-4.83E+0
Acronyms	GWP-GHG = Global warming potential greenhouse gas.																
General 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/A1-A5 for services).																
Disclaimer 1	The GWP-GHG indicator is termed GWP-IOBC/GHG in the ILCD+EPD+ data format. The 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.																

Additional voluntary environmental performance indicators according to EN 15804

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter emissions	PM	Disease incidence	1.10E-7	4.52E-8	2.64E-10	ND	ND	ND	ND	ND	ND	ND	1.73E-9	1.41E-10	3.41E-9	1.38E-9	-3.88E-8
Ionizing radiation - human health	IRP[1]	kBq U235 eq.	2.28E+0	2.27E-3	2.46E-5	ND	ND	ND	ND	ND	ND	ND	1.65E-5	7.10E-7	8.38E-3	2.32E-5	-1.77E+0
Eco-toxicity - freshwater	ETP-fw[2]	CTUe	1.07E+1	3.23E-1	1.33E-1	ND	ND	ND	ND	ND	ND	ND	2.43E-3	1.01E-4	8.80E-1	2.65E-1	-5.61E+0
Human toxicity - cancer effects	HTP-c[2]	CTUh	1.15E-9	4.61E-11	1.33E-1	ND	ND	ND	ND	ND	ND	ND	3.47E-10	1.44E-12	3.85E-11	6.53E-10	-4.12E-10
Human toxicity - non-cancer effects	HTP-nc[2]	CTUh	2.01E-8	4.52E-9	1.34E-4	ND	ND	ND	ND	ND	ND	ND	6.40E-12	1.41E-12	1.37E-9	8.73E-11	-1.70E-8
Land-use related impacts/soil quality	SQP[2]	Dimensionless	5.45E+1	1.15E-2	8.80E-10	ND	ND	ND	ND	ND	ND	ND	1.44E-4	3.59E-6	4.30E-2	4.29E-2	-7.11E+0
Acronyms	PM = Potential incidence of disease due to particulate matter 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; HTP-nc = Potential comparative toxic unit for humans; SQP = Potential soil quality index.																
General 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/A1-A5 for services).																
Disclaimer 1	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 2	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.																

Resource use indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ, net calorific value	1.06E+1	2.25E-2	4.98E+0	ND	ND	ND	ND	ND	ND	ND	1.85E-4	7.04E-6	6.79E-2	2.93E-4	-1.38E+1
PERM	MJ, net calorific value	4.98E+0	0.00E+0	-4.98E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PERT	MJ, net calorific value	1.56E+1	2.25E-2	1.92E-3	ND	ND	ND	ND	ND	ND	ND	1.85E-4	7.04E-6	6.79E-2	2.93E-4	-1.38E+1
PENRE	MJ, net calorific value	1.03E+2	9.03E+0	7.62E-1	ND	ND	ND	ND	ND	ND	ND	8.48E-2	2.82E-3	1.95E+0	4.45E-1	-9.72E+1
PENRM	MJ, net calorific value	2.50E+0	0.00E+0	-6.78E-1	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	-1.46E+0	-3.65E-1	0.00E+0
PENRT	MJ, net calorific value	1.06E+2	9.03E+0	8.48E-2	ND	ND	ND	ND	ND	ND	ND	8.48E-2	2.82E-3	4.95E-1	7.95E-2	-9.72E+1
SM	kg	1.73E+1	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
RSF	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	m^3	2.35E-2	1.75E-4	-4.69E-4	ND	ND	ND	ND	ND	ND	ND	2.57E-6	5.46E-8	6.61E-4	-2.90E-4	-3.95E-2
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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water.															
General 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/A1-A5 for services).															

Waste indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	0.00E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NHWD	kg	0.00E+0	0.00E+0	1.42E-1	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	3.30E+0	0.00E+0
RWD	kg	4.18E-4	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Acronyms	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed.															
General 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/A1-A5 for services).															

Output flow indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
CRU	kg	0.00E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	kg	5.57E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	5.57E+0	0.00E+0	0.00E+0
MER	kg	7.66E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	7.65E+0	0.00E+0	0.00E+0
EEE	MJ, net calorific value	0.00E+0	0.00E+0	9.17E-1	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	2.99E+1	0.00E+0	0.00E+0
EET	MJ, net calorific value	0.00E+0	0.00E+0	1.38E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	5.85E+1	0.00E+0	0.00E+0
Acronyms	CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy.															
General 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/A1-A5 for services).															

