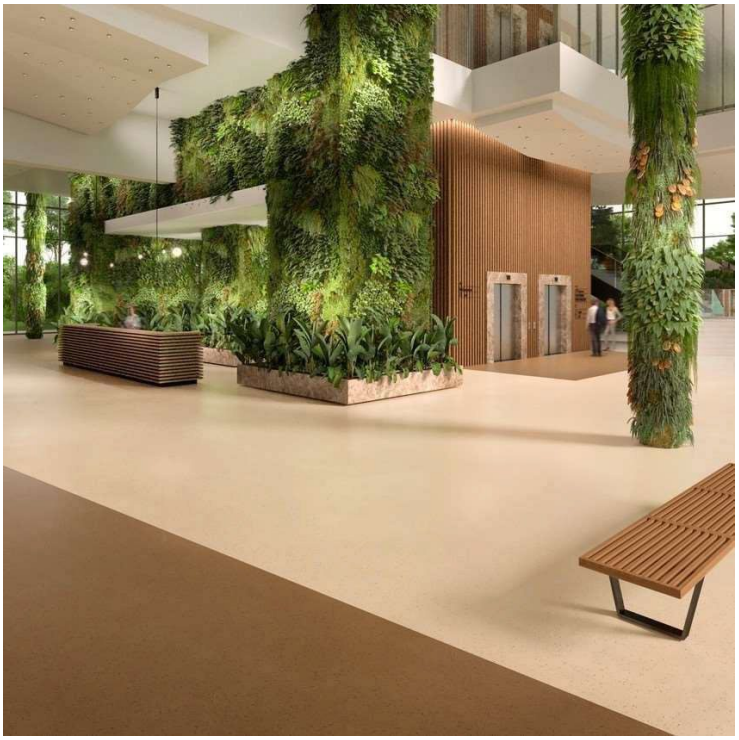
ENVIRONMENTAL PRODUCT DECLARATION

MIPOLAM COLLECTION

HOMOGENEOUS VINYL FLOORING



Our mission at Gerflor: make our customers and users' lives easier with sustainable innovative, healthy, and less impactful products.

When it comes to sustainability, we set ourselves to the highest standards. As part of this commitment, Gerflor has decided to take a leadership position with a goal of publishing a third-party independently verified EPD for each of its product ranges

This EPD covers "Mipolam collection", homogeneous vinyl flooring.

- According to ISO 22196 and ISO 21702, the products have, respectively, anti-bacterial activity against MRSA of 99% after 24h and anti-viral activity against human coronavirus 229E of 99.7% after 2h.
- The product emission rate of volatile organic compounds is < 10 µg/m3 (TVOC after 28 days – ISO 16000 -6).
- They have an exclusive and patented Evercare surface treatment which allowed easy maintenance, no wax for life and high stain resistance.
- They have the Floorscore and M1 certifications.

Since 2011, Gerflor offers an innovative program in select countries for collecting installation waste and end-of-life products. Once collected, those products are sent to a recycling center.
The recyclate is then reintegrated in Gerflor factories into new products, to close the circularity loop.

ENVIRONMENTAL PRODUCT DECLARATION

Gerflor MIPOLAM COLLECTION

According to ISO 14025 and EN 15804

EPD PROGRAM AND PROGRAM OPERATOR NAME, ADDRESS, LOGO, AND WEBSITE	UL SOLUTIONS https://www.ul.com/ 333 Pfingsten Road, Northbrook, IL 60611 https://spot.ul.com
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	UL Solutions Program Operator Rules v.2.7 2022
MANUFACTURER NAME AND ADDRESS	GERFLOR 1 Place Verrazzano, CS 20458, 69258 Lyon CEDEX 09
DECLARATION NUMBER	4791306880.103.3 (Updated October 2026)
DECLARED PRODUCT & FUNCTIONAL UNIT OR DECLARED UNIT	MIPOLAM COLLECTION The functional unit is one square meter of installed product. The reference service life considered is 25 years.
REFERENCE PCR AND VERSION NUMBER	PCR -Part A: Life Cycle Assessment Calculation Rules and Report Requirements. Version 4.0, UL Environnment. PCR - Part B: Flooring EPD Requirements, Second Edition, Dated September 28, 2018, UL Environnment.
DESCRIPTION OF PRODUCT APPLICATION/USE	The product is to be installed in various areas of application including commercial and industrial applications. It is classified in accordance with EN ISO 10874 and in reference to the FCSS (Floor Covering Standard Symbols).
PRODUCT RSL DESCRIPTION (IF APPL.)	The product service life recommended is 25 years. According to UL PCR, the building Estimated Service Life (ESL) is 75 years. For this duration, two replacements are required Environmental impacts are calculated for two different Service Life assumptions: 1 year and 75 years.
MARKETS OF APPLICABILITY	European Commercial market
DATE OF ISSUE	September 4th, 2024
PERIOD OF VALIDITY	5 years
EPD TYPE	Product-specific
VARIABILITY OF REPORTED DATA	1 product(s) is considered in this EPD.
EPD SCOPE	Cradle to Grave
YEAR(S) OF REPORTED PRIMARY DATA	2023
LCA SOFTWARE & VERSION NUMBER	Simapro 9
LCI DATABASE(S) & VERSION NUMBER	Ecoinvent 3.8 – allocution cut-off by classification
LCIA METHODOLOGY & VERSION NUMBER	Method EN 15804 A2 EPD Ev-DEC 1.11 (EVEA)

The PCR review was conducted by:	UL Solutions PCR Review Panel epd@ul.com
This declaration was independently verified in accordance with ISO 14025: 2006. ☐ INTERNAL ☒EXTERNAL	Cooper McCollum, UL Solutions
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	Cara Vought, Sustainable Solutions Corporation

LIMITATIONS

Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc.

Accuracy of Results: EPDs regularly rely on estimations of impacts; the level of accuracy in estimation of effect differs for any particular product line and reported impact.

Comparability: EPDs from different programs may not be comparable.
Comparison of the environmental performance of flooring products using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the building energy use phase as instructed under this PCR.
Full conformance with the PCR for "Building-Related Products and Services" allows EPD comparability only when all stages of a life cycle have been considered, when they comply with all referenced standards, use the same sub-category PCR, and use equivalent scenarios with respect to construction works. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.

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1. Product Definition and Information

1.1. Company Description and production site information

The products are commercialized by Gerflor.
For over 80 years, the Gerflor Group has been developing, manufacturing and selling innovative, decorative and eco-responsible solutions. Its product portfolio encompasses flexible floors, wall protection and finishes. Gerflor supports professionals and individuals every day in every phase of their project, from product selection to end-of-life management and recycling solutions. As a European manufacturer, the Group employs more than 5000 people and distributes its products and services in over 100 countries.

Gerflor solutions can be found in Education, Healthcare, Retail, Sports, Hospitality, Industry, Offices, Transport, Public buildings and Housing.

Faced with the climate emergency and the scarcity of raw materials, the Group's ambition is now more than ever to reconcile sustainable and profitable growth with resolute and innovative approaches to reduce our environmental impact.

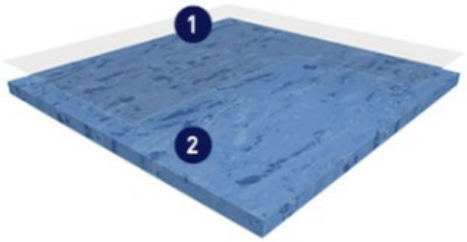
1.2. Product Description

This environmental product declaration covers Mipolam Collection:

- Mipolam Accord
- Mipolam Affinity
- Mipolam Astro
- Mipolam Biocontrol Clean
- Mipolam Biocontrol ESD+
- Mipolam Biocontrol EL5
- Mipolam Biocontrol performance
- Mipolam Bioplanet
- Mipolam Cosmo
- Mipolam EL5
- Mipolam SD
- Mipolam EC
- Mipolam EL7
- Mipolam Elegance
- Mipolam Elegance SD
- Mipolam Esprit
- Mipolam Planet
- Mipolam Symbioz
- Mipolam Troplan
- Streamo Sailer
- Streamo Seacrosser

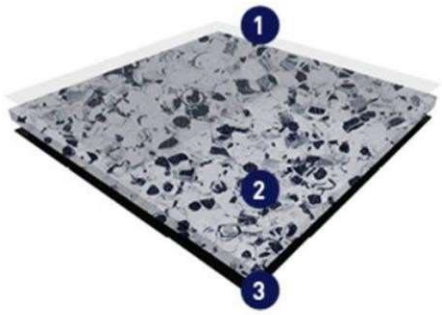
The products are homogeneous calendered vinyl floor coverings, available in rolls, for glued installation.
These products have a similar composition, the same thickness (2 mm) and the same surface treatment Evercare that provides easy maintenance and stain resistance. They have a different weight (between 2.7 kg/m² and 3.3 kg/m²).
They are 100% Reach compliant, phthalate-free, formaldehyde-free. This floorcovering are non-emissive products (below the level of VOC measurement accuracy).

The following figures show product constructions:



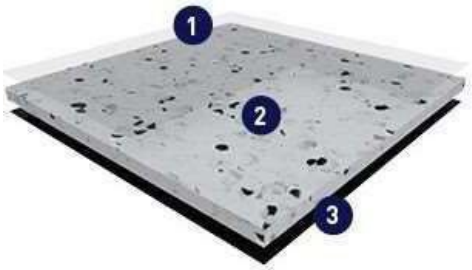
1. Evercare Treatment
2. Monolayer homogeneous flooring, pressed and calendered

Figure 1: Homogeneous vinyl flooring's illustration
(Mipolam Accord, Affinity, Biocontrol Clean, Biocontrol Performance, Bioplanet, Cosmo, EL7, Elegance, Elegance SD, Esprit, Planet, Symbioz, Troplan, Streamo Sailer, Streamo Seacrosser)



1 Conductive surface treatment
2 Homogeneous conductive layer with carbon black
3 Reverse treatment with carbon black

Figure 2: Mipolam Biocontrol EL5, Biocontrol ESD+



1 Evercare™ treatment
2 Homogeneous layer
3 Conductive backing

Figure 3: Mipolam EL5

1.3. Technical Specifications

The product considered in this EPD meets or exceeds all technical requirements in EN ISO 10581– Homogeneous poly(vinyl chloride) floor covering — Specifications.

