

Environmental Product Declaration

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

NYLON CARPET TILE

from

***YUAN RUI ZHI DECORATIVE MATERIALS (SHANGHAI)
CO.,LTD.***



Programme:

The International EPD System, www.environdec.com

Programme operator:

EPD International AB

Type of EPD:

EPD of multiple products, based on the average results of the product group

EPD registration number:

EPD-IES-0026525:001

Version date:

2025-12-08

Validity date:

2030-12-08

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)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 PCR Construction products Version2.0.1 and c-PCR-004 Resilient, textile and laminate floor covering, Version 2025-04-08
PCR review was conducted by: The Technical Committee of the International EPD System

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: <i>Rui Wang, IVL Swedish Environmental Research Institute</i> Approved by: International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier:
☐ Yes ☒ No

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

EPDs within the same product category but 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. For further information about comparability, see EN 15804 and ISO 14025.



INFORMATION ABOUT EPD OWNER

Owner of the EPD:

YUAN RUI ZHI DECORATIVE MATERIALS (SHANGHAI) CO.,LTD.

Address:

No. 2777, Shengang Road, Songjiang District, Shanghai, China

Contact:

Yongjie Li, sales@unijoy-design.com

Address and contact information of the LCA practitioner commissioned by the EPD owner, if applicable:

Zhu Xuedan, CTI Certification Co., Ltd., zhuxuedan@cti-cert.com

Description of the organisation:

YUAN RUI ZHI DECORATIVE MATERIALS (SHANGHAI) CO.,LTD. (hereafter referred to as "Unijoy") has dedicated 27 years to producing high-end carpet tiles and was the first enterprise in China to introduce Japanese tufted pile and backing production line. Unijoy has contributed to the development of national standards for carpet tiles and is one of the organizations involved in drafting this standard. It possess advanced equipment, tapestry technology, and innovative processes such as big cushion back for manufacturing high-quality products known for exceptional performance, unique design, and cost-effectiveness. Unijoy offers personalized product customization development, scheme design, prompt supply, and professional after-sales support to meet diverse customer needs. Unijoy carpet tiles have been exported to many overseas regions.

Product-related or management system-related certifications:

ISO 9001, ISO 14001, and ISO 45001.

PRODUCT INFORMATION

Product name:

NYLON CARPET TILE

Product identification:

Nylon carpet tiles with Nylon 6 yarn type and PVC backing

UN CPC code:

27230 - Carpets and other textile flooring, tufted

Product description:

Nylon carpet tiles are modular flooring products composed of nylon yarn tufted onto spunbonded non-woven base fabric with PVC backing layer, primarily used for decorating and protecting the floors of residential and commercial buildings. The product has a reference service life of 15 years under normal indoor use conditions with regular cleaning and maintenance.

This EPD covers a product group of nylon carpet tiles. The environmental data presented represents the average performance of the product group.

Table 1 NYLON CARPET TILE product group information

Item	Description	Range/Options
Product Dimensions	Length × Width	333*1000mm 500*500mm, 600 *600mm, 500*1000mm,

		1000 250mm
Weight Range	kg/m ² (minimum-maximum)	3.18-4.85

Table 2 Main technical parameters of the product

Properties	Standard	Values
Pile Weight	ISO 8543	450~900 g/m ²
Pile Thickness	ISO 1766	3~5mm
Total Thickness	ISO 1765	6~10 mm
Wear Classification	ISO 10361	>=2.5 TARR
Flammability	ISO 9329-1	CHF>=4.5 KW/m ²
Impact Sound Transmission	ISO 10140-3	$\Delta L_w \geq 25$ dB
Sound Absorption	ISO 354	Class E

Name and location of production site:

Manufacturer: YUAN RUI ZHI DECORATIVE MATERIALS (SHANGHAI) CO.,LTD.

Production Site: No. 2777, Shengang Road, Songjiang District, Shanghai, China

References to any relevant websites for more information or explanatory materials, if applicable.