Results for additional scenarios for modules A4-C4

Additional scenario	100% Incineration
Description of the scenario/method	The entire product is incinerated and the benefit from the energy recovery in the form of electrical and heat energy is recovered in module D.

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Core Environmental impact indicators	Global warming potential - total (GWP-total)	kg CO2 eq.	5.12E+0	6.80E-1	5.85E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.50E-3	2.12E-4	6.46E-1	0.00E+0	-1.04E+1
Core Environmental impact indicators	Global warming potential - fossil fuels (GWP-fossil)	kg CO2 eq.	5.68E+0	6.80E-1	2.50E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.49E-3	2.12E-4	6.45E-1	0.00E+0	-1.01E+1
Core Environmental impact indicators	Global warming potential - biogenic (GWP-biogenic)	kg CO2 eq.	-5.62E-1	1.26E-6	5.83E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.40E-5	1.12E-7	4.94E-4	0.00E+0	-2.03E-1
Core Environmental impact indicators	Global warming potential - land use and land use change (GWP-luluc)	kg CO2 eq.	5.25E-3	1.07E-5	6.91E-7	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.67E-7	3.36E-9	4.03E-5	0.00E+0	-1.69E-2
Core Environmental impact indicators	Depletion potential of the stratospheric ozone layer (ODP)	kg CFC-11 eq.	1.73E-7	1.54E-8	2.64E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	9.87E-11	4.82E-12	5.25E-10	0.00E+0	-1.60E-7
Core Environmental impact indicators	Acidification potential, accumulated exceedance (AP)	mol H+ eq.	1.69E-2	1.75E-3	2.33E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.99E-5	5.48E-7	2.91E-4	0.00E+0	-3.03E-2
Core Environmental impact indicators	Eutrophication potential - freshwater (EP-freshwater)	kg P eq.	1.40E-3	3.50E-6	1.01E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.41E-8	1.09E-9	1.28E-5	0.00E+0	-5.21E-3
Core Environmental impact indicators	Eutrophication potential - marine (EP-marine)	kg N eq.	4.03E-3	6.70E-4	1.78E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.83E-5	2.09E-7	1.36E-4	0.00E+0	-6.14E-3
Core Environmental impact indicators	Eutrophication potential - terrestrial (EP-terrestrial)	mol N eq.	3.95E-2	7.31E-3	1.16E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.10E-4	2.28E-6	1.26E-3	0.00E+0	-5.47E-2
Core Environmental impact indicators	Photochemical ozone creation potential (POCP)	kg NMVOC eq.	1.32E-2	2.90E-3	2.94E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	9.24E-5	9.07E-7	3.46E-4	0.00E+0	-2.39E-2
Core Environmental impact indicators	Abiotic depletion potential - non-fossil resources (ADPE)	kg Sb eq.	4.04E-6	1.77E-8	4.09E-9	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.27E-10	5.53E-12	8.69E-9	0.00E+0	-3.94E-7
Core Environmental impact indicators	Abiotic depletion potential - fossil resources (ADPF)	MJ, net calorific value	1.06E+2	9.03E+0	2.07E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.48E-2	2.82E-3	5.25E-1	0.00E+0	-2.05E+2
Core Environmental impact indicators	Water (user) deprivation potential (WDP)	m3 world eq. deprived	9.85E-1	7.17E-3	7.94E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.07E-4	2.24E-6	3.61E-2	0.00E+0	-3.13E+0
Additional voluntary environmental impact indicators	Global warming potential (GWP-GHG)	kg CO2 eq.	5.70E+0	6.80E-1	2.51E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.50E-3	2.12E-4	3.61E-2	0.00E+0	0.00E+0
Additional voluntary environmental impact indicators	Particulate matter emissions (PM)	Disease incidence	1.10E-7	4.52E-8	2.64E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.73E-9	1.41E-11	3.59E-9	0.00E+0	-8.25E-8
Additional voluntary environmental impact indicators	Ionizing radiation, human health (IRP)	kBq U235 eq.	2.28E+0	2.27E-3	2.46E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.65E-5	7.10E-7	8.43E-3	0.00E+0	-3.76E+0

