

# Environmental Product Declaration



In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

**DESSO Verso**

from

**TARKETT**



Programme:	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0017328
Publication date:	2024-12-12
Valid until:	2029-12-12

*An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)*



## General information

### Programme information

<b>Programme:</b>	The International EPD <sup>®</sup> System
<b>Address:</b>	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
<b>Website:</b>	<a href="http://www.environdec.com">www.environdec.com</a>
<b>E-mail:</b>	<a href="mailto:info@environdec.com">info@environdec.com</a>

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): <i>PCR 2019:14 version 1.3.4 and c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810)</i>
PCR review was conducted by: <i>The Technical Committee of the International EPD<sup>®</sup> System lead by Claudia A Peña. A full list of members available on <a href="http://www.environdec.com">www.environdec.com</a>. The review panel may be contacted via <a href="mailto:info@environdec.com">info@environdec.com</a></i>
Independent third-party verification of the declaration and data, according to ISO 14025:2006:  <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification
Third party verifier: <i>Damien Prunel from LCIE Bureau Veritas</i>
Procedure for follow-up of data during EPD validity involves third party verifier:  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD: Tarkett

Contact: Sandy Bentmim (sandy.bentmim@tarkett.com)

Description of the organisation:

With an 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 floorings, able to meet the particular needs of customers. Our wide range of designs, colours 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 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 to the elimination of losses and to the growth of process efficiency.

Product-related or management system-related certifications: ISO 14001, ISO 45001, WCM manufacturing site

Name and location of production site(s): Dendermonde (Belgium) and Waalwijk (Netherlands)

## Product information

Product name: DESSO Verso

Product identification: Carpet tiles with a 100% recyclable DESSO EcoBase®<sup>1</sup> backing and solution dyed PA6 yarn

Product description: Loose-lay carpet tiles (EN 1307) with DESSO EcoBase® backing developed by Tarkett. The service lifetime recommended by Tarkett is 10 years.

UN CPC code: 2223Z

## LCA information

Functional unit / declared unit: 1m<sup>2</sup> of floor covering with a reference service life (RSL) of 1 year for specified characteristics application and use areas according to ISO 1307 and EN ISO 10874.

Reference service life: 1 year

Time representativeness: 2022

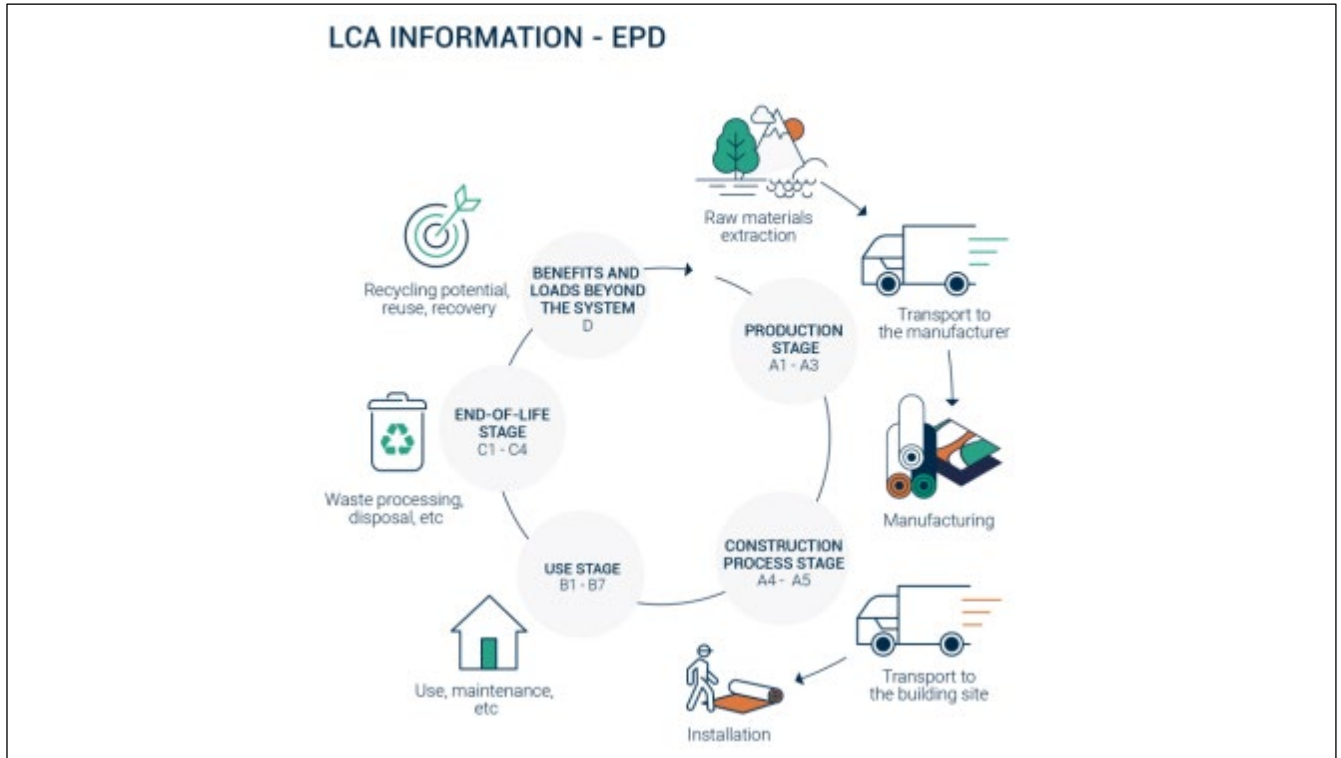
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<sup>1</sup> Assured by Lloyds Register

