Environmental Product Declaration

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

ICONIK Textile backing Range residential vinyl products

from

Tarkett

Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of multiple products, based on a representative product
Products covered:	ICONIK 200Tex, ICONIK 220Tex, ICONIK 260Tex, ICONIK 280Tex, Nordic Stabil/TX Classic
EPD registration number:	EPD-IES-0001997:002
Version date:	2026-02-18
Validity date:	2031-02-18
Version history:	Version 2 of the EPD *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*

GENERAL INFORMATION

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:	support@environdec.com

Product Category Rules (PCR)
madeCEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 version 2.0.1 Construction products. UN CPC code : 369 APE/NAF - 2223Z
PCR review was conducted by: The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com. The review panel may be contacted via support@environdec.com. Members of the Technical Committee were requested to state any potential conflict of interest with the PCR Committee, and if there were conflicts of interest they were excused from the review. Chairs of the PCR review are Rob Rouwette (chair), Noa Meron (co-chair).
c-PCR: c-PCR-004 Being updated - Resilient, textile and laminate floor coverings (EN 16810) (1.0.0). This PCR was developed within CEN standardization and adopted as a c-PCR in the International EPD System. There was thus no additional open consultation period and no additional review in addition to those within standardization.

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ **Individual EPD verification without a pre-verified LCA/EPD tool** Third-party verifier: Anni Oviir , LCA Support – Rangi Maja OÜ Approved by: International EPD System ☐ **Individual EPD verification with a pre-verified LCA/EPD tool** ☐ **EPD process certification* without a pre-verified LCA/EPD tool** ☐ **EPD process certification* with a pre-verified LCA/EPD tool** ☐ **Fully pre-verified EPD tool** *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.envrondec.com.
Procedure for follow-up of data during EPD validity involves third party verifier: ☒ Yes ☐ No

VERSION HISTORY

Version	Date	Comment
1	2020/08/21	Original version of the EPD
2	2026/02/18	Renewal of the document: change of formulation Split of the range between Textile and Foam Backing

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

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 characterization factors); and be valid at the time of comparison.
For further information about comparability, see EN 15804 and ISO 14025.

This EPD is a multi-products EPD, Cradle-to-grave with module D.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Tarkett
Address: Tarkett La Défense, 1 Terrasse Bellini 92400 Paris
Contact: Jean-Michel LUU, jean-michel.luu@tarkett.com
Address and contact information of the LCA practitioner commissioned by the EPD owner, if applicable: Jean-Michel LUU, jean-michel.luu@tarkett.com Tarkett La Défense, 1 Terrasse Bellini 92400 Paris
Description of the organization:

With international coverage and a wide range of products, Tarkett has over 130 years of experience in providing integrated solutions for floorings to professionals and end users.
Many of the most important architectural firms in the world and building professionals have chosen Tarkett for the value of its products and for its consultation and service abilities. Therefore, Tarkett floorings and sport surfaces are present in several prestigious architectural reference points. Tarkett offers integrated solutions for flooring, able to meet the particular needs of customers. Our wide range of designs, colors and models provides an infinite series of possibilities, contributing to create a positive environment and a better quality of life for people.
Tarkett operates with the utmost respect for the environment towards the realization of eco-friendly products.
Tarkett's commitment to the environment is woven throughout its business. Cradle-to-Cradle principles are, in fact, the basis of the design and production of every solution. Particularly, the lifecycle analysis is used to continuously improve the production process, and so the products until their use stage, disposal, and recycling. The commitment to the environment is also proven by the accession to the Circular Economy 100 program, where Tarkett group, with a network of companies, is working to develop a circular economy model based on the reuse of materials and preservation of natural resources. The development of products that can be reused within internal production cycles, or external ones in case of other individuals, has been an integral part of the business strategy aimed at sustainability for many years. The WCM (World Class Manufacturing) management system has been developed in 2009, and it includes the environmental pillar aimed at the elimination of losses and to the growth of process efficiency.

Product-related or management system-related certifications: ISO 9001, ISO 14001, ISO 50001, WCM manufacturing site.

PRODUCT INFORMATION

Product name: ICONIK 200Tex, ICONIK 220Tex, ICONIK 260Tex, ICONIK 280Tex, Nordic Stabil/TX Classic
Product identification: Heterogeneous vinyl floor coverings (ISO 10581)
Visual representation:

UN CPC code : 369 APE/NAF – 1622Z

Product description: ICONIK Range is a heterogenous vinyl floor covering collection with enhanced protection and easier maintenance developed by Tarkett. After years of use, these floors can be removed and reused or recycled. The service lifetime recommended by Tarkett is 25 years when well maintained in commercial, domestic and industrial application.
Name and location of production site: Konz, Germany (KZ) & Backa Palanka, Serbia (BP)
Range of application: The products are to be installed in various areas of application, such as domestic, industrial and commercial use.

CONTENT DECLARATION

Products - EPD Name	Thickness (mm)	Weight (kg/m^2)	Recycled content (Pre-consumer) (%)	Representative product
ICONIK 200Tex (KZ)	2.00E+00	1.27E+00	35	ICONIK 280Tex
ICONIK 220Tex (Produced in Konz and BP)	2.20E+00	1.40E+00	32	
ICONIK 250Tex (Produced in Konz and BP)	2.50E+00	1.46E+00	37	
ICONIK 260Tex (Produced in Konz and BP)	2.60E+00	1.53E+00	32	
ICONIK 280Tex (KZ)	2.80E+00	1.76E+00	28	
Nordic Stabil / TX Classic Stabil (KZ)	2.80E+00	1.86E+00	32	

According to PCR 2019:14 version 2.0.0, several products can be included in the same EPD and variations above 10% are allowed. The products included are similar in terms of structure, which justifies the declaration of a representative product. The results of this EPD are based on a representative product, based on sales.