Additional voluntary environmental impact indicators	Eco-toxicity - freshwater (ETP-fw)	CTUe	1.07E+1	3.23E-1	1.33E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.43E-3	1.01E-4	1.25E+0	0.00E+0	-1.19E+1
Additional voluntary environmental impact indicators	Human toxicity, cancer effect (HTP-c)	CTUh	1.15E-9	4.61E-10	1.33E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.47E-10	1.44E-10	5.42E-10	0.00E+0	-8.73E-10
Additional voluntary environmental impact indicators	Human toxicity, non-cancer effects (HTP-nc)	CTUh	2.01E-8	4.52E-9	1.34E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.40E-12	1.41E-12	1.92E-9	0.00E+0	-3.60E-8
Additional voluntary environmental impact indicators	Land use related impacts/Soil quality (SQP)	dimensionless	5.45E+1	1.15E-2	8.80E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.44E-4	3.59E-6	4.73E-2	0.00E+0	-1.51E+1
Resource use indicators	Use of renewable primary energy as energy carrier (PERE)	MJ, net calorific value	1.06E+1	2.25E-2	4.98E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.85E-4	7.04E-6	6.90E-2	0.00E+0	-2.93E+1
Resource use indicators	Use of renewable primary energy resources used as raw materials (PERM)	MJ, net calorific value	4.98E+0	0.00E+0	-4.98E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Resource use indicators	Total use of renewable primary energy (PERT)	MJ, net calorific value	1.56E+1	2.25E-2	1.92E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.85E-4	7.04E-6	6.90E-2	0.00E+0	-2.93E+1
Resource use indicators	Use of non renewable primary energy as energy carrier (PENRE)	MJ, net calorific value	1.03E+2	9.03E+0	7.62E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.48E-2	2.82E-3	5.25E-1	0.00E+0	-2.05E+2
Resource use indicators	Use of non renewable primary energy resources used as raw materials (PENRM)	MJ, net calorific value	2.50E+0	0.00E+0	-6.78E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Resource use indicators	Total use of non renewable primary energy resource (PENRT)	MJ, net calorific value	1.06E+2	9.03E+0	8.48E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.48E-2	2.82E-3	5.25E-1	0.00E+0	-2.05E+2
Resource use indicators	Use of secondary material (SM)	kg	1.73E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.25E-5	0.00E+0	-4.60E-4
Resource use indicators	Use of renewable secondary fuels (RSF)	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.37E-6	0.00E+0	-7.61E-6
Resource use indicators	Use of non-renewable secondary fuels (NRSF)	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Resource use indicators	Net use of fresh water (FW)	m3	2.35E-2	1.75E-4	-4.69E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.57E-6	5.46E-8	8.68E-4	0.00E+0	-8.39E-2
Waste describing indicators	Hazardous waste disposed (HWD)	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Waste describing indicators	Non-hazardous waste disposed (NHWD)	kg	0.00E+0	0.00E+0	1.42E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Waste describing indicators	Radioactive waste disposed (RWD)	kg	4.18E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Components for re-use (CRU)	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Materials for recycling (MFR)	kg	5.57E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Materials for energy recovery (MER)	kg	7.66E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.73E+1	0.00E+0	0.00E+0
Output flows indicators	Exported electrical energy (EEE)	MJ, net calorific value	0.00E+0	0.00E+0	9.17E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Exported thermal energy (EET)	MJ, net calorific value	0.00E+0	0.00E+0	1.38E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Acronyms																	
Disclaimers																	
General 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/A1-A5 for services).																

Results for additional scenarios for modules A4-C4

Additional scenario	100% Landfill
Description of the scenario/method	The entire product is landfilled as the worst-case scenario.