Database(s) and LCA software used: Ecoinvent 3.10, Simapro 9.6.0.1, EN 15804 reference package based on EF 3.1

Description of system boundaries: Cradle to grave and module D (A + B + C + D)

System diagram:



More information: The products are classified in accordance with EN ISO 10874, (previously EN 685) and in reference to the FCSS (Floor Covering Standard Symbols) to be used in all professional areas which require class 33 or less.

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

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	ND	X	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	European technology and process coverage																European
Specific data used	-	100%	100%	100%	100%	-	-	-	-	-	-	-	-	-	100% for cement industry		100% for cement industry
Variation – products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

## Content information

Characteristics	Yarn Weight [kg/m <sup>2</sup> ]	Product Weight [kg/m <sup>2</sup> ]	Product Thickness [mm]
Verso	4.50E-01	4.00E+00	5.50E+00

Chemical composition for above mentioned product is presented in the following table:

Product components	Weight [%]	Post-consumer material, weight-%	Renewable material, weight-%
Non-woven (PET/PP)	4	0	0
Yarn PA6*	11	0	0
SBR-compound	7	0	0
Aluminium trihydrate	15	0	0
Primary chalk	3	0	0
Glass scrim	1	0	0
EcoBase (w. recycled chalk)**	59	0	9
Packaging materials	Weight, kg	Weight-% (versus the product)	
Cardboard box	1.09E-01	3	
Wooden pallet	1.00E-01	2	

\* The yarn is manufactured from 75% pre-consumer materials.

\*\* EcoBase contains up to 82% pre-consumer recycled chalk.

## Material Health

DESSO Verso is C2C-Silver certified.

Raw materials are assessed against 'Material Health' criteria as defined by the C2C product certification standard v3.1 and the C2C Material Health Assessment methodology (see [www.c2ccertified.org](http://www.c2ccertified.org)).

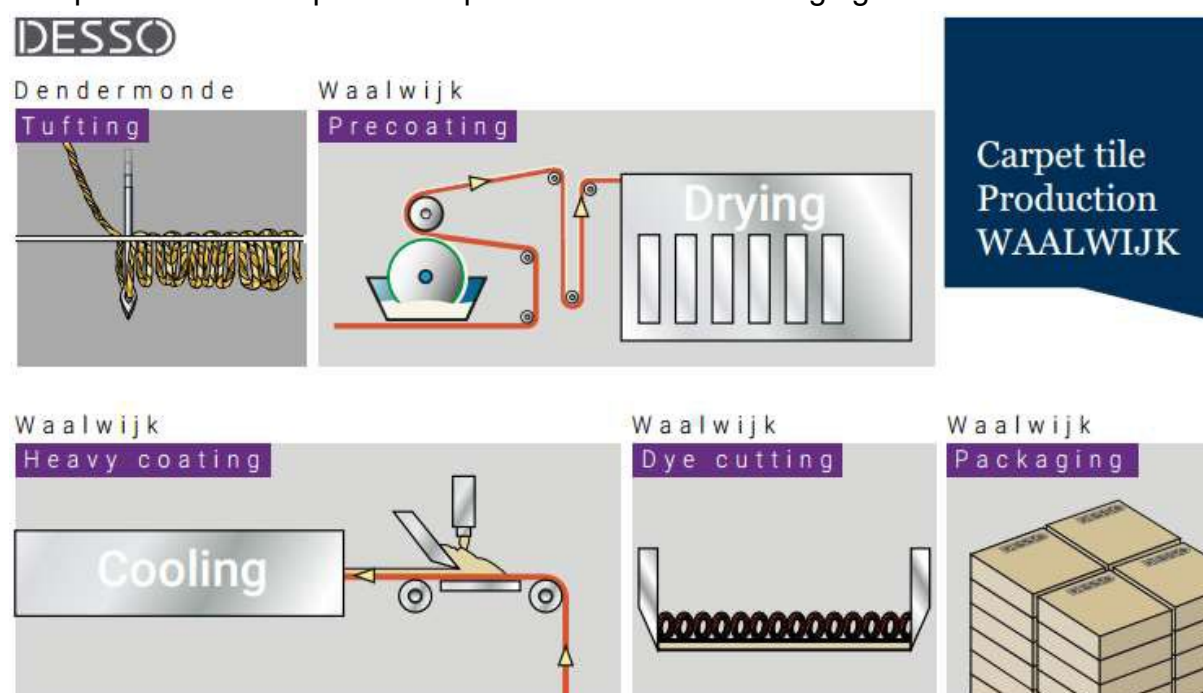
## Recycled content (third-party verified)