The components for **ICONIK 280Tex** are detailed below:

Product content	Mass, kg/m²	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/m²
PVC	7.10E-01	0%	0	0.00E+00
Plasticizers	3.68E-01	0%	0	0.00E+00
Epoxidised soya bean oil	7.45E-03	0%	<1%	1.91E-03
Recycled Mineral fillers	4.99E-01	0%	0	0.00E+00
Stabilizer	6.96E-03	0%	0	0.00E+00
Pigments	4.87E-03	0%	0	0.00E+00
Surface treatment	1.84E-02	0%	0	0.00E+00
Glass fiber tissue	3.57E-02	0%	0	0.00E+00
Polyester Tissue	7.45E-02	0%	0	0.00E+00
Printing ink	2.14E-02	0%	0	0.00E+00
Additives	1.37E-02	0%	0	0.00E+00
TOTAL	1.76E+00	0%	<1%	1.91E-03

The range of the content of the products included is as follows:

Product content	ICONIC 280Tex (%)	Range (%)
PVC	40.0	35.5 - 40.3
Plasticizers	21.0	19.1 – 20.9
Epoxidised soya bean oil	<1	<1
Recycled Mineral fillers	28.0	28.0 – 33.7
Stabilizer	<1	<1
Pigments	<1	<1
Surface treatment	1	0.6 – 1.4
Glass fiber tissue	2.0	2.0 – 2.7
Polyester Tissue	4.0	4.2 – 5.7
Printing ink	1.0	1.0 – 1.6
Additives	1.0	0.7 – 1.7
TOTAL	100%	

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/m²
Product Packaging Cardboard	6.00E-02	3.5%	1.64E-02
Product Packaging PELD (foil)	8.00E-03	0.5%	0
Product Packaging End caps	1.60E-03	0.1%	0
TOTAL	6.96E-02	4.0%	1.64E-2

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO_2.

LCA INFORMATION

Functional unit 1m^2 of floor covering with a reference service life (RSL) of 1 year for specified characteristics application and use areas according to EN 16845:2014.

Conversion factor to mass if mass is not used as functional/declared unit: 1m² = 1.76 kg

Reference service life: 1 year

Time representativeness: 2024

Geographical scope: Modules A1-A5 as well as the use (module B) and end-of-life (module C) have been modelled to represent European technology and process coverage.

Database(s) and LCA software used: Ecoinvent 3.9.1, SimaPro 9.6

Characterization factor: GWP100, EN 15804. Version: EF 3.1, February 2023

Description of system boundaries: Cradle-to-grave and module D

Cut-off rules: The cut-off criteria used for this study follow the guidelines set out in the PCR which conform to the EN 15804-A2, as following:

- All inputs and outputs to a (unit) process are included in the calculation where the data is available.
- A maximum of 1% of the total mass per unit process may be omitted.
- A maximum of 1% of the total renewable and non-renewable energy for a unit process may be omitted.
- A maximum of 5% of the total energy usage and mass per module may be omitted.

All input and output flows have been considered, including raw materials as per the product composition provided by the manufacturer and packaging of raw materials as well as the final product.

Energy and water consumptions have also been considered at 100% according to the data provided.

Allocation: It was applied in accordance with the requirements of EN 15804 and ISO 14044. The declared unit of this study is 1 m² of resilient heterogenous vinyl flooring with a weight of 1.76 kg/m². Here is the list of allocations made:

Raw materials: Raw material inputs are directly measured per product formulation. No allocation was needed for raw material use, as each recipe is specific to the product.

Energy and water consumption: Site-specific consumption data were measured at factory level for one year. These totals were divided by the annual production output (m²/year) to allocate energy and water use to the declared unit.

Manufacturing waste: Internal recycling of production waste (post-manufacturing scrap reintroduced into the process) remains within the system boundary and was not subject to allocation. External waste streams were allocated proportionally to the production volume.

Other flows: Emissions and auxiliary inputs directly measured per unit of production were assigned without allocation.

No economic allocation was applied, since the factory produces only products of the same category, without co-products.

This physical allocation approach ensures a consistent distribution of energy, water, and waste flows to the functional unit.

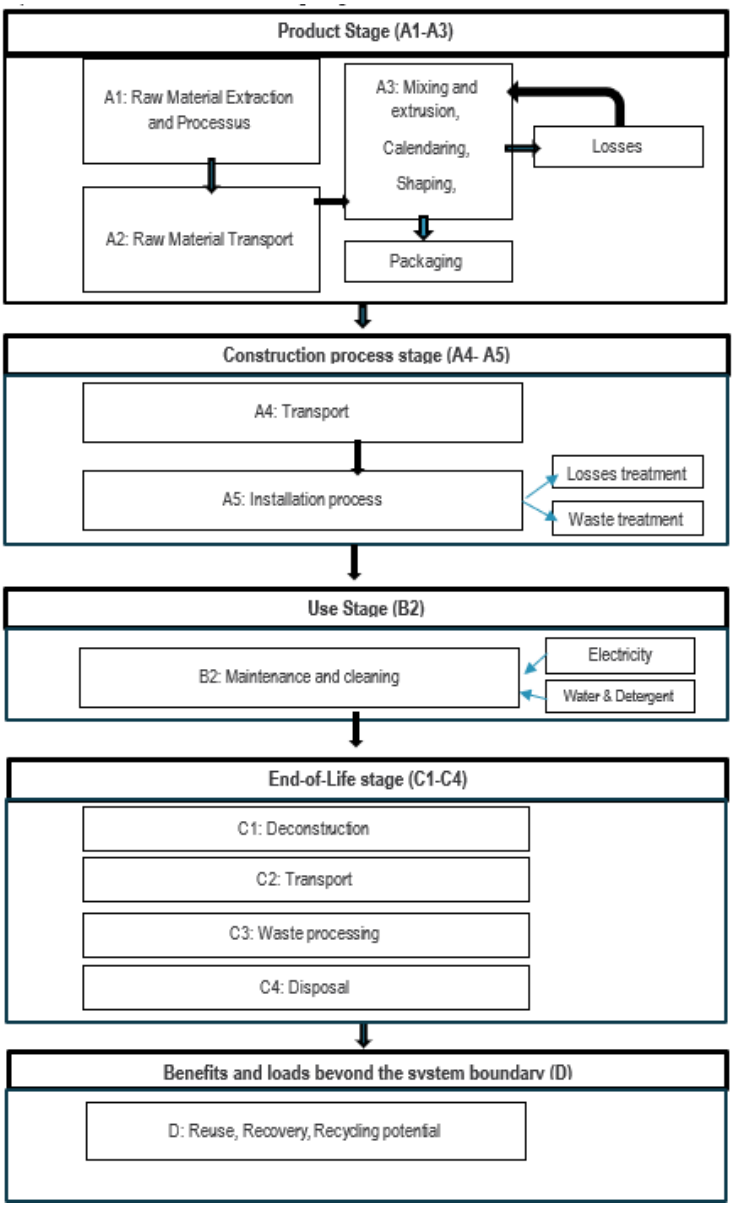
Recycled material considered is post-industrial reinjection of losses and recycled mineral filler, representing up to 37% of the finished product mass. We do not account this recycled content as