The average product declared in this EPD (based on sales distribution) meets the following technical specifications:

Name	Value	Unit
Product thickness	**2**	mm
Product Weight	**2.91**	kg/m^2
Density	**1453**	kg/m^3
Width of sheet	**200**	cm
Lenght of sheet	**20**	lm

1.4. Product Certifications

The products considered in this EPD complies with the following codes or regulations :

- Floorscore,
- M1,
- IAC Gold (for Mipolam Accord, Affinity, Biocontrol Clean, Biocontrol performance, Planet, Cosmo, Esprit, Bio Planet, Symbioz, Troplan, EL7).

Specification Fire Testing:

- Class 1 when tested in accordance with ASTM E 648, Standard Test Method for Critical Radiant Flux
- Class 1 when tested in accordance with ASTM E 662, Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
- EN 13501-1 Fire Behavior Bfl-S1.

Slip resistance: R9

1.5. Product Classifications

The Mipolam products are classified in accordance with EN ISO 10874: Resilient, textile and laminate floor coverings, and in reference to the FCSS (Floor Covering Standard Symbols) to be installed in various areas of application including industry and health, while the Streamo products are intended for the marine industry.

The product is classified according to the United Nations Standard Products and Service Code (UNSPSC) as « Vinyl Flooring »: UNSPSC Code 30161707. And according to Construction Specification Institute (CSI) as « Resilient flooring »: CSI Code 09 65 00.

2. Life Cycle Assessment General Information

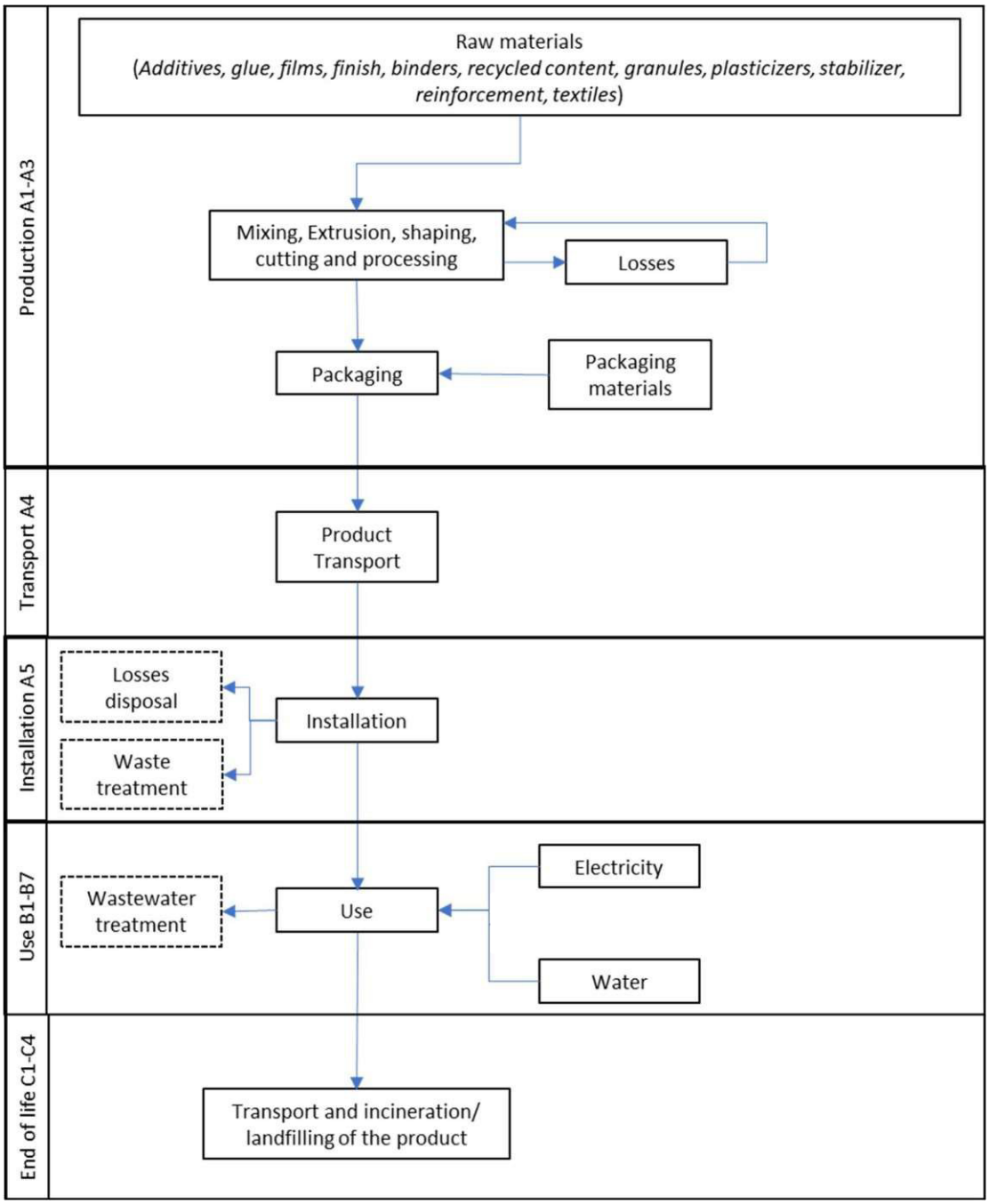
2.1. Methodological Framework

A full Life Cycle Assessment has been performed according to ISO 14040, ISO 14044 and in compliance with EN15804.

This EPD covers the entire life cycle of the products from cradle to grave (modules A1 to D) excluding modules for which there are no inputs/outputs.

No known flows are deliberately excluded from this EPD. For these products, the stated Reference Service Life (RSL) is 25 years (see section 3.5).

Flow Diagram:



2.2. Declared Unit

The functional unit is one square meter of installed product. The reference service life considered is 25 years.

	Value	Unit
Functional Unit	1	m^2
Mass	2.91	kg/m^2

Description of declared unit :
Cover 1 m^2 of interior flooring with a vinyl floor covering product, with a surface mass between 2.7 and 3.3 kg/m^2, implemented according to the rule book, and contribute to the decoration and comfort of premises for a lifespan of 25 years, ensuring the performance described in European standard EN ISO 10581.
The product is suitable for installation in various application areas, including industry, health and marine environments.

2.3. System Boundary

EPD is declared from cradle to grave, including the following stages:
A1 – A3: includes the provision of all raw materials and their packaging, transport to the production site and energy consumption during the manufacturing of the product, as well as processing of waste generated by the factory.
A4 – A5: includes the transport from the factory to the final customer, packaging of the final product and the installation of the product, as well as all consumables and energy required, and processing of waste generated during the installation.
B1 – B7: includes provision and transport of all materials, products and services related to the use phase of the product, as well as their related energy and water consumption, and the processing of any resulting waste.
C1 – C4: includes provision and transport of all materials, products and services related to the end-of-life phase of the product, including energy and water consumption, as well as the end-of-life processing of the product.
D: includes benefits coming from the wastes' end of life.

Scope of study: modules with no "X" in the table below have been considered but have no associated inputs/outputs, therefore do not appear in the results:

	Production Stage			Construction Process Stage		Use Stage							End-of-Life Stage				Benefits&loads beyond syst. Bound.
	Raw material supply	Transport to manufacturer	Manufacturing	Transport from gate to site	Assembly/Install	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energyuse duringproduct use	Operational water use during product use	Deconstruction	Transport	Waste processing	Disposal	Reuse, recovery or recycling potential
Modules	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Accounted for:	X	X	X	X	X	X*	X	X*	X	X*	X*	X*	X	X	X*	X	X

*module has been considered but has no associated inputs/outputs, therefore does not appear in the results.

2.4. Estimates and Assumptions

Estimates and assumptions are made for transport, installation, and deconstruction procedure. Details are provided in section 3.

2.5. Cut-off Criteria

The cut -off criteria shall be 1% of renewable and non-renewable primary energy usage and 1% of the total mass of thatunit process. The total neglected input flows per module shall be a maximum of 5% of energy usage and mass. For this study, all input and output flows have been considered. Raw materials are included as per the product composition provided by the manufacturer and the packaging of the final product. Energy and water consumptions have also been considered at 100% according to the data provided.

2.6. Data Sources

As a general rule, specific data derived from specific production processes or average data derived from specific production processes have been used as the first choice as a basis for calculating an EPD.
To model the life cycle of the product in question, the software SimaPro 9, developed by PRé, has been used inconjunction with the LCA database ecoinvent v3.8.

2.7. Data Quality

The requirements for data quality and LCA data are in accordance with the specifications of the PCR.

Temporal Coverage : producer specific data is averaged over 1 year of production and from within the last 5 years (2023). Generic data is taken from the ecoinvent 3.8 database, the entirety of which was updated in 2021. Inputs and outputs from the system are accounted for over a period of 100 years from the year for which the data set is deemed relevant.
Technological Coverage : the technological coverage of the data reflects the physical reality of the declared product.
Geographical Coverage : whenever possible, country specific data reflecting the reality of the Gerflor supply chain has been used. If country specific data is unavailable, European regional data is used in preference to global data sources.