<https://en.unijoy-design.com/>

CONTENT DECLARATION

- The mass (weight) of one unit of a product, as per functional unit: 3.828 kg/m²

Product components	Weight, kg	Biogenic material, mass-% of product	Biogenic material, weight-% and kg C/kg
Nylon Carpet Fiber	6.00E-01	0%	0.00E+00
Polyester Non-woven Fabric	1.00E-01	0%	0.00E+00
Pre-coating Adhesive	1.52E-01	0%	0.00E+00

Pre-coating Filler	3.00E-01	0%	0.00E+00
Foaming Agent	1.00E-02	0%	0.00E+00
Glass Fiber	5.00E-02	0%	0.00E+00
Resin Paste	4.00E-01	0%	0.00E+00
Plasticizer	3.50E-01	0%	0.00E+00
Backing Filler	1.85E+00	0%	0.00E+00
Dehumidifying Agent	6.00E-03	0%	0.00E+00
Pigment	4.00E-03	0%	0.00E+00
Stabilizer	6.00E-03	0%	0.00E+00
Total	3.83E+00	0%	0.00E+00
Packaging materials	Weight, kg	Biogenic material, mass-% of product	Weight biogenic carbon, kg C/kg
Corrugated box	1.62E-01	4.04%	6.47E-02
Wood pallet	1.89E-02	0.47%	8.91E-03
Total	1.81E-01	4.51%	7.36E-02

- Products do not contain any substances that can be included in “Candidate List of Substances of Very High Concern for Authorization” and raw materials used are not part of the EU REACH regulation.

LCA INFORMATION

Functional unit

1 m² of NYLON CARPET TILE

Conversion factor to mass

3.828 kg/FU

Reference service life:

Based on the typical performance data of NYLON CARPET TILE industry, combined with technical parameters from YUAN RUI ZHI DECORATIVE MATERIALS (SHANGHAI) CO.,LTD., the reference service life is determined to be 15 years. This value applies to residential and commercial applications under normal use conditions (indoor environment, regular cleaning and maintenance, no abnormal heavy loads).

Time representativeness:

September 1, 2024 to August 31, 2025

Geographical scope:

A1-A3 China

A4 From China to domestic, Southeast Asian, and global markets

A5-D Global

Note: The product is manufactured in China for domestic, Southeast Asian, and global markets.

Installation, use, and end-of-life stages (A5-D) are modeled using global average data.

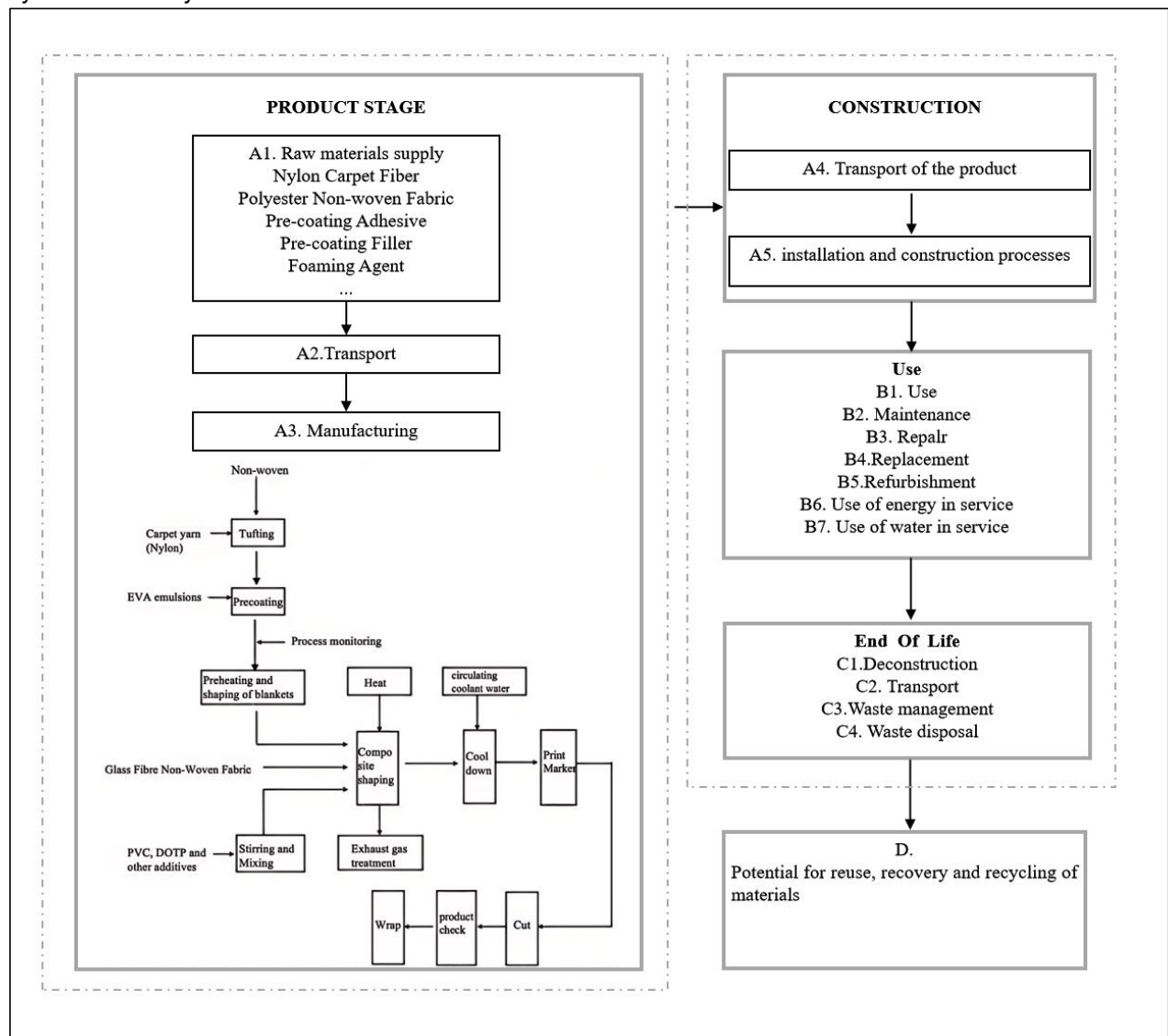
Database(s) and LCA software used: Calculation completed in SimaPro software (version 10.2) ,with the database used is Ecoinvent 3.10.In this EPD report,EN 15804 reference package based on EF 3.1 has been used.