secondary material in the LCA. This ratio is an estimate based on collected data from factories. Process of recycling is part of the A3. The environmental burden of this recycled material is considered.

For EPD of multiple products, if the EPD does not claim compliance with ISO 21930, variations above 10% are allowed. In such cases, the LCA report shall include an explanation of the variation and a justification of the grouping of products, and the EPD shall (in the LCA information section) declare the variation of each impact indicator results for which the variation is above 10% and include an explanation of the variation. EPDs based on worst-case results, that do not claim compliance with ISO 21930, are exempted from the requirement to declare the variation if above 10%.

LCA result of one declared unit product (A-C)	Unit	Min	ICONIK 280Tex	Max
GWP-total	kg CO2 eq	3.99E+00	5.11E+00	5.46E+00
GWP-biogenic	kg CO2 eq	3.06E-02	3.06E-02	5.82E-02
PERE	MJ, net CV	1.67E+01	2.17E+01	2.17E+01
PERM	MJ, net CV	9.35E-01	1.11E+00	1.11E+00
PERT	MJ, net CV	1.78E+01	2.28E+01	2.28E+01

Process flow diagram:



Process flow diagram of the product system, divided into the life-cycle stages and modules (or other division of the product life cycle, if defined in the PCR), showing the main processes included and the system boundary of the LCA. The diagram shall make it clear when the end-of-waste state is reached for main input flows of reused/recycled materials and recovered energy, and for output flows of reused/recycled materials and recovered energy exiting the end-of-life stage.

DATA QUALITY

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	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Specific data used	14.7%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	0.10% to 23.22%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	56%					-	-	-	-	-	-	-	-	-	-	-	-

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.

This LCA supports an EPD covering a product range of floor coverings manufactured with the same technology and base formulation. Product variations arise from differences in wear layer thickness, which directly correspond to different technical performance levels: different wear layers are designed to withstand different traffic intensity. Consequently, environmental impact variations are predominantly mass-driven and physically consistent. Additional variation is attributable to production at two sites with differing electricity emission factors (approximately 56% difference), while all other process parameters remain identical. The grouping is justified under the IES PCR, as products fulfil the same function and intended use, and the observed impact variations are transparent, documented

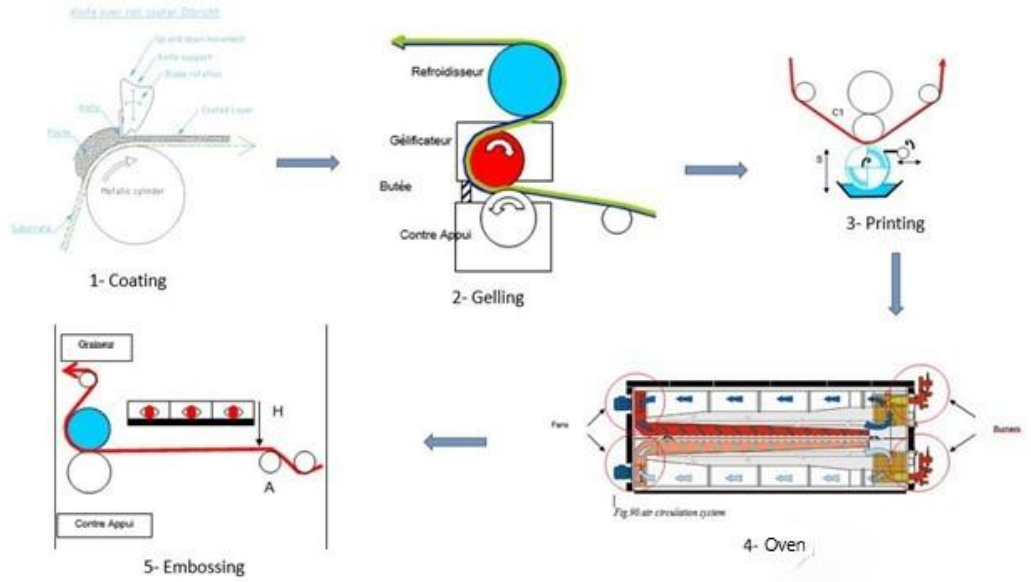
More information:
The results of this EPD are based on an average product weighted by sales.
A data quality assessment has been carried out in line with the requirements of PCR in Section 4.6.4. Product raw material, energy consumption and transport of raw materials to the manufacturing site are all based on primary data. The data has been collected by EPD owner for an entire year of production, the year 2024. The generic data is based on database Ecoinvent v3.9.1.
The total share of primary data contributing to the declared GWP-GHG results of modules A1-A3 (A1-A5 for services) is 14.7%.
According to standards ISO 14040, ISO 14044, NF EN 15804, and NF EN 15804+A2 have been complied with regarding the quality of data for the following criteria:

Representativity	Evaluation	Comments
Geographical Factor	This EPD is representative of heterogeneous flooring produced and sold in Europe.	The detailed composition of the products has been established only for PVC Flooring, for various thicknesses and a single mode of implementation.
Technological Factor	This EPD is representative of heterogenous PVC flooring.	Manufacturing data has been collected both at the Swedish manufacturer, and the distances to the clients were collected for all clients located in Europe.
Time Factor	These data correspond to production during the year 2024.	All the data collection for manufacturing and transport concerns the year 2024. Where available, data collected specifically for this study at Tarkett production site. In the absence of specific data, generic data from the Ecoinvent database 3.9.1 was used. This database is regularly updated and is representative of current processes.
Variability	The declared environmental impacts are the impacts of the most impactful product.	The data was collected for the production site. The variability of the results was calculated by doing a sensitivity analysis as recommended by EN15804+A2/CN.