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Core Environmental impact indicators	Global warming potential - total (GWP-total)	kg CO2 eq.	5.12E+0	6.80E-1	5.85E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.50E-3	2.12E-4	0.00E+0	4.19E-2	-1.16E-1
Core Environmental impact indicators	Global warming potential - fossil fuels (GWP-fossil)	kg CO2 eq.	5.68E+0	6.80E-1	2.50E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.49E-3	2.12E-4	0.00E+0	4.18E-2	-1.13E-1
Core Environmental impact indicators	Global warming potential - biogenic (GWP-biogenic)	kg CO2 eq.	-5.62E-1	1.26E-6	5.83E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.40E-5	1.12E-7	0.00E+0	1.66E-5	-2.25E-3
Core Environmental impact indicators	Global warming potential - land use and land use change (GWP-luluc)	kg CO2 eq.	5.25E-3	1.07E-5	6.91E-7	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.67E-7	3.36E-9	0.00E+0	2.03E-6	-1.87E-4
Core Environmental impact indicators	Depletion potential of the stratospheric ozone layer (ODP)	kg CFC-11 eq.	1.73E-7	1.54E-8	2.64E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	9.87E-10	4.82E-12	0.00E+0	3.41E-10	-1.79E-9
Core Environmental impact indicators	Acidification potential, accumulated exceedance (AP)	mol H+ eq.	1.69E-2	1.75E-3	2.33E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.99E-5	5.48E-7	0.00E+0	1.85E-4	-3.36E-4
Core Environmental impact indicators	Eutrophication potential - freshwater (EP-freshwater)	kg P eq.	1.40E-3	3.50E-6	1.01E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.41E-8	1.09E-9	0.00E+0	3.22E-7	-5.76E-5
Core Environmental impact indicators	Eutrophication potential - marine (EP-marine)	kg N eq.	4.03E-3	6.70E-4	1.78E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.83E-5	2.09E-7	0.00E+0	6.17E-4	-6.84E-5
Core Environmental impact indicators	Eutrophication potential - terrestrial (EP-terrestrial)	mol N eq.	3.95E-2	7.31E-3	1.16E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.10E-4	2.28E-6	0.00E+0	9.39E-4	-6.09E-4
Core Environmental impact indicators	Photochemical ozone creation potential (POCP)	kg NMVOC eq.	1.32E-2	2.90E-3	2.94E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	9.24E-5	9.07E-7	0.00E+0	2.89E-4	-2.67E-4
Core Environmental impact indicators	Abiotic depletion potential - non-fossil resources (ADPE)	kg Sb eq.	4.04E-6	1.77E-8	4.09E-9	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.27E-10	5.53E-10	0.00E+0	1.18E-9	-4.37E-9
Core Environmental impact indicators	Abiotic depletion potential - fossil resources (ADPF)	MJ, net calorific value	1.06E+2	9.03E+0	2.07E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.48E-2	2.82E-3	0.00E+0	2.95E-1	-2.29E+0
Core Environmental impact indicators	Water (user) deprivation potential (WDP)	m3 world eq. deprived	9.85E-1	7.17E-3	7.94E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.07E-4	2.24E-6	0.00E+0	-4.16E-2	-3.47E-2
Additional mandatory environmental indicator	Global warming potential (GWP-GHG)	kg CO2 eq.	5.70E+0	6.80E-1	2.51E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.50E-3	2.12E-4	0.00E+0	4.18E-2	-1.13E-1
Additional voluntary environmental impact indicators	Particulate matter emissions (PM)	Disease incidence	1.10E-7	4.52E-8	2.64E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.73E-9	1.41E-10	0.00E+0	5.22E-9	-9.14E-10
Additional voluntary environmental impact indicators	Ionizing radiation, human health (IRP)	kBq U235 eq.	2.28E+0	2.27E-3	2.46E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.65E-5	7.10E-7	0.00E+0	8.31E-5	-4.16E-2