Description of system boundaries:

Cradle to grave and module D (A + B + C + D).

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.



More information:

Allocation

This study applies physical allocation principles for energy consumption, water usage, and solid waste generation in the manufacturing process. Since no co-products are generated during NYLON CARPET TILE production, co-product allocation is not applicable. Due to multiple product lines producing various flooring types and specifications within the facility, and the lack of product-specific metering equipment, the energy consumption, water usage, and solid waste data are allocated based on production volume.

Cut-off

There is no neglected unit process more than 1% of total mass and energy flows per unit process. The total neglected input flows per module is less than 5 % of energy usage and mass.

Explanation of Power Structure

This study clarifies the sources of electricity data as follows: All electricity consumption in this study is calculated using a location-based approach for power emission factors. Electricity consumption during the production phase is sourced from local grid purchases. since specific emission factors from power suppliers or market-based tools are unavailable, the average grid emission factor for the geographic location is applied. Electricity consumption during the use phase is similarly calculated conservatively using the global average grid emission factor.

Therefore, the climate impact of the electricity of A3 (GWP-GHG indicator) is 0.6549 kg CO₂ eq/kWh.

Scenarios

The following scenarios are used in this study:

- **Construction installation:** Adhesive consumption and product loss during installation are based on empirical values provided by the manufacturer. Packaging waste and installation losses are treated using conservative assumptions, without considering environmental benefits from waste recovery, assuming all materials are sent to landfill.
- **Product use:** Detergent, tap water, and electricity consumption are all based on empirical values provided by the manufacturer.
- **End-of-Life:** All parameters in the end-of-life stage are based on scenario assumptions. It is assumed that products are disassembled after disposal (energy consumption uses default values from the PCR), then transported by truck for 130 kilometers (conservative) to the nearest waste treatment facility. End-of-life treatment is modeled based on global plastic waste management data. Composite carpets are assumed to undergo 79% landfill, 12% incineration with energy recovery, and 9% material recycling. Environmental benefits from both energy recovery and material recycling are calculated using appropriate benefit assessment methods and reported in Module D.

The LCA analysis applied the EN 15804 as the calculation methodology. All results in this LCA analysis are calculated by EN 15804+A2. The “EN 15804 reference package” is calculated based on EF 3.1.

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

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage				Beyond product life cycle
	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	CN	CN	CN	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Share of primary data	8%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	+27%/-17%																
Variation – sites	ND (single site)					-	-	-	-	-	-	-	-	-	-	-	-

Data quality

A summary of the data quality assessment, in line with requirements of PCR in Section 4.6.4, is listed below.