Process	**Source type**	**Source**	**Reference year**	**Data category**	**Share of primary data of GWP-GHG results for A1-A3**
Product raw materials	Collected data, database	EPD owner, Ecoinvent v3.9.1	2024	Secondary	0%
Packaging	Collected data	EPD Owner	2024	Secondary	0%
Electricity consumption	Collected data	EPD owner	2024	Primary	9.1%
Biomass generation for manufacturing of product	Database	Ecoinvent v.3.9.1	2024	Secondary	0%
Transport of raw material to production site	Collected data	EPD owner	2024	Primary	5.6%
Waste treatment	Collected data	EPD owner	2024	Secondary	0%
Total share of primary data, of GWP-GHG results for A1-A3					14.7%

PRODUCT MANUFACTURING

Production process



Production waste

Waste type	Amount	Unit
Non-hazardous waste to external recycling	8.06E-02	kg/m²
Hazardous waste to external recycling	5.42E-04	kg/m²
Hazardous waste to incineration with energy recovery	6.26E-03	kg/m²
Non-Hazardous waste to incineration with energy recovery	1.37E-01	kg/m²

Electricity climate impact

Plant	Ecoinvent Module	kgCO^2eq/kWh
Konz, Germany	Electricity, high voltage {DE}| market for electricity, high voltage | Cut-off, U - Renewable	1.14E-02

Health, safety and environmental aspects during production

Iconik range production site complies with the ISO 14001 Environmental Management System and the ISO 9001 Quality Management System.

Delivery and installation

Delivery

The average distribution distance between the factory and the installation site is **804** km. It has been calculated considering the average distance between European countries where Tarkett is selling ICONIK range Textile backing products and the factory plant in Konz (Germany). The distribution is made by truck.

Scenario information	Unit
Fuel type	Diesel
Liters of fuel	33 l/100km
Vehicle type	32> metric ton EURO 4 – 20% 32> metric ton EURO 5 – 60% 32> metric ton EURO 6 – 20%
Distance	8.04E+02 km
Capacity utilization (including empty runs, mass based gross density of products transported)	50%
Bulk density of transported products	6.14E+02 kg/m3
Volume capacity utilization factor (factor: =1 or <1 or >1 for compressed or nested packaged products)	1

Installation

The different parts of the flooring are cut to fit the surface to be covered, and they are arranged together so that they can fit perfectly between them on the floor. The different parts of the flooring are installed with a loose lay method to the floor and taped together.

Scenario information	Unit
Acrylic tape	1.02E-01 kg/m²
Electricity consumption	0.00E+00 kWh/year/m²
Waste materials on the building site before waste processing, generated by the product's installation	1.72E-01 kg/m²
Output materials as result of waste processing at the building for collection for recycling	1.72E-01 kg/m²
Direct emissions to ambient air, soil and water	-

Waste

During the installation approximately 10% of the flooring is lost as off-cuts. All flooring losses are sent to recycling. Thanks to the ReStart program. Tarkett offers to all its customer flooring installers a free take-back system for installation off-cuts including equipment, logistics and recycling. This analysis therefore considers a recycling scenario of the offcut.

Packaging

50 % of the packaging materials goes to incineration and 50 % goes to landfill.

Scenario information	Quantity	Treatment
Installation waste packaging cardboard	50%	Landfill
	50%	Incineration
Installation waste packaging plastic	50%	Landfill
	50%	Incineration
Transport to landfill	30 km	/
Transport to incineration	100 km	/

USE STAGE

Refence Service life (RSL)

For this product, the stated RSL is 1 year. It should be noted, however, that the service life of heterogenous vinyl flooring may vary depending on the amount and nature of floor traffic and the type and frequency of maintenance. The manufacturer has provided this service life based on his experience of flooring manufacture and supply. This RSL is applicable if the product use complies with that defined by ISO 14041 and ISO10874 in accordance with the product's classification. **The service lifetime recommended by Tarkett is 25 years**.

Cleaning and maintenance

The maintenance step concerns the cleaning of the floor. Tarkett has provided the recommended maintenance routine for the product throughout the reference life. Water, detergent and electricity consumption of the cleaning machine are considered in the LCA study:

- Common maintenance: 2 cleanings / week
- Periodic maintenance: 2 times / year

Description	Ecoinvent module	Amount	Unit
Electricity consumption	Electricity, medium voltage {Europe without Switzerland} | market group for | Cut-off, U	2.16E-01	kWh/year/m^2
Water consumption	-	7.80E-01	L/year/m^2
Detergent consumption	-	3.09E-03	L/year/m^2

Prevention of structural damage

To avoid excessive wear, usage should be restricted to the stated areas of application as outlined by the norm ISO 10874.

END OF LIFE

3 distinct End-of-Life scenarios have been modeled for ICONIK textile backing Range products. Tarkett recommend using the ReStart program at End-of-Use to recycle the product. However, to showcase the value of Tarkett's recycling activities, environmental impacts of two alternative scenarios have been calculated.

Recycling /R

100% of the ICONIK range -Textile Backing products can be recycled at its end of use stage, thanks to the ReStart® program, enabling Tarkett to collect installation losses and post-use flooring from construction sites to recycle it and/or re-use it as high-quality raw material back in Tarkett plants. Tarkett has developed a new technology that cleans, shreds, and recycles previously unusable post-consumer vinyl. Thus, ICONIK range -Textile Backing products are recycled back at the Clervaux plant in Luxembourg and the transport between construction site and recycling facility is **904** km by truck. Environmental impacts of recycling are presented in module **C/R**.