A third party verified ISO 14040/44 secondary LCI data sets contribute more than 67% of total impact (either at the unit process level or in aggregate) to any of the required impact categories identified by the applicable PCR.

2.8. Period under Review

Data have been reviewed for the production year 2023.

2.9. Allocation

Allocations when using secondary materials as raw materials:
The recycled content comes from external sources (offcuts from installation and removal of old coatings), the end-of- waste status is considered at the level of the sorted material stock and no impact is assigned to the production of these offcuts.

Allocations in the plant (differentiation from other products manufactured in the plant):
The overall values for the factory's material and energy consumptions during a period of one year have been divided by the annual production of each product to supply a value per square meter of flooring produced. All factory data is measured in square meters, and it is assumed that the process consumptions are governed by area of flooring processed rather than mass.

Allocation of multi-input processes if performed during modelling:
Production offcuts: the scraps are components reintegrated into other products on other process lines. Since these

scraps are not sold externally, a physical allocation is made between the main product and the scraps.
Thus, the overproduction to produce these losses is not considered in this case. The impacts of the production of these scraps are assigned to the system that uses them (other Gerflor products), so no impact is omitted.

Allocations of reuse, recycling and energy recovery:
Not relevant here.

2.10. Comparability (Optional)

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.

3. Life Cycle Assessment Background Information & Scenarios

3.1. Material Composition & packaging (A1)

Product:

Component	Mass (%)	Mass (kg/m²)
PVC	35-40%	1.02 – 1.16
Plasticizer	15-20%	0.44 – 0.58
Mineral filler	40-45%	1.16 – 1.31
Stabilizer	<1%	<0.03
Additives	<1%	<0.03
Pigments	<3%	<0.09
Finish	<1%	<0.03
Recycled content*	24%	0.70
Packaging	<5%	<0.15

*Recycled content is pre-consumer waste.

Packaging:

The rolls are wrapped around a 100% recycled cardboard core and packed in wrapping paper ; the rolls are protected by cardboard mandrels and plastics end-caps.

As described in ULE Part A Requirements, the packaging waste scenario for European market is:

- 76.4% recycling, 16.4% landfilling and 7.2% incineration for carboard
- 24.8% recycling, 54.8% landfilling and 20.4% incineration for wood
- 37% recycling, 35% landfilling and 28% incineration for plastic

3.2. Manufacturing (A3)

The products are manufactured in Gerflor manufacturing plant, located in Germany or in France. The products are manufactured by calendering and/or pressing.
The production of the sheets is divided into the following stages:

- Mixing: binder, filler, additive, stabilizer, and pigments are mixed to obtain mixture
- Calendering and/or pressing
  - Calendering: the mixture is calendered to get the desired shape
  - Pressing: the components are sprinkled on the substrate and pressed at high temperature
- Finishing: application of the surface layer
- Shaping: rolls are cut at the desired dimensions
- Packaging

The following figure shows the production process diagram :

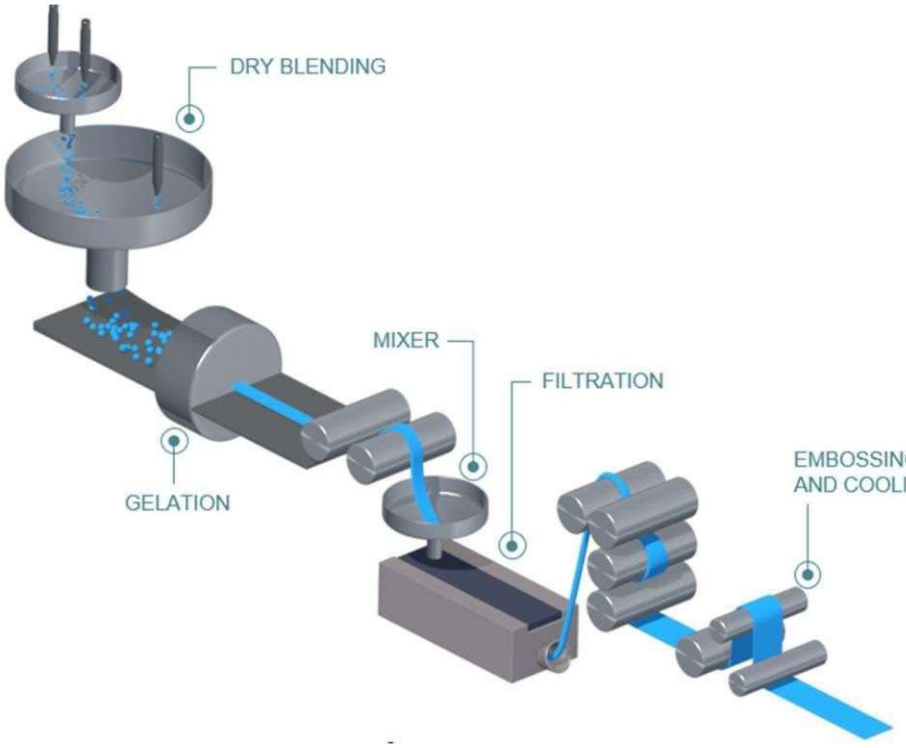


Figure 4: Calendering process diagram

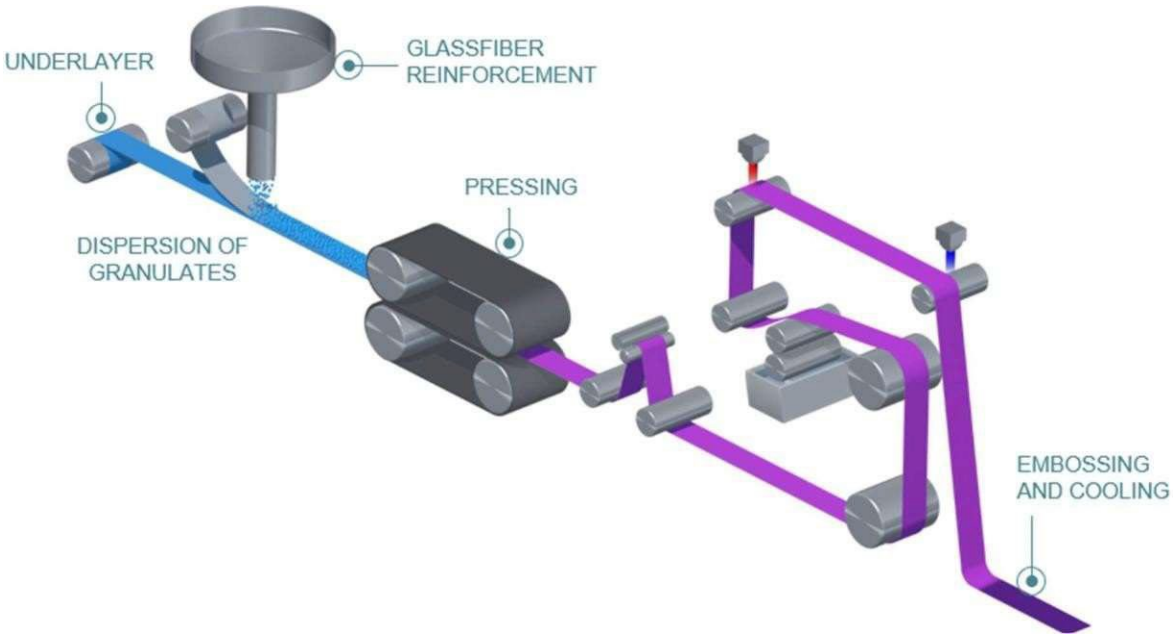


Figure 5: Pressing process diagram

3.3. Delivery (transport from the factory to the building site) (A4)

The product are made in Germany or in France (depending on references) and sent to the European market. Distances taken in account are described below.

Truck	VALUE	UNIT
Fuel type	Diesel, low sulfur	
Liters of fuel	26	l/100km
Vehicle type	16-32 metric ton EURO 6	
Transport distance	1037	km
Capacity utilization (including empty runs, mass based	36	%
Gross density of products transported	1453	kg/m3
Weight of products transported (if gross density not reported)	-	kg
Volume of products transported (if gross density not reported)	-	m3
Capacity utilization volume factor (factor: =1 or <1 or ≥ 1 for compressed or nested packaging products)	<1	-
Boat		
Fuel type	Heavy Fuel Oil	
Liters of fuel	0.047	l/100km
Vehicle type	Transoceanic Ship	
Transport distance	171	km
Capacity utilization (including empty runs, mass based	100	%
Gross density of products transported	1453	kg/m3
Weight of products transported (if gross density not reported)	-	kg
Volume of products transported (if gross density not reported)	-	m3
Capacity utilization volume factor (factor: =1 or <1 or ≥ 1 for compressed or nested packaging products)	<1	-

3.4. Installation (A5)

The product is installed by hand, using acrylic glue. During the installation, approximately 10% of the material is lost as off-cuts ; this waste is mainly sent to landfill.
Gerflor recommends using Gerflor Second Life program to recycle the off-cuts, where infrastructure exists. This program is available in several countries. It is a simple and free collection system for installation waste and end of life products. The waste is first sent to a dedicated recycling center. After recycling, it is reintroduced in new Gerflor products in substitution of virgin materials.