DESSO Verso contains up to 63.0% recycled and bio-based content<sup>2</sup>. The product is delivered with the Cradle to Cradle® Gold-certified DESSO EcoBase® backing, which is 100% recyclable<sup>3</sup> and designed with 100% positively defined<sup>4</sup> ingredients. This includes chalk upcycled from the Dutch drinking water industry and pine rosin, a by-product of the Scandinavian paper industry.

## Product manufacturing

### Production process

The production of carpet tiles is presented in the following figure:



### Renewable energy

Our carpet tiles are produced with energy from 100% renewable sources. The electricity is coming from renewable sources with Guarantees of Origin<sup>5</sup>

### Production waste

Waste type	Verso
Non-hazardous waste to incineration in the cement industry [kg/m <sup>2</sup> ]	2.29E-01
Non-hazardous wastewater to external treatment [kg/m <sup>2</sup> ]	2.63E-02

<sup>2</sup> This includes on average 5% bio-based content based on the total product weight. The recycled content is assured by Lloyds

<sup>3</sup> Assured by Lloyds Register

<sup>4</sup> Positively defined means all ingredients have been assessed as either Green (optimal) or Yellow (tolerable) according to the Cradle to Cradle® assessment criteria. As described in Cradle to Cradle® Certified Product Standard Version 3.1

<sup>5</sup> A mix of mainly wind and a small part of solar and hydro energy reflecting 0,04kgCO<sub>2</sub>eq/kWh



## Delivery and installation

### Delivery

The average distribution distance between the factories and the installation site is presented in the following table. The distribution is made by truck.

	Verso
Average distance of delivery [km]	7.00E+02

### Installation

Carpet flooring do not use any electric tools for their installation. If a cut is necessary, it could be done with a manual tool.

### Waste

During the installation approximately 3% of the flooring is lost as off-cuts. All flooring losses are sent to incineration.

### Packaging

50% of the packaging materials goes to incineration and 50% goes to landfill except for wooden pallet which are recycled.

## Use Stage

### Reference Service Life (RSL)

For these products, the stated RSL is 1 year. It should be noted, however, that the service life of a carpet 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 on the basis of his experience of flooring manufacture and supply. This RSL is applicable as long as the product use complies with that defined by ISO 14041 and ISO 10874 in accordance with the product's classification. The service lifetime recommended by Tarkett is 10 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 times / week
- Periodical maintenance: 2 times / year

Description	Amount	Unit
Electricity consumption	4.42E-01	kWh/year/m <sup>2</sup>
Water consumption	5.70E-02	L/year/m <sup>2</sup>
Detergent consumption	3.00E-03	L/year/m <sup>2</sup>



### 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

For the purpose of this LCA, it has been assumed that 100% of the product is sent to the cement industry for recycling of chalk and ATH (raw material of cement).

### Transport

The distance of transport, by truck, between installation sites and cement industry:

	Verso
Transport distance to Tarkett's carpet recycling centre [km]	2.50E+02

## Resource recovery

Co-processing in the cement-industry will deliver a benefit of material reuse (ATH and chalk recycling, open loop). Benefits accounted in this scenario are presented in module D.