Table 3 The declaration of data sources, reference years, data categories, and share of primary data

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Production of Nylon 6	Database	Ecoinvent v3.10	2024	Secondary data	49%
Transport of raw material	Database	Ecoinvent v3.10	2024-2025	Primary data	2%
Generation of energy and resources used in manufacturing of product	Database	Ecoinvent v3.10	2024	Primary data	6%
Total share of primary data, of GWP-GHG results for A1-A3					8%

** Disclaimer: The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that do not capture all relevant aspects of data quality. The indicator is not comparable across product categories.*

ENVIRONMENTAL PERFORMANCE

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

Mandatory impact category indicators according to EN 15804

Results per 1 m ² of NYLON CARPET TILE																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	1.19 E+01	4.28 E-01	6.95 E-01	0.00 E+00	2.33 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.88 E-03	9.74 E-02	1.09 E+00	4.58 E-01	- 6.52 E-01
GWP-fossil	kg CO ₂ eq.	1.21 E+01	4.28 E-01	3.97 E-01	0.00 E+00	2.33 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.88 E-03	9.74 E-02	1.09 E+00	4.58 E-01	- 6.21 E-01
GWP-biogenic	kg CO ₂ eq.	- 1.54 E-01	- 1.75 E-06	5.71 E-01	0.00 E+00	3.48 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.81 E-07	1.22 E-06	7.42 E-05	1.61 E-06	- 3.18 E-02
GWP-luluc	kg CO ₂ eq.	1.47 E-02	1.73 E-04	4.54 E-04	0.00 E+00	3.02 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.18 E-07	3.87 E-05	7.10 E-06	1.28 E-06	- 1.07 E-04
ODP	kg CFC 11 eq.	1.98 E-06	5.99 E-09	5.98 E-08	0.00 E+00	2.58 E-08	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	4.60 E-11	1.36 E-09	4.06 E-10	2.25 E-10	- 1.37 E-07
AP	mol H ⁺ eq.	5.22 E-02	1.99 E-03	1.68 E-03	0.00 E+00	1.24 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.54 E-05	3.25 E-04	2.50 E-04	1.40 E-04	- 2.66 E-03
EP-freshwater	kg P eq.	1.57 E-03	3.26 E-05	4.98 E-05	0.00 E+00	1.02 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	7.87 E-08	7.64 E-06	3.44 E-06	4.30 E-07	- 4.19 E-05
EP-marine	kg N eq.	1.16 E-02	5.96 E-04	8.52 E-04	0.00 E+00	2.30 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	6.61 E-06	1.05 E-04	1.42 E-04	6.22 E-03	- 6.00 E-04
EP-terrestrial	mol N eq.	1.17 E-01	6.52 E-03	3.83 E-03	0.00 E+00	2.34 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	7.23 E-05	1.14 E-03	1.21 E-03	6.75 E-04	- 6.05 E-03
POCP	kg NMVOC eq.	4.38 E-02	2.36 E-03	1.54 E-03	0.00 E+00	7.24 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.36 E-05	4.52 E-04	3.05 E-04	3.42 E-04	- 2.15 E-03
ADP-minerals&metals*	kg Sb eq.	1.04 E-04	1.32 E-06	3.22 E-06	0.00 E+00	1.40 E-05	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	8.14 E-10	3.11 E-07	5.45 E-08	5.13 E-09	- 6.78 E-06
ADP-fossil*	MJ	1.78 E+02	5.97 E+00	5.75 E+00	0.00 E+00	3.35 E+01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.96 E-02	1.37 E+00	2.16 E-01	1.92 E-01	- 8.04 E+00
WDP*	m ³	4.24 E+00	3.19 E-02	7.69 E-02	0.00 E+00	1.77 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	9.94 E-05	7.45 E-03	5.28 E-02	5.64 E-04	- 2.05 E-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															

Statement: 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).

Additional mandatory and voluntary impact category indicators

Results per 1 m² of NYLON CARPET TILE

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.	1.21 E+01	4.28 E-01	3.97 E-01	0.00 E+00	2.33 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.88 E-03	9.74 E-02	1.09 E+00	4.58 E-01	- 6.21 E-01