Installation into the building (A5) - Scenario	VALUE	UNIT
Ancillary materials : Acrylic glue	0.25	kg/m²
Net freshwater consumption specified by water source and fate (amount evaporated, amount disposed to sewer)	-	m3
Other resources	-	kg
Electricity consumption	-	kWh
Other energy carriers	-	MJ
Product loss per functional unit	0.291	kg
Waste materials at the construction site before waste processing, generated byproduct installation	0.142	kg
Output materials resulting from on-site waste processing (specified by route; e.g. forrecycling, energy recovery and/or disposal)	-	kg
Biogenic carbon contained in packaging	0.059	kg CO2
Direct emissions to ambient air, soil and water	-	kg
VOC emissions	-	kg/m²

3.5. Use - Reference Service Life and Building Estimated Service Life (B2)

Service Life	VALUE	UNIT
Product Reference Service Life (RSL)	25	years
Building estimated Service Life (ESL)	75	years

It should be noted that the service life may vary depending 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 as long as the product use complies with ISO 14041 in accordance with the product's classification.

Declared product properties (at the gate) and finishes, etc.	Declared product properties aredescribed in Declaration of Performance (DOP), in accordance with EN 14041
Design application parameters (if instructed by the manufacturer), including references to the appropriate practices and application codes)	Products in accordance with EN 14041 and technical prescription of the manufacturer
An assumed quality of work, when installed in accordance with the manufacturer's instructions	Assumed to be installed according to the manufacturer's instructions
Outdoor environment, (if relevant for outdoor applications), e.g. weathering, pollutants, UV and wind exposure, building orientation, shading, temperature	Not relevant
Indoor environment, (if relevant for indoor applications), e.g. temperature, moisture,chemical exposure)	Use conditions in accordance with manufacturer prescriptions: see technical datasheet
Use conditions, e.g. frequency of use, mechanical exposure.	Use conditions in accordance with manufacturer prescriptions : see technical datasheet
Maintenance, e.g. required frequency, type and quality of replacement components	Maintenance scenario is defined in the table above

3.6. Use – Cleaning (B2)

Maintenance (B2) - Scenario	VALUE	UNIT
Maintenance process information	- Dry vaccum cleaning: 2/week - Wet cleaning by hand: 1/week	-
Maintenance cycle	3900	Number/ RSL
Maintenance cycle	11700	Number/ ESL
Net freshwater consumption specified by water source and fate (amount evaporated,amount disposed to sewer)	2.6	L/year
Ancillary materials specified by type (e.g. cleaning agent)	0 0	kg/year
Other resources	-	kg
Energy input, specified by activity, type and amount	0.26	kWh/year
Other energy carriers specified by type	-	kWh
Power output of equipment	-	kW
Waste materials from maintenance (specify materials)	-	kg
Direct emissions to ambient air, soil and water	-	kg

Further assumptions for scenario development (e.g. frequency and time period ofuse, number of occupants);	-	

3.7. Repair, replacement, refurbishment, reuse (B3-B5)

Repair (B3): no data

Replacement (B4): product's life expectancy being 25 years and building's life expectancy being 75 years, 2 product replacements will be necessary. The impact of these replacements can be found in indicator B4 “Replacement”. B2 “Maintenance” is also proportional to the number of years considered.

Replacement (B4) – Scenario	VALUE	UNIT
Reference Service Life	25	Years
Number of replacements over building estimated service life (75 years)	2	(ESL-RSL)-1
Energy input, specified by activity, type and amount	-	kWh
Net freshwater consumption specified by water source and fate (e.g., X m3 river water evaporated, X m3 city water disposed to sewer)	-	m3
Ancillary materials specified by type and amount: - Acrylic glue	- 0.5	Kg/m²
Replacement of worn parts, specify parts/materials	-	kg
Direct emissions to ambient air, soil and water	-	kg
Further assumptions for scenario development, e.g. frequency and time period of use	-	As appropriate

Refurbishment (B5) : no data.

3.8. Operational energy use (B6) and Operational water use (B7)

No data.

3.9. Deconstruction (C1)

Product deconstruction is carried out manually.

3.10. Transport (C2) and end-of-life (C3-C4)

Gerflor recommends using Gerflor Second Life program to recycle the product, where infrastructure exists. This program is available in several countries.
It is a simple and free collection system for installation waste and end of life products. The waste is first sent to a dedicated recycling center. After recycling, it is reintroduced in new Gerflor products in substitution of virgin materials.
When recycling is not an option, landfill and incineration are the other options.
3 end-of-life scenarios are therefore proposed in this EPD to address the different cases: recycling, landfill, or incineration.

According to the PCR UL Part A, 50% of the product should be recycled for Europe. There is no specific data for this

distance for European market, so the North America's one, in PCR UL Part B, is assumed by default.

COLLECTION PROCESS		VALUE	UNIT
Collection process	Collected with mixed construction waste - **Product**	2.91	kg
	Collected with mixed construction waste - **Glue**	0.25	kg

RECYCLING SCENARIO	VALUE	UNIT
Distance to recycling center	161	km
Truck	16-32 metric ton Euro6	-
Recovery - Product: - Glue:	 2.91 0.25	kg
Disposal	-	
LANDFILL SCENARIO	**VALUE**	**UNIT**
Distance to landfill	161	km
Truck	16-32 metric ton Euro6	-
Recovery - Product: - Glue:	 2.91 0.25	kg
Disposal	-	
INCINERATION SCENARIO	**VALUE**	**UNIT**
Distance to incineration center	161	km
Truck	16-32 metric ton Euro6	-
Recovery - Product: - Glue:	 2.91 0.25	kg
Disposal	-	

BIOGENIC CARBON		VALUE	UNIT
Removals of biogenic carbon (excluding packaging)		0.0093	kg CO2

3.11. Benefits and loads beyond system boundary (D)

Reuse, recovery and/or recycling potentials (D) - scenarios	VALUE for recycling scenario	VALUE for landfill scenario	VALUE for incineration scenario	UNIT
Net energy benefit from energy recovery from waste treatment declared as exported energy in C3 (R>0.6)	-	-	-	MJ
Net energy benefit from thermal and electrical energy due to treatment of wastedeclared as exported energy in C4 (R<0.6)	-	-	2.28E+1	MJ
Net energy benefit from material flow declared in C3 for energy recovery	-	-	-	MJ

Process and conversion efficiencies	-	-	-
Further assumptions for scenario development (e.g. further processing technologies, assumptions on correction factors);	-	-	-

4. Life Cycle Assessment Results

The following results are given for a service life of 1 year and 75 years.
75 years results include 2 replacements based on a product reference service life of 25 years.

LCA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks. All results should be used with caution because the uncertainties in the results are high.

Gerflor recommends using Gerflor Second Life program or any other program to recycle the product, where infrastructure exists. This program is available in several countries.
It is a simple and free collection system for installation waste and end of life products. The waste is first sent to a dedicated recycling center. After recycling, it is reintroduced in new Gerflor products in substitution of virgin materials. When recycling is not an option, landfill and incineration are the other options.
3 end-of-life scenarios are therefore proposed in this EPD to address the different cases: recycling (1), landfill (2), or incineration (3).
Results only vary in C phase.

4.1. Summary of key GWP results

For convenience, here is a summary of the key GWP results:

GLOBAL WARMING POTENTIAL (GWP) kg CO2 eq./m²	Total GWP, with recycling scenario	Total GWP, with landfill scenario	Total GWP, with incineration scenario
Use 1 year	7.47E+0	7.67E+0	1.19E+1
Use 25 years	9.94E+0	1.01E+1	1.44E+1
Use 75 years	2.98E+1	3.04E+1	4.32E+1

4.2. Life Cycle Assessment – Environmental impacts

4.2.1. Environmental impacts for 1 year

4.2.1.1. Potential environmental impact in case of RECYCLING at end of use

POTENTIAL ENVIRONMENTAL IMPACT - RECYCLING - 1 YEAR - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use	End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Maintenance (1 year)	C2 Transport	C3 Waste processing	C4 Disposal	
Climate change - GWP total	*kg CO2 eq*	7.47E+0	5.26E+0	5.17E-1	1.44E+0	1.03E-1	8.22E-2	5.81E-2	0.00E+0	-2.63E+0
Climate change - GWP fossil	*kg CO2 eq*	7.03E+0	5.12E+0	5.16E-1	1.19E+0	1.02E-1	8.22E-2	2.53E-2	0.00E+0	-2.70E+0
Climate change - GWP biogenic	*kg CO2 eq*	1.14E-1	-1.48E-1	1.63E-4	2.28E-1	5.48E-4	2.60E-5	3.27E-2	0.00E+0	6.85E-2
Climate change -GWP land use and change	*kg CO2 eq*	3.28E-1	2.98E-1	2.12E-4	3.03E-2	2.43E-4	3.35E-5	5.90E-5	0.00E+0	-1.11E-3
Ozone depletion	*kg CFC11 eq*	1.90E-6	1.52E-6	1.20E-7	2.34E-7	5.25E-9	1.92E-8	1.29E-9	0.00E+0	-9.51E-7
Acidification	*mol H+ eq*	4.56E-2	3.11E-2	1.62E-3	1.19E-2	5.96E-4	2.35E-4	1.37E-4	0.00E+0	-1.52E-2
Eutrophication, freshwater (P)	*kg P eq*	2.80E-4	2.12E-4	3.69E-6	4.79E-5	1.33E-5	5.91E-7	2.66E-6	0.00E+0	-3.69E-5
Eutrophication, freshwater (PO4)	*kg PO4 eq*	8.59E-4	6.49E-4	1.13E-5	1.47E-4	4.09E-5	1.81E-6	8.16E-6	0.00E+0	-1.13E-4
Eutrophication, marine	*kg N eq*	9.71E-3	7.74E-3	3.30E-4	1.44E-3	1.27E-4	4.68E-5	1.86E-5	0.00E+0	-2.03E-3
Eutrophication, terrestrial	*mol N eq*	7.23E-2	5.51E-2	3.68E-3	1.19E-2	8.95E-4	5.21E-4	2.13E-4	0.00E+0	-2.27E-2
Photochemical ozone formation	*kg NMVOC eq*	2.31E-2	1.70E-2	1.36E-3	4.17E-3	2.41E-4	2.00E-4	5.98E-5	0.00E+0	-1.34E-2
Resource use, minerals and metals	*kg Sb eq*	1.02E-4	8.10E-5	1.88E-6	1.76E-5	9.78E-7	3.01E-7	7.17E-8	0.00E+0	-5.61E-5
Resource use, fossils	*MJ*	1.55E+2	1.19E+2	7.88E+0	2.33E+1	2.19E+0	1.26E+0	5.35E-1	0.00E+0	-9.54E+1
Water use	*m3 depriv.*	7.83E+0	6.47E+0	2.35E-2	1.29E+0	3.71E-2	3.76E-3	6.12E-3	0.00E+0	-2.43E+0
Particulate matter	*disease inc.*	3.83E-7	2.60E-7	4.16E-8	7.24E-8	1.84E-9	6.67E-9	4.47E-10	0.00E+0	-1.19E-7
Ionising radiation	*kBq U-235 eq*	4.24E-1	2.92E-1	3.42E-2	6.83E-2	1.96E-2	5.45E-3	4.73E-3	0.00E+0	1.65E-2
Ecotoxicity, freshwater	*CTUe*	5.56E+1	4.38E+1	2.30E+0	8.88E+0	2.60E-1	3.67E-1	2.98E-2	0.00E+0	-2.94E+1
Human toxicity, cancer	*CTUh*	2.30E-9	1.88E-9	9.26E-11	2.90E-10	1.52E-11	1.48E-11	5.19E-12	0.00E+0	1.46E-10
Human toxicity, non-cancer	*CTUh*	6.55E-9	5.06E-9	2.33E-10	1.18E-9	3.57E-11	3.74E-11	4.67E-12	0.00E+0	-2.48E-9
Land use	*Pt*	8.11E+1	6.29E+1	5.46E+0	1.13E+1	4.12E-1	8.76E-1	8.24E-2	0.00E+0	4.11E+0