## Environmental Information

### Potential environmental impact

Results per functional or declared unit - (End of Life → Recycling)															
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	D
GWP-total	kg CO2 eq	4.42E+00	1.35E-01	3.72E-01	0.00E+00	1.48E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-02	5.36E+00	-8.24E-01
GWP-fossil	kg CO2 eq	5.03E+00	1.35E-01	3.06E-01	0.00E+00	1.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-02	4.73E+00	-8.24E-01
GWP-biogenic	kg CO2 eq	5.45E-02	2.42E-05	8.58E-02	0.00E+00	3.67E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E-06	6.28E-01	-3.10E-04
GWP-Luluc	kg CO2 eq	3.99E-03	4.44E-05	1.27E-04	0.00E+00	6.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-05	7.96E-05	-3.75E-04
AP	kg CFC11 eq	1.68E-06	2.68E-09	5.08E-08	0.00E+00	2.57E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.62E-10	1.47E-09	-6.77E-09
ODP	mol H+ eq	2.13E-02	4.17E-04	7.26E-04	0.00E+00	7.51E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-04	8.00E-04	-6.52E-03
EP-freshwater	kg P eq	1.25E-03	9.03E-06	3.95E-05	0.00E+00	1.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-06	2.69E-05	-2.82E-04
EP-marine	kg N eq	4.13E-03	1.39E-04	2.30E-04	0.00E+00	1.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-05	4.16E-04	-9.95E-04
EP-terrestrial	mol N eq	3.41E-02	1.52E-03	1.36E-03	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-04	3.55E-03	-1.08E-02
POCP	kg NMVOC eq	1.87E-02	6.54E-04	6.94E-04	0.00E+00	3.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-04	9.04E-04	-3.22E-03
ADP-minerals&metals*	kg Sb eq	3.75E-05	4.44E-07	1.17E-06	0.00E+00	3.58E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-07	2.65E-07	-4.40E-06
ADP-fossil*	MJ	9.37E+01	1.90E+00	3.02E+00	0.00E+00	3.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.79E-01	1.05E+00	-8.19E+00
WDP	m3 depriv.	1.58E+00	7.90E-03	4.47E-02	0.00E+00	4.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-03	1.05E-01	-1.15E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption														

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

### Use of resources

Results per functional or declared unit - (End of Life → Recycling)															
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	D
PERE	MJ, net CV	2.00E+01	3.22E-02	2.19E+00	0.00E+00	8.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	1.30E-01	-3.99E-01
PERM	MJ, net CV	4.23E+00	0.00E+00	-1.45E+00	0.00E+00	4.50E-03	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
PERT	MJ, net CV	2.43E+01	3.22E-02	7.36E-01	0.00E+00	8.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	1.30E-01	-3.99E-01
PENRE	MJ, net CV	6.68E+01	1.90E+00	2.22E+00	0.00E+00	3.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.79E-01	1.05E+00	-8.19E+00
PENRM	MJ, net CV	2.83E+01	0.00E+00	8.48E-01	0.00E+00	2.53E-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
PENRT	MJ, net CV	9.51E+01	1.90E+00	3.06E+00	0.00E+00	3.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.79E-01	1.05E+00	-8.19E+00
SM	kg	2.47E+00	0.00E+00	7.41E-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
RSF	MJ, net CV	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, net CV	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	m3	4.28E-02	2.60E-04	1.29E-03	0.00E+00	2.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-05	3.86E-03	-3.43E-03
Acronyms	PERE = Use of renewable primary energy excluding non-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														

### Waste production and output flows

Results per functional or declared unit - (End of Life → Recycling)															
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	D
Hazardous waste disposed	kg	8.71E-03	5.75E-05	2.64E-03	0.00E+00	1.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-05	4.66E-02	-1.71E-03
Non-hazardous waste disposed	kg	2.41E+00	1.11E-01	2.22E-01	0.00E+00	4.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E-02	6.48E-02	-1.05E+00
Radioactive waste disposed	kg	1.19E-04	6.06E-07	3.72E-06	0.00E+00	2.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-07	3.55E-06	-7.04E-06
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
Material for recycling	kg	1.92E-01	0.00E+00	1.06E-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
Materials for energy recovery	kg	8.59E-02	0.00E+00	1.24E-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
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-01
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	3.99E-01

## Information on biogenic carbon content

Results per functional or declared unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	8.87E-03
Biogenic carbon content in packaging	kg C	1.09E-03

*Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>.*

## Additional mandatory and voluntary impact category indicators

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	D
GWP-GHG	kg CO <sub>2</sub> eq	4.37E+00	1.35E-01	2.86E-01	0.00E+00	1.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-02	4.73E+00	-8.24E-01

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<sub>2</sub> is set to zero.

## References

General Programme Instructions of the International EPD<sup>®</sup> System. Version 5.0.0.

PCR 2019:14. Version 1.3.4 c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810).