Resource use indicators

Results per 1 m² of NYLON CARPET TILE

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	7.95 E+00	7.68 E-02	2.44 E-01	0.00 E+00	4.01 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.81 E-04	1.79 E-02	8.52 E-03	1.18 E-03	- 1.51 E-01
PERM	MJ	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
PERT	MJ	7.95 E+00	7.68 E-02	2.44 E-01	0.00 E+00	4.01 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.81 E-04	1.79 E-02	8.52 E-03	1.18 E-03	- 1.51 E-01
PENRE	MJ	1.78 E+02	5.97 E+00	5.75 E+00	0.00 E+00	3.35 E+01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.96 E-02	1.37 E+00	2.16 E-01	1.92 E-01	- 8.04 E+00
PENRM	MJ	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
PENRT	MJ	1.78 E+02	5.97 E+00	5.75 E+00	0.00 E+00	3.35 E+01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.96 E-02	1.37 E+00	2.16 E-01	1.92 E-01	- 8.04 E+00
SM	kg	1.49 E-01	2.69 E-03	4.62 E-03	0.00 E+00	6.02 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	9.96 E-06	6.13 E-04	1.94 E-04	8.03 E-05	- 1.88 E-02
RSF	MJ	2.51 E-02	3.29 E-05	7.55 E-04	0.00 E+00	4.98 E-05	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.39 E-08	7.80 E-06	6.36 E-06	2.09 E-07	- 7.07 E-06
NRSF	MJ	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
FW	m ³	1.01 E-01	7.80 E-04	1.85 E-03	0.00 E+00	4.32 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.41 E-06	1.82 E-04	1.23 E-03	1.38 E-05	- 4.81 E-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

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 CO₂ is set to zero.

Waste indicators

Results per 1 m ² of NYLON CARPET TILE																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	7.01E-01	1.03E-02	2.19E-02	0.00E+00	2.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-05	2.39E-03	1.88E-02	2.16E-04	-1.25E-02
Non-hazardous waste disposed	kg	2.35E+01	1.92E-01	2.23E+00	0.00E+00	5.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-04	4.49E-02	5.09E-01	3.03E+00	-2.44E-01
Radioactive waste disposed	kg	8.68E-05	1.18E-06	2.68E-06	0.00E+00	7.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-09	2.75E-07	9.92E-08	2.13E-08	-2.10E-06

Output flow indicators

Results per 1 m ² of NYLON CARPET TILE																
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	2.28E-02	7.34E-05	6.83E-04	0.00E+00	2.19E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E-08	1.01E-05	2.26E-06	5.21E-07	-3.71E-05
Materials for energy recovery	kg	8.84E-04	3.73E-07	2.66E-05	0.00E+00	2.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.23E-10	8.81E-08	2.72E-08	2.64E-09	-1.68E-07
Exported energy, electricity	MJ	2.73E-02	4.27E-04	8.40E-04	0.00E+00	2.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-06	9.93E-05	4.39E-05	8.80E-06	-1.81E+00
Exported energy, thermal	MJ	2.79E-02	8.46E-04	8.91E-04	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.88E-07	2.00E-04	9.14E-05	4.61E-06	-1.01E-03

Environmental impact indicators for 100% landfill, 100% incineration, and 100% recycling scenarios at end-of-life stage

Type	Indicator	Unit	100% landfill			100% incineration			100% recycling		
			C3	C4	D	C3	C4	D	C3	C4	D
Core environmental impact indicators	GWP -total	kg CO ₂ eq	0.00E+00	5.79E-01	0.00E+00	9.11E+00	0.00E+00	-2.69E-01	1.37E-03	0.00E+00	-6.89E+00
	GWP -fossil	kg CO ₂ eq	0.00E+00	5.79E-01	0.00E+00	9.11E+00	0.00E+00	-1.07E-02	1.37E-03	0.00E+00	-6.88E+00
	GWP -biogenic	kg CO ₂ eq	0.00E+00	2.04E-06	0.00E+00	6.18E-04	0.00E+00	-2.58E-01	2.04E-07	0.00E+00	-8.65E-03
	GWP -luluc	kg CO ₂ eq	0.00E+00	1.62E-06	0.00E+00	5.91E-05	0.00E+00	-9.01E-06	1.59E-07	0.00E+00	-1.18E-03