4.2.1.2. Potential environmental impact in case of LANDFILL at end of use

POTENTIAL ENVIRONMENTAL IMPACT - LANDFILL - 1 YEAR - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use	End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production.	A4 Transport	A5 Installation	B2 Maintenance (1 year)	C2 Transport	C3 Waste processing	C4 Disposal	
Climate change - GWP total	*kg CO2 eq*	7.67E+0	5.26E+0	5.17E-1	1.44E+0	1.03E-1	8.22E-2	0.00E+0	2.60E-1	0.00E+0
Climate change - GWP fossil	*kg CO2 eq*	7.23E+0	5.12E+0	5.16E-1	1.19E+0	1.02E-1	8.22E-2	0.00E+0	2.27E-1	0.00E+0
Climate change - GWP biogenic	*kg CO2 eq*	1.14E-1	-1.48E-1	1.63E-4	2.28E-1	5.48E-4	2.60E-5	0.00E+0	3.26E-2	0.00E+0
Climate change -GWP land use and change	*kg CO2 eq*	3.28E-1	2.98E-1	2.12E-4	3.03E-2	2.43E-4	3.35E-5	0.00E+0	6.90E-6	0.00E+0
Ozone depletion	*kg CFC11 eq*	1.91E-6	1.52E-6	1.20E-7	2.34E-7	5.25E-9	1.92E-8	0.00E+0	9.79E-9	0.00E+0
Acidification	*mol H+ eq*	4.57E-2	3.11E-2	1.62E-3	1.19E-2	5.96E-4	2.35E-4	0.00E+0	2.35E-4	0.00E+0
Eutrophication, freshwater (P)	*kg P eq*	2.77E-4	2.12E-4	3.69E-6	4.79E-5	1.33E-5	5.91E-7	0.00E+0	2.28E-7	0.00E+0
Eutrophication, freshwater (PO4)	*kg PO4 eq*	8.51E-4	6.49E-4	1.13E-5	1.47E-4	4.09E-5	1.81E-6	0.00E+0	6.99E-7	0.00E+0
Eutrophication, marine	*kg N eq*	9.86E-3	7.74E-3	3.30E-4	1.44E-3	1.27E-4	4.68E-5	0.00E+0	1.75E-4	0.00E+0
Eutrophication, terrestrial	*mol N eq*	7.31E-2	5.51E-2	3.68E-3	1.19E-2	8.95E-4	5.21E-4	0.00E+0	9.48E-4	0.00E+0
Photochemical ozone formation	*kg NMVOC eq*	2.33E-2	1.70E-2	1.36E-3	4.17E-3	2.41E-4	2.00E-4	0.00E+0	3.27E-4	0.00E+0
Resource use, minerals and metals	*kg Sb eq*	1.02E-4	8.10E-5	1.88E-6	1.76E-5	9.78E-7	3.01E-7	0.00E+0	9.29E-8	0.00E+0
Resource use, fossils	*MJ*	1.55E+2	1.19E+2	7.88E+0	2.33E+1	2.19E+0	1.26E+0	0.00E+0	7.07E-1	0.00E+0
Water use	*m3 depriv.*	7.83E+0	6.47E+0	2.35E-2	1.29E+0	3.71E-2	3.76E-3	0.00E+0	3.34E-3	0.00E+0
Particulate matter	*disease inc.*	3.87E-7	2.60E-7	4.16E-8	7.24E-8	1.84E-9	6.67E-9	0.00E+0	5.11E-9	0.00E+0
Ionising radiation	*kBq U-235 eq*	4.23E-1	2.92E-1	3.42E-2	6.83E-2	1.96E-2	5.45E-3	0.00E+0	3.26E-3	0.00E+0
Ecotoxicity, freshwater	*CTUe*	6.65E+1	4.38E+1	2.30E+0	8.88E+0	2.60E-1	3.67E-1	0.00E+0	1.09E+1	0.00E+0
Human toxicity, cancer	*CTUh*	2.30E-9	1.88E-9	9.26E-11	2.90E-10	1.52E-11	1.48E-11	0.00E+0	6.88E-12	0.00E+0
Human toxicity, non-cancer	*CTUh*	6.82E-9	5.06E-9	2.33E-10	1.18E-9	3.57E-11	3.74E-11	0.00E+0	2.72E-10	0.00E+0
Land use	*Pt*	8.28E+1	6.29E+1	5.46E+0	1.13E+1	4.12E-1	8.76E-1	0.00E+0	1.84E+0	0.00E+0

4.2.1.3. Potential environmental impact in case of INCINERATION at end of use

POTENTIAL ENVIRONMENTAL IMPACT – INCINERATION - 1 YEAR - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use	End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Maintenance (1 year)	C2 Transport	C3 Waste processing	C4 Disposal	
Climate change - GWP total	*kg CO2 eq*	1.19E+1	5.26E+0	5.17E-1	1.44E+0	1.03E-1	8.22E-2	0.00E+0	4.52E+0	-4.13E+0
Climate change - GWP fossil	*kg CO2 eq*	1.15E+1	5.12E+0	5.16E-1	1.19E+0	1.02E-1	8.22E-2	0.00E+0	4.49E+0	-4.11E+0
Climate change - GWP biogenic	*kg CO2 eq*	1.16E-1	-1.48E-1	1.63E-4	2.28E-1	5.48E-4	2.60E-5	0.00E+0	3.47E-2	-1.49E-2
Climate change -GWP land use and change	*kg CO2 eq*	3.30E-1	2.98E-1	2.12E-4	3.03E-2	2.43E-4	3.35E-5	0.00E+0	1.38E-3	-6.90E-3
Ozone depletion	*kg CFC11 eq*	2.34E-6	1.52E-6	1.20E-7	2.34E-7	5.25E-9	1.92E-8	0.00E+0	4.37E-7	-3.76E-7
Acidification	*mol H+ eq*	5.08E-2	3.11E-2	1.62E-3	1.19E-2	5.96E-4	2.35E-4	0.00E+0	5.31E-3	-2.18E-2
Eutrophication, freshwater (P)	*kg P eq*	3.15E-4	2.12E-4	3.69E-6	4.79E-5	1.33E-5	5.91E-7	0.00E+0	3.80E-5	-3.12E-4
Eutrophication, freshwater (PO4)	*kg PO4 eq*	9.67E-4	6.49E-4	1.13E-5	1.47E-4	4.09E-5	1.81E-6	0.00E+0	1.17E-4	-9.57E-4
Eutrophication, marine	*kg N eq*	1.10E-2	7.74E-3	3.30E-4	1.44E-3	1.27E-4	4.68E-5	0.00E+0	1.30E-3	-2.62E-3
Eutrophication, terrestrial	*mol N eq*	8.66E-2	5.51E-2	3.68E-3	1.19E-2	8.95E-4	5.21E-4	0.00E+0	1.44E-2	-2.98E-2
Photochemical ozone formation	*kg NMVOC eq*	2.69E-2	1.70E-2	1.36E-3	4.17E-3	2.41E-4	2.00E-4	0.00E+0	3.86E-3	-8.57E-3
Resource use, minerals and metals	*kg Sb eq*	1.19E-4	8.10E-5	1.88E-6	1.76E-5	9.78E-7	3.01E-7	0.00E+0	1.74E-5	-7.22E-6
Resource use, fossils	*MJ*	1.64E+2	1.19E+2	7.88E+0	2.33E+1	2.19E+0	1.26E+0	0.00E+0	9.91E+0	-8.04E+1
Water use	*m3 depriv.*	8.54E+0	6.47E+0	2.35E-2	1.29E+0	3.71E-2	3.76E-3	0.00E+0	7.17E-1	-6.80E-1
Particulate matter	*disease inc.*	4.26E-7	2.60E-7	4.16E-8	7.24E-8	1.84E-9	6.67E-9	0.00E+0	4.33E-8	-8.83E-8
Ionising radiation	*kBq U-235 eq*	4.62E-1	2.92E-1	3.42E-2	6.83E-2	1.96E-2	5.45E-3	0.00E+0	4.26E-2	-6.01E-1
Ecotoxicity, freshwater	*CTUe*	2.23E+2	4.38E+1	2.30E+0	8.88E+0	2.60E-1	3.67E-1	0.00E+0	1.67E+2	-5.45E+0
Human toxicity, cancer	*CTUh*	3.29E-9	1.88E-9	9.26E-11	2.90E-10	1.52E-11	1.48E-11	0.00E+0	1.00E-9	-3.94E-10
Human toxicity, non-cancer	*CTUh*	6.98E-9	5.06E-9	2.33E-10	1.18E-9	3.57E-11	3.74E-11	0.00E+0	4.33E-10	-6.08E-10
Land use	*Pt*	8.42E+1	6.29E+1	5.46E+0	1.13E+1	4.12E-1	8.76E-1	0.00E+0	3.23E+0	-1.03E+1