Incineration with energy recovery /I

Incineration with energy recovery is a rising waste management method in many of the countries in which ICONIK range -Textile Backing products are sold. While Tarkett wishes to recycle 100% of sold ICONIK range -Textile Backing products, incineration with energy recovery is an alternative option if recycling is impossible. Environmental impacts of incineration with energy recovery are presented as additional information in module **C/I**. The distance considered to the incineration center is **100 km.**

Landfilling /L

Landfilling waste is still a prominent waste management scenario. This option is however not recommended by Tarkett. Environmental impacts of landfilling are presented as additional information in module **C/L.** The distance considered to the landfill site is **30 km**.

The transport mode is described in the table below:

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Scenario information	Unit
Fuel type	Diesel
Liters of fuel	33 l/100km
Vehicle type	32> metric ton EURO 5
Capacity utilization (including empty runs, mass based gross density of products transported)	50%
Bulk density of transported products	6.14E+02 kg/m3
Volume capacity utilization factor (factor: =1 or <1 or >1 for compressed or nested packaged products)	1

BENEFITS AND LOADS BEYOND SYSTEM BOUNDARIES

Recycling /R
The benefit is due to the recycling post-use flooring that allows avoiding the emissions of virgin materials. ICONIK range -Textile Backing products can be 100% recycled at post-installation and post-consumer stage. Post-consumer recycling process currently has an efficiency of 90%. Benefits from avoided raw material production and avoided transport are calculated in module **D/R**.

Landfilling /L
Benefits accounted in this scenario exclusively come from installation offcuts recycling and are presented as additional information in module D/L.

Incineration with energy recovery /I
Benefits from installation offcuts recycling and incineration energy recovery are calculated as additional information in module D/I.

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance result

Mandatory impact category indicators according to EN 15804

Results for ICONIK 280Tex – Recycling scenario

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	3.63E+00	1.52E-01	5.39E-01	0.00E+00	8.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-01	5.36E-01	0.00E+00	-2.70E+00
GWP-fossil	kg CO_2 eq.	3.65E+00	1.51E-01	4.23E-01	0.00E+00	8.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-01	5.34E-01	0.00E+00	-2.65E+00
GWP-biogenic	kg CO_2 eq.	-8.22E-02	4.93E-05	1.10E-01	0.00E+00	4.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.33E-05	2.37E-03	0.00E+00	1.65E-02
GWP-luluc	kg CO_2 eq.	6.55E-02	7.25E-05	6.59E-03	0.00E+00	5.08E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.85E-05	7.81E-05	0.00E+00	-6.37E-02
ODP	kg CFC 11 eq.	2.73E-06	3.34E-09	2.74E-07	0.00E+00	1.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-09	1.58E-08	0.00E+00	-2.67E-06
AP	mol H^+ eq.	2.17E-02	5.07E-04	2.57E-03	0.00E+00	4.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-04	1.18E-03	0.00E+00	-1.95E-02
EP-freshwater	kg P eq.	8.82E-04	1.09E-05	9.90E-05	0.00E+00	7.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-05	1.27E-04	0.00E+00	-6.80E-04
EP-marine	kg N eq.	2.71E-03	3.34E-05	3.04E-04	0.00E+00	2.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-05	3.89E-04	0.00E+00	-2.09E-03
EP-terrestrial	mol N eq.	6.52E-03	1.74E-04	7.71E-04	0.00E+00	9.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-04	2.88E-04	0.00E+00	-5.88E-03
POCP	kg NMVOC eq.	2.69E-02	1.84E-03	3.25E-03	0.00E+00	6.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-03	2.92E-03	0.00E+00	-2.16E-02
ADP-minerals&metals*	kg Sb eq.	1.53E-02	7.90E-04	1.78E-03	0.00E+00	2.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E-04	1.04E-03	0.00E+00	-1.32E-02
ADP-fossil*	MJ	5.80E-05	4.23E-07	6.09E-06	0.00E+00	1.99E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-07	3.13E-07	0.00E+00	-5.51E-05
WDP*	m^3	9.23E+01	2.23E+00	1.00E+01	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E+00	8.97E+00	0.00E+00	-7.67E+01
Particulate matter	disease inc.	2.77E-05	6.39E-09	2.78E-06	0.00E+00	1.61E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-09	4.06E-09	0.00E+00	-2.74E-05
Ionising radiation	kBq U-235 eq	3.57E-01	1.18E-03	3.93E-02	0.00E+00	4.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-03	1.17E-01	0.00E+00	-2.31E-01

Ecotoxicity, freshwater	CTUe	6.58E+01	4.48E-01	7.10E+00	0.00E+00	3.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-01	1.05E+00	0.00E+00	-6.23E+01
Human toxicity, cancer	CTUh	8.11E-09	2.75E-11	8.41E-10	0.00E+00	2.88E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-11	8.71E-11	0.00E+00	-7.75E-09
Human toxicity, non-cancer	CTUh	2.89E-08	6.68E-10	3.51E-09	0.00E+00	8.11E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-10	2.15E-09	0.00E+00	-2.37E-08
Land use	Pt	1.03E+01	9.46E-01	1.30E+00	0.00E+00	3.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+00	1.06E+00	0.00E+00	-6.01E+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															

** Disclaimer:*

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.

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 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.