	ODP	kg CFC-11 eq	0.00E+00	2.85E-10	0.00E+00	3.36E-09	0.00E+00	-1.49E-10	3.35E-11	0.00E+00	-1.52E-06
	AP	mole H+ eq	0.00E+00	1.77E-04	0.00E+00	2.08E-03	0.00E+00	-8.06E-05	1.12E-05	0.00E+00	-2.95E-02
	EP-freshwater	kg P eq	0.00E+00	5.44E-07	0.00E+00	2.86E-05	0.00E+00	-4.09E-05	5.72E-08	0.00E+00	-4.11E-04
	EP-marine	kg N eq	0.00E+00	7.87E-03	0.00E+00	1.18E-03	0.00E+00	-3.74E-05	4.81E-06	0.00E+00	-6.62E-03
	EP-terrestrial	mole N eq	0.00E+00	8.54E-04	0.00E+00	1.01E-02	0.00E+00	-3.25E-04	5.26E-05	0.00E+00	-6.67E-02
	POCP	kg NMVOC eq	0.00E+00	4.32E-04	0.00E+00	2.53E-03	0.00E+00	-8.80E-05	1.72E-05	0.00E+00	-2.37E-02
	ADP-minerals & metals	kg sb eq	0.00E+00	6.50E-09	0.00E+00	4.54E-07	0.00E+00	-2.33E-08	5.92E-10	0.00E+00	-7.53E-05
	ADP-fossil	MJ	0.00E+00	2.43E-01	0.00E+00	1.78E+00	0.00E+00	-9.38E-02	2.88E-02	0.00E+00	-8.92E+01
	WDP	m³	0.00E+00	7.15E-04	0.00E+00	4.40E-01	0.00E+00	-5.01E-03	7.23E-05	0.00E+00	-2.27E+00
GWP-GHG	GWP - GHG	kg CO ₂ eq	0.00E+00	5.79E-01	0.00E+00	9.11E+00	0.00E+00	-1.07E-02	1.37E-03	0.00E+00	-6.88E+00
Use of resources	PERE	MJ	0.00E+00	1.50E-03	0.00E+00	7.09E-02	0.00E+00	-2.70E-03	1.32E-04	0.00E+00	-1.68E+00
	PERM	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
	PERT	MJ	0.00E+00	1.50E-03	0.00E+00	7.09E-02	0.00E+00	-2.70E-03	1.32E-04	0.00E+00	-1.68E+00
	PENRE	MJ	0.00E+00	2.43E-01	0.00E+00	1.78E+00	0.00E+00	-9.38E-02	2.88E-02	0.00E+00	-8.92E+01
	PENRM	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
	PENRT	MJ	0.00E+00	2.43E-01	0.00E+00	1.78E+00	0.00E+00	-9.38E-02	2.88E-02	0.00E+00	-8.92E+01
	SM	kg	0.00E+00	1.02E-04	0.00E+00	1.62E-03	0.00E+00	-1.50E-01	7.24E-06	0.00E+00	-8.71E-03

	RSF	MJ	0.00E+0 0	2.65E- 07	0.00E+0 0	5.30E- 05	0.00E+0 0	-7.94E- 07	2.47E- 08	0.00E+0 0	-7.75E- 05
	NRSF	MJ	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0
	FW	m ³	0.00E+0 0	1.74E- 05	0.00E+0 0	1.03E- 02	0.00E+0 0	-1.18E- 04	1.75E- 06	0.00E+0 0	-5.33E- 02
Waste outflow	Hazardous waste disposed	kg	0.00E+0 0	2.73E- 04	0.00E+0 0	1.57E- 01	0.00E+0 0	-1.14E- 02	2.39E- 05	0.00E+0 0	-1.24E- 01
	Non-hazardous waste disposed	kg	0.00E+0 0	3.83E+0 0	0.00E+0 0	4.24E+0 0	0.00E+0 0	-3.27E- 01	3.63E- 04	0.00E+0 0	- 2.28E+0 0
	Radioactive waste disposed	kg	0.00E+0 0	2.69E- 08	0.00E+0 0	8.25E- 07	0.00E+0 0	-3.72E- 08	2.43E- 09	0.00E+0 0	-2.33E- 05
Output flows	Components for re-use	kg	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0	0.00E+0 0
	Material for recycling	kg	0.00E+0 0	6.59E- 07	0.00E+0 0	1.88E- 05	0.00E+0 0	-9.96E- 07	6.47E- 08	0.00E+0 0	-4.11E- 04
	Materials for energy recovery	kg	0.00E+0 0	3.35E- 09	0.00E+0 0	2.27E- 07	0.00E+0 0	-9.47E- 09	3.07E- 10	0.00E+0 0	-1.86E- 06
	Exported energy, electricity	MJ	0.00E+0 0	1.11E- 05	0.00E+0 0	3.65E- 04	0.00E+0 0	- 1.50E+0 1	9.65E- 07	0.00E+0 0	-6.25E- 03
	Exported energy, thermal	MJ	0.00E+0 0	5.83E- 06	0.00E+0 0	7.61E- 04	0.00E+0 0	-2.82E- 05	7.19E- 07	0.00E+0 0	-1.12E- 02

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

This EPD provides average results for the nylon carpet tile product group. All products within the group use the same types of materials and follow identical production processes, with material quantities varying proportionally across different product specifications to meet diverse performance requirements. Therefore, the variation within this product group is primarily attributed to differences in product weight. Heavier products consume more materials during production stage. Detailed variation information is provided in the table below.