4.2.2. Environmental impacts for 75 years

4.2.2.1. Potential environmental impact in case of RECYCLING at end of use

POTENTIAL ENVIRONMENTAL IMPACT - RECYCLING - 75 YEARS - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use		End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Mainten. (75 years)	B4 Replace (75 years)	C2 Transport	C3 Waste processing	C4 Disposal	
Climate change - GWP total	*kg CO2 eq*	2.98E+1	5.26E+0	5.17E-1	1.44E+0	7.71E+0	1.47E+1	8.22E-2	5.81E-2	0.00E+0	-2.63E+0
Climate change - GWP fossil	*kg CO2 eq*	2.84E+1	5.12E+0	5.16E-1	1.19E+0	7.65E+0	1.38E+1	8.22E-2	2.53E-2	0.00E+0	-2.70E+0
Climate change - GWP biogenic	*kg CO2 eq*	3.81E-1	-1.48E-1	1.63E-4	2.28E-1	4.11E-2	2.26E-1	2.60E-5	3.27E-2	0.00E+0	6.85E-2
Climate change -GWP land use and change	*kg CO2 eq*	1.00E+0	2.98E-1	2.12E-4	3.03E-2	1.82E-2	6.56E-1	3.35E-5	5.90E-5	0.00E+0	-1.11E-3
Ozone depletion	*kg CFC11 eq*	6.09E-6	1.52E-6	1.20E-7	2.34E-7	3.94E-7	3.80E-6	1.92E-8	1.29E-9	0.00E+0	-9.51E-7
Acidification	*mol H+ eq*	1.80E-1	3.11E-2	1.62E-3	1.19E-2	4.47E-2	9.00E-2	2.35E-4	1.37E-4	0.00E+0	-1.52E-2
Eutrophication, freshwater (P)	*kg P eq*	1.80E-3	2.12E-4	3.69E-6	4.79E-5	9.99E-4	5.33E-4	5.91E-7	2.66E-6	0.00E+0	-3.69E-5
Eutrophication, freshwater (PO4)	*kg PO4 eq*	5.52E-3	6.49E-4	1.13E-5	1.47E-4	3.07E-3	1.64E-3	1.81E-6	8.16E-6	0.00E+0	-1.13E-4
Eutrophication, marine	*kg N eq*	3.83E-2	7.74E-3	3.30E-4	1.44E-3	9.55E-3	1.92E-2	4.68E-5	1.86E-5	0.00E+0	-2.03E-3
Eutrophication, terrestrial	*mol N eq*	2.81E-1	5.51E-2	3.68E-3	1.19E-2	6.72E-2	1.43E-1	5.21E-4	2.13E-4	0.00E+0	-2.27E-2
Photochemical ozone formation	*kg NMVOC eq*	8.65E-2	1.70E-2	1.36E-3	4.17E-3	1.80E-2	4.56E-2	2.00E-4	5.98E-5	0.00E+0	-1.34E-2
Resource use, minerals and metals	*kg Sb eq*	3.76E-4	8.10E-5	1.88E-6	1.76E-5	7.33E-5	2.02E-4	3.01E-7	7.17E-8	0.00E+0	-5.61E-5
Resource use, fossils	*MJ*	6.22E+2	1.19E+2	7.88E+0	2.33E+1	1.64E+2	3.05E+2	1.26E+0	5.35E-1	0.00E+0	-9.54E+1
Water use	*m3 depriv.*	2.62E+1	6.47E+0	2.35E-2	1.29E+0	2.78E+0	1.56E+1	3.76E-3	6.12E-3	0.00E+0	-2.43E+0
Particulate matter	*disease inc.*	1.28E-6	2.60E-7	4.16E-8	7.24E-8	1.38E-7	7.62E-7	6.67E-9	4.47E-10	0.00E+0	-1.19E-7
Ionising radiation	*kBq U-235 eq*	2.68E+0	2.92E-1	3.42E-2	6.83E-2	1.47E+0	8.10E-1	5.45E-3	4.73E-3	0.00E+0	1.65E-2
Ecotoxicity, freshwater	*CTUe*	1.86E+2	4.38E+1	2.30E+0	8.88E+0	1.95E+1	1.11E+2	3.67E-1	2.98E-2	0.00E+0	-2.94E+1
Human toxicity, cancer	*CTUh*	7.99E-9	1.88E-9	9.26E-11	2.90E-10	1.14E-9	4.56E-9	1.48E-11	5.19E-12	0.00E+0	1.46E-10
Human toxicity, non-cancer	*CTUh*	2.22E-8	5.06E-9	2.33E-10	1.18E-9	2.68E-9	1.30E-8	3.74E-11	4.67E-12	0.00E+0	-2.48E-9
Land use	*Pt*	2.73E+2	6.29E+1	5.46E+0	1.13E+1	3.09E+1	1.61E+2	8.76E-1	8.24E-2	0.00E+0	4.11E+0

4.2.2.2. Potential environmental impact in case of LANDFILL at end of use

POTENTIAL ENVIRONMENTAL IMPACT - LANDFILL - 75 YEARS - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use		End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Mainten. (75 years)	B4 Replace (75 years)	C2 Transport	C3 Waste processing	C4 Disposal	
Climate change - GWP total	*kg CO2 eq*	3.04E+1	5.26E+0	5.17E-1	1.44E+0	7.71E+0	1.51E+1	8.22E-2	0.00E+0	2.60E-1	0.00E+0
Climate change - GWP fossil	*kg CO2 eq*	2.90E+1	5.12E+0	5.16E-1	1.19E+0	7.65E+0	1.43E+1	8.22E-2	0.00E+0	2.27E-1	0.00E+0
Climate change - GWP biogenic	*kg CO2 eq*	3.80E-1	-1.48E-1	1.63E-4	2.28E-1	4.11E-2	2.26E-1	2.60E-5	0.00E+0	3.26E-2	0.00E+0
Climate change -GWP land use and change	*kg CO2 eq*	1.00E+0	2.98E-1	2.12E-4	3.03E-2	1.82E-2	6.56E-1	3.35E-5	0.00E+0	6.90E-6	0.00E+0
Ozone depletion	*kg CFC11 eq*	6.12E-6	1.52E-6	1.20E-7	2.34E-7	3.94E-7	3.81E-6	1.92E-8	0.00E+0	9.79E-9	0.00E+0
Acidification	*mol H+ eq*	1.80E-1	3.11E-2	1.62E-3	1.19E-2	4.47E-2	9.02E-2	2.35E-4	0.00E+0	2.35E-4	0.00E+0
Eutrophication, freshwater (P)	*kg P eq*	1.79E-3	2.12E-4	3.69E-6	4.79E-5	9.99E-4	5.28E-4	5.91E-7	0.00E+0	2.28E-7	0.00E+0
Eutrophication, freshwater (PO4)	*kg PO4 eq*	5.50E-3	6.49E-4	1.13E-5	1.47E-4	3.07E-3	1.62E-3	1.81E-6	0.00E+0	6.99E-7	0.00E+0
Eutrophication, marine	*kg N eq*	3.88E-2	7.74E-3	3.30E-4	1.44E-3	9.55E-3	1.95E-2	4.68E-5	0.00E+0	1.75E-4	0.00E+0
Eutrophication, terrestrial	*mol N eq*	2.84E-1	5.51E-2	3.68E-3	1.19E-2	6.72E-2	1.44E-1	5.21E-4	0.00E+0	9.48E-4	0.00E+0
Photochemical ozone formation	*kg NMVOC eq*	8.73E-2	1.70E-2	1.36E-3	4.17E-3	1.80E-2	4.62E-2	2.00E-4	0.00E+0	3.27E-4	0.00E+0
Resource use, minerals and metals	*kg Sb eq*	3.76E-4	8.10E-5	1.88E-6	1.76E-5	7.33E-5	2.02E-4	3.01E-7	0.00E+0	9.29E-8	0.00E+0
Resource use, fossils	*MJ*	6.22E+2	1.19E+2	7.88E+0	2.33E+1	1.64E+2	3.05E+2	1.26E+0	0.00E+0	7.07E-1	0.00E+0
Water use	*m3 depriv.*	2.62E+1	6.47E+0	2.35E-2	1.29E+0	2.78E+0	1.56E+1	3.76E-3	0.00E+0	3.34E-3	0.00E+0
Particulate matter	*disease inc.*	1.29E-6	2.60E-7	4.16E-8	7.24E-8	1.38E-7	7.71E-7	6.67E-9	0.00E+0	5.11E-9	0.00E+0
Ionising radiation	*kBq U-235 eq*	2.68E+0	2.92E-1	3.42E-2	6.83E-2	1.47E+0	8.07E-1	5.45E-3	0.00E+0	3.26E-3	0.00E+0
Ecotoxicity, freshwater	*CTUe*	2.18E+2	4.38E+1	2.30E+0	8.88E+0	1.95E+1	1.32E+2	3.67E-1	0.00E+0	1.09E+1	0.00E+0
Human toxicity, cancer	*CTUh*	7.99E-9	1.88E-9	9.26E-11	2.90E-10	1.14E-9	4.57E-9	1.48E-11	0.00E+0	6.88E-12	0.00E+0
Human toxicity, non-cancer	*CTUh*	2.30E-8	5.06E-9	2.33E-10	1.18E-9	2.68E-9	1.36E-8	3.74E-11	0.00E+0	2.72E-10	0.00E+0
Land use	*Pt*	2.78E+2	6.29E+1	5.46E+0	1.13E+1	3.09E+1	1.65E+2	8.76E-1	0.00E+0	1.84E+0	0.00E+0