Additional voluntary environmental impact indicators	Eco-toxicity - freshwater (ETP-fw)	CTUe	1.07E+1	3.23E-1	1.33E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.43E-3	1.01E-4	0.00E+0	8.85E-1	-1.32E-1
Additional voluntary environmental impact indicators	Human toxicity, cancer effect (HTP-c)	CTUh	1.15E-9	4.61E-10	1.33E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.47E-10	1.44E-10	0.00E+0	2.30E-10	-9.70E-10
Additional voluntary environmental impact indicators	Human toxicity, non-cancer effects (HTP-nc)	CTUh	2.01E-8	4.52E-9	1.34E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.40E-12	1.41E-12	0.00E+0	2.93E-10	-4.00E-10
Additional voluntary environmental impact indicators	Land use related impacts/Soil quality (SQP)	dimensionless	5.45E+1	1.15E-2	8.80E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.44E-4	3.59E-6	0.00E+0	1.43E-1	-1.67E-1
Resource use indicators	Use of renewable primary energy as energy carrier (PERE)	MJ, net calorific value	1.06E+1	2.25E-2	4.98E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.85E-4	7.04E-6	0.00E+0	1.04E-3	-3.24E-1
Resource use indicators	Use of renewable primary energy resources used as raw materials (PERM)	MJ, net calorific value	4.98E+0	0.00E+0	-4.98E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Resource use indicators	Total use of renewable primary energy (PERT)	MJ, net calorific value	1.56E+1	2.25E-2	1.92E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.85E-4	7.04E-6	0.00E+0	1.04E-3	-3.24E-1
Resource use indicators	Use of non renewable primary energy as energy carrier (PENRE)	MJ, net calorific value	1.03E+2	9.03E+0	7.62E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.48E-2	2.82E-3	0.00E+0	2.95E-1	-2.29E+0
Resource use indicators	Use of non renewable primary energy resources used as raw materials (PENRM)	MJ, net calorific value	2.50E+0	0.00E+0	-6.78E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Resource use indicators	Total use of non renewable primary energy resource (PENRT)	MJ, net calorific value	1.06E+2	9.03E+0	8.48E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.48E-2	2.82E-3	0.00E+0	2.95E-1	-2.29E+0
Resource use indicators	Use of secondary material (SM)	kg	1.73E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.86E-6	-5.09E-6
Resource use indicators	Use of renewable secondary fuels (RSF)	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.83E-7	-8.45E-8
Resource use indicators	Use of non-renewable secondary fuels (NRSF)	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Resource use indicators	Net use of fresh water (FW)	m3	2.35E-2	1.75E-4	-4.69E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.57E-6	5.46E-8	0.00E+0	-9.68E-4	-9.30E-4
Waste describing indicators	Hazardous waste disposed (HWD)	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Waste describing indicators	Non-hazardous waste disposed (NHWD)	kg	0.00E+0	0.00E+0	1.42E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.73E+1	0.00E+0
Waste describing indicators	Radioactive waste disposed (RWD)	kg	4.18E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Components for re-use (CRU)	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Materials for recycling (MFR)	kg	5.57E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Materials for energy recovery (MER)	kg	7.66E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Exported electrical energy (EEE)	MJ, net calorific value	0.00E+0	0.00E+0	9.17E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Exported thermal energy (EET)	MJ, net calorific value	0.00E+0	0.00E+0	1.38E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Acronyms																	
Disclaimers																	
General 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/A1-A5 for services).																

Results for additional scenarios for modules A4-C4

Additional scenario	100% Downcycle
Description of the scenario/method	The entire product is downcycled to lower grade product. No materials credits are accounted since the product is already made from recycled materials, only processing impact is accounted in C3.

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Core Environmental impact indicators	Global warming potential - total (GWP-total)	kg CO2 eq.	5.12E+0	6.80E-1	5.85E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.50E-3	2.12E-4	4.58E-1	0.00E+0	-1.16E-1
Core Environmental impact indicators	Global warming potential - fossil fuels (GWP-fossil)	kg CO2 eq.	5.68E+0	6.80E-1	2.50E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.49E-3	2.12E-4	4.58E-1	0.00E+0	-1.13E-1
Core Environmental impact indicators	Global warming potential - biogenic (GWP-biogenic)	kg CO2 eq.	-5.62E-1	1.26E-6	5.83E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.40E-5	1.12E-7	2.85E-5	0.00E+0	-2.25E-3
Core Environmental impact indicators	Global warming potential - land use and land use change (GWP-luluc)	kg CO2 eq.	5.25E-3	1.07E-5	6.91E-7	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.67E-7	3.36E-9	3.92E-5	0.00E+0	-1.87E-4
Core Environmental impact indicators	Depletion potential of the stratospheric ozone layer (ODP)	kg CFC-11 eq.	1.73E-7	1.54E-8	2.64E-11	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	9.87E-11	4.82E-12	4.71E-10	0.00E+0	-1.79E-9
Core Environmental impact indicators	Acidification potential, accumulated exceedance (AP)	mol H+ eq.	1.69E-2	1.75E-3	2.33E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.99E-5	5.48E-7	2.50E-4	0.00E+0	-3.36E-4
Core Environmental impact indicators	Eutrophication potential - freshwater (EP-freshwater)	kg P eq.	1.40E-3	3.50E-6	1.01E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.41E-8	1.09E-9	1.23E-5	0.00E+0	-5.76E-5
Core Environmental impact indicators	Eutrophication potential - marine (EP-marine)	kg N eq.	4.03E-3	6.70E-4	1.78E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.83E-5	2.09E-7	1.12E-4	0.00E+0	-6.84E-5
Core Environmental impact indicators	Eutrophication potential - terrestrial (EP-terrestrial)	mol N eq.	3.95E-2	7.31E-3	1.16E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.10E-4	2.28E-6	1.06E-3	0.00E+0	-6.09E-4
Core Environmental impact indicators	Photochemical ozone creation potential (POCP)	kg NMVOC eq.	1.32E-2	2.90E-3	2.94E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	9.24E-5	9.07E-7	2.96E-4	0.00E+0	-2.67E-4
Core Environmental impact indicators	Abiotic depletion potential - non-fossil resources (ADPE)	kg Sb eq.	4.04E-6	1.77E-8	4.09E-9	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.27E-10	5.53E-12	6.43E-9	0.00E+0	-4.37E-9
Core Environmental impact indicators	Abiotic depletion potential - fossil resources (ADPF)	MJ, net calorific value	1.06E+2	9.03E+0	2.07E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.48E-2	2.82E-3	4.95E-1	0.00E+0	-2.29E+0
Core Environmental impact indicators	Water (user) deprivation potential (WDP)	m3 world eq. deprived	9.85E-1	7.17E-3	7.94E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.07E-4	2.24E-6	2.72E-2	0.00E+0	-3.47E-2
Additional mandatory environmental indicator	Global warming potential (GWP-GHG)	kg CO2 eq.	5.70E+0	6.80E-1	2.51E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.50E-3	2.12E-4	4.58E-1	0.00E+0	-1.13E-1
Additional voluntary environmental impact indicators	Particulate matter emissions (PM)	Disease incidence	1.10E-7	4.52E-8	2.64E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.73E-9	1.41E-11	3.41E-9	0.00E+0	-9.14E-10