LCA result of one functional unit product (A1-A3)	Unit	Min	Max	Average	Differ Min	Differ Max
GWP-total	kg CO ₂ eq.	9.90E+00	1.53E+01	1.19E+01	19%	24%
GWP-fossil	kg CO ₂ eq.	1.00E+01	1.54E+01	1.21E+01	19%	24%
GWP-biogenic	kg CO ₂ eq.	-1.52E-01	-1.57E-01	-1.54E-01	1%	2%
GWP-luluc	kg CO ₂ eq.	1.32E-02	1.71E-02	1.47E-02	11%	15%
ODP	kg CFC 11 eq.	1.66E-06	2.48E-06	1.98E-06	18%	22%
AP	mol H ⁺ eq.	4.36E-02	6.62E-02	5.22E-02	18%	24%
EP-freshwater	kg P eq.	1.34E-03	1.92E-03	1.57E-03	16%	20%
EP- marine	kg N eq.	9.69E-03	1.46E-02	1.16E-02	18%	23%
EP-terrestrial	mol N eq.	9.77E-02	1.48E-01	1.17E-01	18%	23%
POCP	kg NMVOC eq.	3.65E-02	5.55E-02	4.38E-02	18%	24%
ADP-minerals&metals*	kg Sb eq.	8.59E-05	1.34E-04	1.04E-04	19%	25%
ADP-fossil*	MJ	1.49E+02	2.26E+02	1.78E+02	18%	24%
WDP*	m ³	3.55E+00	5.36E+00	4.24E+00	18%	23%
PERE	MJ	7.15E+00	9.20E+00	7.95E+00	11%	15%
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0%	0%
PERT	MJ	7.15E+00	9.20E+00	7.95E+00	11%	15%
PENRE	MJ	1.49E+02	2.26E+02	1.78E+02	18%	24%
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0%	0%
PENRT	MJ	1.49E+02	2.26E+02	1.78E+02	18%	24%
SM	kg	1.45E-01	1.55E-01	1.49E-01	3%	4%
RSF	MJ	2.51E-02	2.52E-02	2.51E-02	0%	0%
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0%	0%
FW	m ³	8.43E-02	1.27E-01	1.01E-01	18%	23%
Hazardous waste disposed	kg	5.99E-01	8.59E-01	7.01E-01	16%	20%
Non-hazardous waste disposed	kg	1.98E+01	2.93E+01	2.35E+01	17%	22%
Radioactive waste disposed	kg	7.58E-05	1.04E-04	8.68E-05	14%	18%
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0%	0%
Material for recycling	kg	2.25E-02	2.32E-02	2.28E-02	1%	2%
Materials for energy recovery	kg	7.41E-04	1.11E-03	8.84E-04	18%	22%
Exported energy, electricity	MJ	2.30E-02	3.39E-02	2.73E-02	17%	22%
Exported energy, thermal	MJ	2.35E-02	3.47E-02	2.79E-02	17%	22%

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	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-land use	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)
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)
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	Construction process stage-Transport from the plant to the installation site
A5	Construction/Installation

B1	Use
B2	Maintenance
B3	Repair
B4	Replacement
B5	Refurbishment
B6	Operational energy use
B7	Operational water use
C1	End of life stage-deconstruction, demolition
C2	End of life stage-transport
C3	End of life stage-waste processing
C4	End of life stage-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
NM VOC	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

REFERENCES

- a) ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.
- b) ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.
- c) ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.
- d) EN 15804:2012 +A2:2019/AC:2021 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.
- e) General Programme Instructions of International EPD System. Version 5.0.1.
- f) PCR 2019:14. Construction Products, Version 2.0.1
- g) c-PCR-004 Resilient, textile and laminate floor covering, Version 2025-04-08.



VERSION HISTORY

Original Version of the EPD, 2025-12-08