Additional mandatory and voluntary impact category indicators

Results for ICONIK 280Tex – Recycling scenario																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[1]	kg CO_2 eq.	3.71E+00	1.51E-01	4.29E-01	0.00E+00	8.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-01	5.34E-01	0.00E+00	-2.71E+00

Resource use indicators

Results for ICONIK 280Tex – Recycling scenario																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

PERE	MJ	1.59E+01	3.27E-02	1.63E+00	0.00E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-02	3.72E+00	0.00E+00	-1.02E+01
PERM	MJ	2.37E+00	0.00E+00	2.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.50E+00	0.00E+00	-1.48E+00
PERT	MJ	1.83E+01	3.27E-02	1.87E+00	0.00E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-02	2.23E+00	0.00E+00	-1.16E+01
PENRE	MJ	6.00E+01	2.23E+00	6.81E+00	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E+00	8.97E+00	0.00E+00	-4.47E+01
PENRM	MJ	3.46E+01	0.00E+00	3.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.46E+01	0.00E+00	-3.43E+01
PENRT	MJ	9.46E+01	2.23E+00	1.03E+01	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E+00	-2.56E+01	0.00E+00	-7.89E+01
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	8.30E-02	3.50E-04	8.89E-03	0.00E+00	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.79E-04	3.16E-03	0.00E+00	-7.52E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste indicators

Results for ICONIK 280Tex – Recycling scenario															
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**

Hazardous waste disposed	kg	1.54E-01	2.16E-03	1.95E-02	0.00E+00	1.72E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-03	1.28E-02	0.00E+00	-1.22E-01
Non-hazardous waste disposed	kg	1.47E+00	2.13E-01	2.51E-01	0.00E+00	2.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-01	1.36E-01	0.00E+00	-1.22E+00
Radioactive waste disposed	kg	7.28E-05	6.81E-07	8.26E-06	0.00E+00	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.37E-07	3.47E-05	0.00E+00	-3.64E-05

Output flow indicators

Results for ICONIK 280Tex – Recycling scenario																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	2.41E-01	0.00E+00	2.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	3.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Results for ICONIK 280Tex – Incineration scenario																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	3.63E+00	1.52E-01	5.39E-01	0.00E+00	8.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-03	0.00E+00	2.94E+00	-9.79E-01
GWP-fossil	kg CO_2 eq.	3.65E+00	1.51E-01	4.23E-01	0.00E+00	8.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-03	0.00E+00	2.94E+00	-9.73E-01
GWP-biogenic	kg CO_2 eq.	-8.22E-02	4.93E-05	1.10E-01	0.00E+00	4.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-06	0.00E+00	2.05E-03	2.73E-04
GWP-luluc	kg CO_2 eq.	6.55E-02	7.25E-05	6.59E-03	0.00E+00	5.08E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-06	0.00E+00	1.50E-03	-6.34E-03
AP	kg CFC 11 eq.	2.73E-06	3.34E-09	2.74E-07	0.00E+00	1.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-10	0.00E+00	4.34E-07	-2.76E-07
ODP	mol H^+ eq.	2.17E-02	5.07E-04	2.57E-03	0.00E+00	4.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-05	0.00E+00	4.82E-03	-4.35E-03
EP-freshwater	kg P eq.	8.82E-04	1.09E-05	9.90E-05	0.00E+00	7.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E-07	0.00E+00	3.56E-04	-3.14E-04
EP-marine	kg N eq.	2.71E-03	3.34E-05	3.04E-04	0.00E+00	2.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.39E-06	0.00E+00	1.12E-03	-9.65E-04
EP-terrestrial	mol N eq.	6.52E-03	1.74E-04	7.71E-04	0.00E+00	9.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.75E-05	0.00E+00	1.15E-02	-6.25E-03
POCP	kg NMVOC eq.	2.69E-02	1.84E-03	3.25E-03	0.00E+00	6.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-05	0.00E+00	3.42E-03	-2.89E-03
ADP-minerals&metals*	kg Sb eq.	1.53E-02	7.90E-04	1.78E-03	0.00E+00	2.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-08	0.00E+00	1.48E-05	-5.81E-06
ADP-fossil*	MJ	5.80E-05	4.23E-07	6.09E-06	0.00E+00	1.99E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-02	0.00E+00	1.03E+01	-1.83E+01
WDP*	m^3	9.23E+01	2.23E+00	1.00E+01	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E-04	0.00E+00	7.18E-01	-3.13E-01
Particulate matter	disease inc.	2.77E-05	6.39E-09	2.78E-06	0.00E+00	1.61E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-09	0.00E+00	3.28E-08	-2.51E-06
Ionising radiation	kBq U-235 eq	3.57E-01	1.18E-03	3.93E-02	0.00E+00	4.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-04	0.00E+00	7.59E-02	-1.04E-01
Ecotoxicity, freshwater	CTUe	6.58E+01	4.48E-01	7.10E+00	0.00E+00	3.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-01	0.00E+00	1.37E+02	-6.84E+00
Human toxicity, cancer	CTUh	8.11E-09	2.75E-11	8.41E-10	0.00E+00	2.88E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-12	0.00E+00	7.36E-10	-8.32E-10

Human toxicity, non-cancer	CTUh	2.89E-08	6.68E-10	3.51E-09	0.00E+00	8.11E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-10	0.00E+00	1.34E-08	-4.56E-09
Land use	Pt	1.03E+01	9.46E-01	1.30E+00	0.00E+00	3.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-01	0.00E+00	2.22E+00	-1.50E+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															

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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.

"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 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.

Additional mandatory and voluntary impact category indicators

Results for ICONIK 280Tex – Incineration scenario

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[2]	kg CO_2 eq.	3.71E+00	1.51E-01	4.29E-01	0.00E+00	8.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-03	0.00E+00	2.94E+00	-9.79E-01

Resource use indicators

Results for ICONIK 280Tex – Incineration scenario

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1.59E+01	3.27E-02	1.63E+00	0.00E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-03	0.00E+00	1.26E+00	-1.75E+00
PERM	MJ	2.37E+00	0.00E+00	2.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.46E+01	-1.35E-01

[2] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

PERT	MJ	1.83E+01	3.27E-02	1.87E+00	0.00E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-03	0.00E+00	-3.33E+01	-1.88E+00
PENRE	MJ	6.00E+01	2.23E+00	6.81E+00	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-02	0.00E+00	1.03E+01	-1.54E+01
PENRM	MJ	3.46E+01	0.00E+00	3.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.50E+00	-3.11E+00
PENRT	MJ	9.46E+01	2.23E+00	1.03E+01	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-02	0.00E+00	8.83E+00	-1.85E+01
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-01
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.50E-04	8.89E-03	0.00E+00	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-04	0.00E+00	1.26E-05	0.00E+00	1.93E-02	-1.08E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste indicators