4.2.2.3. Potential environmental impact in case of INCINERATION at end of use

POTENTIAL ENVIRONMENTAL IMPACT – INCINERATION - 75 YEARS - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use		End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Mainten. (75 years)	B4 Replace (75 years)	C2 Transport	C3 Waste processing	C4 Disposal	
Climate change - GWP total	*kg CO2 eq*	4.32E+1	5.26E+0	5.17E-1	1.44E+0	7.71E+0	2.37E+1	8.22E-2	0.00E+0	4.52E+0	-4.13E+0
Climate change - GWP fossil	*kg CO2 eq*	4.18E+1	5.12E+0	5.16E-1	1.19E+0	7.65E+0	2.28E+1	8.22E-2	0.00E+0	4.49E+0	-4.11E+0
Climate change - GWP biogenic	*kg CO2 eq*	3.87E-1	-1.48E-1	1.63E-4	2.28E-1	4.11E-2	2.30E-1	2.60E-5	0.00E+0	3.47E-2	-1.49E-2
Climate change -GWP land use and change	*kg CO2 eq*	1.01E+0	2.98E-1	2.12E-4	3.03E-2	1.82E-2	6.59E-1	3.35E-5	0.00E+0	1.38E-3	-6.90E-3
Ozone depletion	*kg CFC11 eq*	7.40E-6	1.52E-6	1.20E-7	2.34E-7	3.94E-7	4.67E-6	1.92E-8	0.00E+0	4.37E-7	-3.76E-7
Acidification	*mol H+ eq*	1.95E-1	3.11E-2	1.62E-3	1.19E-2	4.47E-2	1.00E-1	2.35E-4	0.00E+0	5.31E-3	-2.18E-2
Eutrophication, freshwater (P)	*kg P eq*	1.90E-3	2.12E-4	3.69E-6	4.79E-5	9.99E-4	6.04E-4	5.91E-7	0.00E+0	3.80E-5	-3.12E-4
Eutrophication, freshwater (PO4)	*kg PO4 eq*	5.85E-3	6.49E-4	1.13E-5	1.47E-4	3.07E-3	1.85E-3	1.81E-6	0.00E+0	1.17E-4	-9.57E-4
Eutrophication, marine	*kg N eq*	4.21E-2	7.74E-3	3.30E-4	1.44E-3	9.55E-3	2.17E-2	4.68E-5	0.00E+0	1.30E-3	-2.62E-3
Eutrophication, terrestrial	*mol N eq*	3.24E-1	5.51E-2	3.68E-3	1.19E-2	6.72E-2	1.71E-1	5.21E-4	0.00E+0	1.44E-2	-2.98E-2
Photochemical ozone formation	*kg NMVOC eq*	9.79E-2	1.70E-2	1.36E-3	4.17E-3	1.80E-2	5.32E-2	2.00E-4	0.00E+0	3.86E-3	-8.57E-3
Resource use, minerals and metals	*kg Sb eq*	4.28E-4	8.10E-5	1.88E-6	1.76E-5	7.33E-5	2.36E-4	3.01E-7	0.00E+0	1.74E-5	-7.22E-6
Resource use, fossils	*MJ*	6.50E+2	1.19E+2	7.88E+0	2.33E+1	1.64E+2	3.24E+2	1.26E+0	0.00E+0	9.91E+0	-8.04E+1
Water use	*m3 depriv.*	2.83E+1	6.47E+0	2.35E-2	1.29E+0	2.78E+0	1.70E+1	3.76E-3	0.00E+0	7.17E-1	-6.80E-1
Particulate matter	*disease inc.*	1.41E-6	2.60E-7	4.16E-8	7.24E-8	1.38E-7	8.48E-7	6.67E-9	0.00E+0	4.33E-8	-8.83E-8
Ionising radiation	*kBq U-235 eq*	2.80E+0	2.92E-1	3.42E-2	6.83E-2	1.47E+0	8.85E-1	5.45E-3	0.00E+0	4.26E-2	-6.01E-1
Ecotoxicity, freshwater	*CTUe*	6.87E+2	4.38E+1	2.30E+0	8.88E+0	1.95E+1	4.45E+2	3.67E-1	0.00E+0	1.67E+2	-5.45E+0
Human toxicity, cancer	*CTUh*	1.10E-8	1.88E-9	9.26E-11	2.90E-10	1.14E-9	6.55E-9	1.48E-11	0.00E+0	1.00E-9	-3.94E-10
Human toxicity, non-cancer	*CTUh*	2.35E-8	5.06E-9	2.33E-10	1.18E-9	2.68E-9	1.39E-8	3.74E-11	0.00E+0	4.33E-10	-6.08E-10
Land use	*Pt*	2.82E+2	6.29E+1	5.46E+0	1.13E+1	3.09E+1	1.68E+2	8.76E-1	0.00E+0	3.23E+0	-1.03E+1

4.3. Life Cycle Assessment – Resources, wastes categories and outgoing flows

4.3.1. Resources, wastes categories and outgoing flows for 1 year

4.3.1.1. Resources, waste categories and outgoing flows in case of RECYCLING at end of use

RESOURCES, WASTES CATEGORIES AND OUTGOING FLOWS - RECYCLING - 1 YEAR - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use	End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Mainten. (1 year)	C2 Transport	C3 Waste processing	C4 Disposal	
Renewable primary energy excl. RM	*kg CO2 eq*	2.47E+1	2.10E+1	1.12E-1	3.05E+0	4.49E-1	1.80E-2	9.38E-2	0.00E+0	-4.69E-1
Renewable primary energy used as RM	*kg CO2 eq*	7.79E+0	8.83E+0	0.00E+0	-1.04E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total renewable primary energy	*kg CO2 eq*	3.25E+1	2.98E+1	1.12E-1	2.01E+0	4.49E-1	1.80E-2	9.38E-2	0.00E+0	-4.69E-1
Non renewable primary energy excl. RM	*kg CO2 eq*	8.97E+1	6.89E+1	7.88E+0	8.99E+0	2.19E+0	1.26E+0	5.35E-1	0.00E+0	-6.40E+1
Non renewable primary energy used as RM	*kg CFC11 eq*	6.56E+1	5.12E+1	0.00E+0	1.44E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.14E+1
Total non renewable primary energy	*mol H+ eq*	1.55E+2	1.20E+2	7.88E+0	2.34E+1	2.19E+0	1.26E+0	5.35E-1	0.00E+0	-9.54E+1
Use of secondary material	*kg P eq*	1.51E-1	1.38E-1	0.00E+0	1.38E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of renewable secondary fuels	*kg PO4 eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of non renewable secondary fuels	*kg N eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Recovered energy	*mol N eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Net use of fresh water	*kg NMVOC eq*	1.73E-1	1.39E-1	8.88E-4	3.06E-2	2.18E-3	1.42E-4	4.58E-4	0.00E+0	-4.69E-2
Hazardous waste disposed	*kg Sb eq*	4.43E-1	3.11E-1	5.79E-3	1.21E-1	2.67E-3	9.21E-4	8.44E-4	0.00E+0	-6.06E-2
Non hazardous waste disposed	*MJ*	5.40E+0	2.33E+0	4.55E-1	2.49E+0	4.03E-2	7.30E-2	8.83E-3	0.00E+0	-8.19E-1
Radioactive waste disposed (High)	*m3 depriv.*	6.95E-5	5.50E-5	5.83E-7	9.69E-6	3.37E-6	9.34E-8	8.12E-7	0.00E+0	-2.40E-6
Radioactive waste disposed (Inter-Low)	*disease inc.*	3.93E-4	2.52E-4	5.27E-5	6.48E-5	1.27E-5	8.39E-6	3.07E-6	0.00E+0	1.20E-5
Components for re-use	*kBq U-235 eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for recycling	*CTUe*	3.29E+0	2.06E-2	0.00E+0	1.09E-1	0.00E+0	0.00E+0	3.16E+0	0.00E+0	0.00E+0
Materials for energy recovery	*CTUh*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Exported energy	*CTUh*	1.44E-1	7.17E-2	0.00E+0	7.20E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0