Additional voluntary environmental impact indicators	Ionizing radiation, human health (IRP)	kBq U235 eq.	2.28E+0	2.27E-3	2.46E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.65E-5	7.10E-7	8.38E-3	0.00E+0	-4.16E-2
Additional voluntary environmental impact indicators	Eco-toxicity - freshwater (ETP-fw)	CTUe	1.07E+1	3.23E-1	1.33E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.43E-3	1.01E-4	8.80E-1	0.00E+0	-1.32E-1
Additional voluntary environmental impact indicators	Human toxicity, cancer effect (HTP-c)	CTUh	1.15E-9	4.61E-11	1.33E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.47E-10	1.44E-10	3.85E-11	0.00E+0	-9.70E-10
Additional voluntary environmental impact indicators	Human toxicity, non-cancer effects (HTP-nc)	CTUh	2.01E-8	4.52E-9	1.34E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.40E-10	1.41E-12	1.37E-9	0.00E+0	-4.00E-10
Additional voluntary environmental impact indicators	Land use related impacts/Soil quality (SQP)	dimensionless	5.45E+1	1.15E-2	8.80E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.44E-4	3.59E-6	4.30E-2	0.00E+0	-1.67E-1
Resource use indicators	Use of renewable primary energy as energy carrier (PERE)	MJ, net calorific value	1.06E+1	2.25E-2	4.98E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.85E-4	7.04E-6	6.79E-2	0.00E+0	-3.24E-1
Resource use indicators	Use of renewable primary energy resources used as raw materials (PERM)	MJ, net calorific value	4.98E+0	0.00E+0	-4.98E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Resource use indicators	Total use of renewable primary energy (PERT)	MJ, net calorific value	1.56E+1	2.25E-2	1.92E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.85E-4	7.04E-6	6.79E-2	0.00E+0	-3.24E-1
Resource use indicators	Use of non renewable primary energy as energy carrier (PENRE)	MJ, net calorific value	1.03E+2	9.03E+0	7.62E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.48E-2	2.82E-3	1.95E+0	0.00E+0	-2.29E+0
Resource use indicators	Use of non renewable primary energy resources used as raw materials (PENRM)	MJ, net calorific value	2.50E+0	0.00E+0	-6.78E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.46E+0	0.00E+0	0.00E+0
Resource use indicators	Total use of non renewable primary energy resource (PENRT)	MJ, net calorific value	1.06E+2	9.03E+0	8.48E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.48E-2	2.82E-3	4.95E-1	0.00E+0	-2.29E+0
Resource use indicators	Use of secondary material (SM)	kg	1.73E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-5.09E-6
Resource use indicators	Use of renewable secondary fuels (RSF)	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-8.45E-8
Resource use indicators	Use of non-renewable secondary fuels (NRSF)	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Resource use indicators	Net use of fresh water (FW)	m3	2.35E-2	1.75E-4	-4.69E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.57E-6	5.46E-8	6.61E-4	0.00E+0	-9.30E-4
Waste describing indicators	Hazardous waste disposed (HWD)	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Waste describing indicators	Non-hazardous waste disposed (NHWD)	kg	0.00E+0	0.00E+0	1.42E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Waste describing indicators	Radioactive waste disposed (RWD)	kg	4.18E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Components for re-use (CRU)	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Materials for recycling (MFR)	kg	5.57E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.73E+1	0.00E+0	0.00E+0
Output flows indicators	Materials for energy recovery (MER)	kg	7.66E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Exported electrical energy (EEE)	MJ, net calorific value	0.00E+0	0.00E+0	9.17E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Output flows indicators	Exported thermal energy (EET)	MJ, net calorific value	0.00E+0	0.00E+0	1.38E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Acronyms																	
Disclaimers																	