Results for ICONIK 280Tex – Incineration scenario															
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1.54E-01	2.16E-03	1.95E-02	0.00E+00	1.72E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.76E-05	0.00E+00	1.56E-01	-1.91E-02

Non-hazardous waste disposed	kg	1.47E+00	2.13E-01	2.51E-01	0.00E+00	2.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.65E-03	0.00E+00	9.72E-01	-2.18E-01
Radioactive waste disposed	kg	7.28E-05	6.81E-07	8.26E-06	0.00E+00	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-08	0.00E+00	2.64E-05	-3.50E-05

Output flow indicators

Results for ICONIK 280Tex – Incineration scenario																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	2.41E-01	0.00E+00	2.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	3.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.94E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Results for ICONIK 280Tex – Landfill scenario																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	3.63E+00	1.52E-01	5.39E-01	0.00E+00	8.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-03	0.00E+00	1.26E-01	-3.21E-01
GWP-fossil	kg CO_2 eq.	3.65E+00	1.51E-01	4.23E-01	0.00E+00	8.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-03	0.00E+00	1.26E-01	-3.16E-01
GWP-biogenic	kg CO_2 eq.	-8.22E-02	4.93E-05	1.10E-01	0.00E+00	4.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-06	0.00E+00	1.89E-05	1.46E-03
GWP-luluc	kg CO_2 eq.	6.55E-02	7.25E-05	6.59E-03	0.00E+00	5.08E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-06	0.00E+00	4.06E-06	-6.44E-03
AP	kg CFC 11 eq.	2.73E-06	3.34E-09	2.74E-07	0.00E+00	1.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-10	0.00E+00	5.18E-10	-2.71E-07
ODP	mol H^+ eq.	2.17E-02	5.07E-04	2.57E-03	0.00E+00	4.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-05	0.00E+00	1.18E-04	-2.08E-03
EP-freshwater	kg P eq.	8.82E-04	1.09E-05	9.90E-05	0.00E+00	7.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E-07	0.00E+00	1.21E-06	-8.02E-05
EP-marine	kg N eq.	6.52E-03	1.74E-04	7.71E-04	0.00E+00	9.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.39E-06	0.00E+00	6.90E-04	-6.20E-04
EP-terrestrial	mol N eq.	2.69E-02	1.84E-03	3.25E-03	0.00E+00	6.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.75E-05	0.00E+00	5.23E-04	-2.45E-03
POCP	kg NMVOC eq.	1.53E-02	7.90E-04	1.78E-03	0.00E+00	2.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-05	0.00E+00	2.27E-04	-1.43E-03
ADP-minerals&metals*	kg Sb eq.	5.80E-05	4.23E-07	6.09E-06	0.00E+00	1.99E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-08	0.00E+00	3.63E-08	-5.60E-06
ADP-fossil*	MJ	9.23E+01	2.23E+00	1.00E+01	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-02	0.00E+00	4.09E-01	-8.56E+00
WDP*	m^3	3.02E+00	1.08E-02	3.28E-01	0.00E+00	1.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E-04	0.00E+00	1.84E-03	-2.86E-01
Particulate matter	disease inc.	2.77E-05	6.39E-09	2.78E-06	0.00E+00	1.61E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-10	0.00E+00	2.39E-09	-2.77E-06
Ionising radiation	kBq U-235 eq	3.57E-01	1.18E-03	3.93E-02	0.00E+00	4.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E-05	0.00E+00	8.46E-04	-3.40E-02
Ecotoxicity, freshwater	CTUe	6.58E+01	4.48E-01	7.10E+00	0.00E+00	3.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-02	0.00E+00	5.54E+00	-6.38E+00
Human toxicity, cancer	CTUh	8.11E-09	2.75E-11	8.41E-10	0.00E+00	2.88E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-12	0.00E+00	8.66E-12	-7.91E-10

Human toxicity, non-cancer	CTUh	2.89E-08	6.68E-10	3.51E-09	0.00E+00	8.11E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E-11	0.00E+00	2.68E-10	-2.59E-09
Land use	Pt	1.03E+01	9.46E-01	1.30E+00	0.00E+00	3.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.83E-02	0.00E+00	8.41E-01	-7.03E-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 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.

"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 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.

Additional mandatory and voluntary impact category indicators

Results for ICONIK 280Tex – Landfill scenario																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[3]	kg CO_2 eq.	3.71E+00	1.51E-01	4.29E-01	0.00E+00	8.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-03	0.00E+00	1.26E-01	-3.22E-01

Resource use indicators

Results for ICONIK 280Tex – Landfill scenario																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1.59E+01	3.27E-02	1.63E+00	0.00E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-03	0.00E+00	1.74E-02	-1.37E+00
PERM	MJ	2.37E+00	0.00E+00	2.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+00	-1.50E-01

[3] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

PERT	MJ	1.83E+01	3.27E-02	1.87E+00	0.00E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-03	0.00E+00	1.51E+00	-1.51E+00
PENRE	MJ	6.00E+01	2.23E+00	6.81E+00	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-02	0.00E+00	4.09E-01	-5.33E+00
PENRM	MJ	3.46E+01	0.00E+00	3.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E+01	-3.46E+00
PENRT	MJ	9.46E+01	2.23E+00	1.03E+01	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-02	0.00E+00	3.50E+01	-8.79E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-01
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	8.30E-02	3.50E-04	8.89E-03	0.00E+00	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-05	0.00E+00	4.99E-04	-7.89E-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														

Waste indicators

Results for ICONIK 280Tex – Landfill scenario															
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1.54E-01	2.16E-03	1.95E-02	0.00E+00	1.72E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.76E-05	0.00E+00	4.71E-04	-1.35E-02

Non-hazardous waste disposed	kg	1.47E+00	2.13E-01	2.51E-01	0.00E+00	2.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.65E-03	0.00E+00	1.76E+00	-1.36E-01
Radioactive waste disposed	kg	7.28E-05	6.81E-07	8.26E-06	0.00E+00	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-08	0.00E+00	2.29E-07	-6.83E-06

Output flow indicators

Results for ICONIK 280Tex – Landfill scenario															
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	2.41E-01	0.00E+00	2.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	3.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional LCA results (other environmental performance results) of the product(s)

For EPD of multiple products, if the EPD does not claim compliance with ISO 21930, variations above 10% are allowed. In such cases, the LCA report shall include an explanation of the variation and a justification of the grouping of products, and the EPD shall (in the LCA information section) declare the variation of each impact indicator results for which the variation is above 10% and include an explanation of the variation. EPDs based on worst-case results, that do not claim compliance with ISO 21930, are exempted from the requirement to declare the variation if above 10%.