General 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/A1-A5 for services).

ABBREVIATIONS

ADP Abiotic Depletion Potential

ADP-fossil Abiotic depletion potential for fossil resources (MJ)

ADP-minerals&metals Abiotic depletion potential for non-fossil resources (kg Sb eq.)

AP Acidification Potential (mol H▲ eq.)

CAS No. Chemical Abstracts Service Number

CEN European Committee for Standardization

CFC-11 eq. Chlorofluorocarbon-11 Equivalents

CFR Components for Reuse (kg)

CLC Co-location centre

CO↔ eq. Carbon Dioxide Equivalents

CPC Central product classification

EC No. European Community Number

EEE Exported Energy, Electricity (MJ)

EET Exported Energy, Thermal (MJ)

EF Environmental Footprint

EN European Norm (Standard)

EP Eutrophication Potential

EP-freshwater Freshwater eutrophication potential (kg P eq.)

EP-marine Marine eutrophication potential (kg N eq.)

EP-terrestrial Terrestrial eutrophication potential (mol N eq.)

FW Use of net fresh water (m^3)

GHG Greenhouse gas

GHS Globally harmonized system of classification and labelling of chemicals

GLO Global

GPI General Programme Instructions

GRI Global Reporting Initiative

GWP Global Warming Potential (kg CO↔ eq.)

GWP-biogenic Global Warming Potential from biogenic sources (kg CO↔ eq.)

GWP-fossil Global Warming Potential from fossil sources (kg CO↔ eq.)

GWP-GHG Global Warming Potential for greenhouse gases (kg CO↔ eq.)

GWP-luluc Global Warming Potential from land use and land use change (kg CO↔ eq.)

GWP-total Total Global Warming Potential (kg CO↔ eq.)

HW Hazardous Waste (disposed) (kg)

ISO International Organization for Standardization

kg Kilogram

kg C Kilograms of Carbon

kg CO↔ eq. Kilograms of Carbon Dioxide Equivalent

m^3 Cubic Meter

MER Materials for Energy Recovery (kg)

MJ Megajoule

MR Material for Recycling (kg)

N eq. Nitrogen Equivalents

ND Not Declared

NHW Non-Hazardous Waste (disposed) (kg)

NMVOC Non-Methane Volatile Organic Compounds

NRSF Use of non-renewable secondary fuels (MJ)

ODP Ozone Depletion Potential (kg CFC-11 eq.)

P eq. Phosphorus Equivalents

PENRE Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)

PENRM Use of non-renewable primary energy resources used as raw materials (MJ)

PENRT Total use of non-renewable primary energy resources (MJ)

PERE Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)

PERM Use of renewable primary energy resources used as raw materials (MJ)

PERT Total use of renewable primary energy resources (MJ)

POCP Photochemical Ozone Creation Potential (kg NMVOC eq.)

RSF Use of renewable secondary fuels (MJ)

RW Radioactive Waste (disposed) (kg)

Sb eq. Antimony Equivalents

SM Use of secondary material (kg)

SVHC Substances of Very High Concern

WDP Water Deprivation Potential (m^3)

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VERSION HISTORY

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Original version of the EPD

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