LCA result of one declared unit product (A-C)	Unit	Min	ICONIK 280Tex	Max
GWP-total	kg CO2 eq	3.99E+00	5.11E+00	5.46E+00
GWP-biogenic	kg CO2 eq	3.06E-02	3.06E-02	5.82E-02
PERE	MJ, net CV	1.67E+01	2.17E+01	2.17E+01
PERM	MJ, net CV	9.35E-01	1.11E+00	1.11E+00
PERT	MJ, net CV	1.78E+01	2.28E+01	2.28E+01

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
Environmental Impact Indicators (EN 15804)	
GHG	Greenhouse gas
GWP	Global Warming Potential (kg CO_2 eq.)
GWP-fossil	Global Warming Potential from fossil sources (kg CO_2 eq.)
GWP-biogenic	Global Warming Potential from biogenic sources (kg CO_2 eq.)
GWP-luluc	Global Warming Potential from land use and land use change (kg CO_2 eq.)
GWP-total	Total Global Warming Potential (kg CO_2 eq.)
GWP-GHG	Global Warming Potential for greenhouse gases (kg CO_2 eq.)
ODP	Ozone Depletion Potential (kg CFC-11 eq.)
AP	Acidification Potential (mol H^+ eq.)
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.)
POCP	Photochemical Ozone Creation Potential (kg NMVOC eq.)
ADP	Abiotic Depletion Potential
ADP-minerals&metals	Abiotic depletion potential for non-fossil resources (kg Sb eq.)

ADP-fossil	Abiotic depletion potential for fossil resources (MJ)
WDP	Water Deprivation Potential (m^3)
Resource Use Indicators	
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)
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)
SM	Use of secondary material (kg)
RSF	Use of renewable secondary fuels (MJ)
NRSF	Use of non-renewable secondary fuels (MJ)
FW	Use of net fresh water (m^3)
Waste Indicators	
HW	Hazardous Waste (disposed) (kg)
NHW	Non-Hazardous Waste (disposed) (kg)
RW	Radioactive Waste (disposed) (kg)
Output Flow Indicators	
CFR	Components for Reuse (kg)
MR	Material for Recycling (kg)
MER	Materials for Energy Recovery (kg)
EEE	Exported Energy, Electricity (MJ)
EET	Exported Energy, Thermal (MJ)
Lifecycle Stages / Modules	
A1	Raw material supply
A2	Transport
A3	Manufacturing
A4	Transport to site
A5	Construction/Installation
B1	Use
B2	Maintenance
B3	Repair
B4	Replacement
B5	Refurbishment
B6	Operational energy use
B7	Operational water use
C1	Deconstruction/Demolition
C2	Transport to waste processing
C3	Waste processing
C4	Disposal
D	Reuse-Recovery-Recycling potential
Other Relevant Terms	
SVHC	Substances of Very High Concern
EC No.	European Community Number
CAS No.	Chemical Abstracts Service Number
MJ	Megajoule
kg	Kilogram
m^3	Cubic Meter
NMVOC	Non-Methane Volatile Organic Compounds
Sb eq.	Antimony Equivalents
P eq.	Phosphorus Equivalents
N eq.	Nitrogen Equivalents
CFC-11 eq.	Chlorofluorocarbon-11 Equivalents
CO_2 eq.	Carbon Dioxide Equivalents
kg C	Kilograms of Carbon

kg CO_2 eq.	Kilograms of Carbon Dioxide Equivalent
ND	Not Declared
Country abbreviation (ISO 3166 code)	
SE	Sweden
UA	Ukrain

REFERENCES

a) General Programme Instructions of International EPD System. Version.5.0.1
b) EN 15804:2012+A2:2019 – *Sustainability of construction works – Environmental Product Declarations – Core rules for the product category of construction products.* European Committee for Standardization (CEN), Brussels.
c) ISO 14025:2006 – *Environmental labels and declarations – Type III environmental declarations – Principles and procedures.* International Organization for Standardization (ISO), Geneva
d) PCR 2019:14. Construction products. Version 2.0.1
e) 2019:14-c-PCR-004 *Being updated - Resilient, textile and laminate floor coverings* (EN 16810) (version 1.0.0). European Committee for Standardization (CEN/ TC34), Brussels.
f) ISO 10582:2017 – *Resilient floor coverings – Heterogeneous poly(vinyl chloride) floor coverings – Specifications.* International Organization for Standardization (ISO), Geneva
g) ISO 10874:2019 – *Resilient, textile and laminate floor coverings – Classification*. International Organization for Standardization (ISO), Geneva.
h) FCCS (Floor Covering Classification System) – *Taxonomy of commercial flooring performance and classifications.* RFCI – Resilient Floor Covering Institute, LaGrange, Georgia.
i) ISO 14040:2006 – *Environmental management – Life cycle assessment – Principles and framework.* International Organization for Standardization (ISO), Geneva.
j) ISO 14044:2006 – *Environmental management – Life cycle assessment – Requirements and guidelines.* International Organization for Standardization (ISO), Geneva.
k) ISO 9001:2015 – *Quality management systems – Requirements.* International Organization for Standardization (ISO), Geneva.
l) ISO 14001:2015 – *Environmental management systems – Requirements with guidance for use.* International Organization for Standardization (ISO), Geneva.
m) ISO 50001:2018 – *Energy management systems – Requirements with guidance for use.* International Organization for Standardization (ISO), Geneva.
n) FD P01-015:2006. *Environmental quality of construction products - Energy and transport data sheet.* AFNOR.

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