4.3.1.2. Resources, waste categories and outgoing flows in case of LANDFILL at end of use

RESOURCES, WASTES CATEGORIES AND OUTGOING FLOWS - LANDFILL - 1 YEAR - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use	End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Mainten. (1 year)	C2 Transport	C3 Waste processing	C4 Disposal	
Renewable primary energy excl. RM	*kg CO2 eq*	2.46E+1	2.10E+1	1.12E-1	3.05E+0	4.49E-1	1.80E-2	0.00E+0	3.12E-2	0.00E+0
Renewable primary energy used as RM	*kg CO2 eq*	7.79E+0	8.83E+0	0.00E+0	-1.04E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total renewable primary energy	*kg CO2 eq*	3.24E+1	2.98E+1	1.12E-1	2.01E+0	4.49E-1	1.80E-2	0.00E+0	3.12E-2	0.00E+0
Non renewable primary energy excl. RM	*kg CO2 eq*	8.99E+1	6.89E+1	7.88E+0	8.99E+0	2.19E+0	1.26E+0	0.00E+0	7.07E-1	0.00E+0
Non renewable primary energy used as RM	*kg CFC11 eq*	6.56E+1	5.12E+1	0.00E+0	1.44E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total non renewable primary energy	*mol H+ eq*	1.55E+2	1.20E+2	7.88E+0	2.34E+1	2.19E+0	1.26E+0	0.00E+0	7.07E-1	0.00E+0
Use of secondary material	*kg P eq*	1.51E-1	1.38E-1	0.00E+0	1.38E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of renewable secondary fuels	*kg PO4 eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of non renewable secondary fuels	*kg N eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Recovered energy	*mol N eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Net use of fresh water	*kg NMVOC eq*	1.74E-1	1.39E-1	8.88E-4	3.06E-2	2.18E-3	1.42E-4	0.00E+0	8.96E-4	0.00E+0
Hazardous waste disposed	*kg Sb eq*	4.43E-1	3.11E-1	5.79E-3	1.21E-1	2.67E-3	9.21E-4	0.00E+0	8.15E-4	0.00E+0
Non hazardous waste disposed	*MJ*	8.56E+0	2.33E+0	4.55E-1	2.49E+0	4.03E-2	7.30E-2	0.00E+0	3.17E+0	0.00E+0
Radioactive waste disposed (High)	*m3 depriv.*	6.88E-5	5.50E-5	5.83E-7	9.69E-6	3.37E-6	9.34E-8	0.00E+0	8.24E-8	0.00E+0
Radioactive waste disposed (Inter-Low)	*disease inc.*	3.95E-4	2.52E-4	5.27E-5	6.48E-5	1.27E-5	8.39E-6	0.00E+0	4.49E-6	0.00E+0
Components for re-use	*kBq U-235 eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for recycling	*CTUe*	1.30E-1	2.06E-2	0.00E+0	1.09E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for energy recovery	*CTUh*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Exported energy	*CTUh*	1.44E-1	7.17E-2	0.00E+0	7.20E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0

4.3.1.3. Resources, waste categories and outgoing flows in case of INCINERATION at end of use

RESOURCES, WASTES CATEGORIES AND OUTGOING FLOWS – INCINERATION - 1 YEAR - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use	End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Mainten. (1 year)	C2 Transport	C3 Waste processing	C4 Disposal	
Renewable primary energy excl. RM	kg CO2 eq	2.57E+1	2.10E+1	1.12E-1	3.05E+0	4.49E-1	1.80E-2	0.00E+0	1.11E+0	-1.11E+1
Renewable primary energy used as RM	kg CO2 eq	7.79E+0	8.83E+0	0.00E+0	-1.04E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total renewable primary energy	kg CO2 eq	3.35E+1	2.98E+1	1.12E-1	2.01E+0	4.49E-1	1.80E-2	0.00E+0	1.11E+0	-1.11E+1
Non renewable primary energy excl. RM	kg CO2 eq	1.67E+2	6.89E+1	7.88E+0	8.99E+0	2.19E+0	1.26E+0	0.00E+0	7.75E+1	-8.04E+1
Non renewable primary energy used as RM	kg CFC11 eq	-2.06E+0	5.12E+1	0.00E+0	1.44E+1	0.00E+0	0.00E+0	0.00E+0	-6.76E+1	0.00E+0
Total non renewable primary energy	mol H+ eq	1.65E+2	1.20E+2	7.88E+0	2.34E+1	2.19E+0	1.26E+0	0.00E+0	9.91E+0	-8.04E+1
Use of secondary material	kg P eq	1.51E-1	1.38E-1	0.00E+0	1.38E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of renewable secondary fuels	kg PO4 eq	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of non renewable secondary fuels	kg N eq	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Recovered energy	mol N eq	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Net use of fresh water	kg NMVOC eq	1.93E-1	1.39E-1	8.88E-4	3.06E-2	2.18E-3	1.42E-4	0.00E+0	2.06E-2	-5.30E-2
Hazardous waste disposed	kg Sb eq	1.80E+0	3.11E-1	5.79E-3	1.21E-1	2.67E-3	9.21E-4	0.00E+0	1.36E+0	-6.44E-2
Non hazardous waste disposed	MJ	5.99E+0	2.33E+0	4.55E-1	2.49E+0	4.03E-2	7.30E-2	0.00E+0	5.98E-1	-8.34E-1
Radioactive waste disposed (High)	m3 depriv.	7.48E-5	5.50E-5	5.83E-7	9.69E-6	3.37E-6	9.34E-8	0.00E+0	6.06E-6	-9.64E-5
Radioactive waste disposed (Inter-Low)	disease inc.	4.23E-4	2.52E-4	5.27E-5	6.48E-5	1.27E-5	8.39E-6	0.00E+0	3.32E-5	-4.31E-4
Components for re-use	kBq U-235 eq	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for recycling	CTUe	1.30E-1	2.06E-2	0.00E+0	1.09E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for energy recovery	CTUh	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Exported energy	CTUh	2.30E+1	7.17E-2	0.00E+0	7.20E-2	0.00E+0	0.00E+0	0.00E+0	2.28E+1	0.00E+0

4.3.2. Resources, waste categories and outgoing flows for 75 years

4.3.2.1. Resources, waste categories and outgoing flows in case of RECYCLING at end of use

RESOURCES, WASTES CATEGORIES AND OUTGOING FLOWS - RECYCLING - 75 YEARS - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use		End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Mainten. (75 years)	B4 Replace (75 years)	C2 Transport	C3 Waste processing	C4 Disposal	
Renewable primary energy excl. RM	*kg CO2 eq*	1.06E+2	2.10E+1	1.12E-1	3.05E+0	3.36E+1	4.85E+1	1.80E-2	9.38E-2	0.00E+0	-4.69E-1
Renewable primary energy used as RM	*kg CO2 eq*	2.34E+1	8.83E+0	0.00E+0	-1.04E+0	0.00E+0	1.56E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total renewable primary energy	*kg CO2 eq*	1.30E+2	2.98E+1	1.12E-1	2.01E+0	3.36E+1	6.41E+1	1.80E-2	9.38E-2	0.00E+0	-4.69E-1
Non renewable primary energy excl. RM	*kg CO2 eq*	4.27E+2	6.89E+1	7.88E+0	8.99E+0	1.64E+2	1.75E+2	1.26E+0	5.35E-1	0.00E+0	-6.40E+1
Non renewable primary energy used as RM	*kg CFC11 eq*	1.97E+2	5.12E+1	0.00E+0	1.44E+1	0.00E+0	1.31E+2	0.00E+0	0.00E+0	0.00E+0	-3.14E+1
Total non renewable primary energy	*mol H+ eq*	6.23E+2	1.20E+2	7.88E+0	2.34E+1	1.64E+2	3.06E+2	1.26E+0	5.35E-1	0.00E+0	-9.54E+1
Use of secondary material	*kg P eq*	4.54E-1	1.38E-1	0.00E+0	1.38E-2	0.00E+0	3.03E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of renewable secondary fuels	*kg PO4 eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of non renewable secondary fuels	*kg N eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Recovered energy	*mol N eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Net use of fresh water	*kg NMVOC eq*	6.76E-1	1.39E-1	8.88E-4	3.06E-2	1.63E-1	3.42E-1	1.42E-4	4.58E-4	0.00E+0	-4.69E-2
Hazardous waste disposed	*kg Sb eq*	1.52E+0	3.11E-1	5.79E-3	1.21E-1	2.00E-1	8.80E-1	9.21E-4	8.44E-4	0.00E+0	-6.06E-2
Non hazardous waste disposed	*MJ*	1.91E+1	2.33E+0	4.55E-1	2.49E+0	3.02E+0	1.07E+1	7.30E-2	8.83E-3	0.00E+0	-8.19E-1
Radioactive waste disposed (High)	*m3 depriv.*	4.51E-4	5.50E-5	5.83E-7	9.69E-6	2.53E-4	1.32E-4	9.34E-8	8.12E-7	0.00E+0	-2.40E-6
Radioactive waste disposed (Inter-Low)	*disease inc.*	2.09E-3	2.52E-4	5.27E-5	6.48E-5	9.50E-4	7.61E-4	8.39E-6	3.07E-6	0.00E+0	1.20E-5
Components for re-use	*kBq U-235 eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for recycling	*CTUe*	9.87E+0	2.06E-2	0.00E+0	1.09E-1	0.00E+0	6.58E+0	0.00E+0	3.16E+0	0.00E+0	0.00E+0
Materials for energy recovery	*CTUh*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Exported energy	*CTUh*	4.31E-1	7.17E-2	0.00E+0	7.20E-2	0.00E+0	2.87E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0

4.3.2.2. Resources, waste categories and outgoing flows in case of LANDFILL at end of use

RESOURCES, WASTES CATEGORIES AND OUTGOING FLOWS - LANDFILL - 75 YEARS - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use		End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Mainten. (75 years)	B4 Replace (75 years)	C2 Transport	C3 Waste processing	C4 Disposal	
Renewable primary energy excl. RM	*kg CO2 eq*	1.06E+2	2.10E+1	1.12E-1	3.05E+0	3.36E+1	4.84E+1	1.80E-2	0.00E+0	3.12E-2	0.00E+0
Renewable primary energy used as RM	*kg CO2 eq*	2.34E+1	8.83E+0	0.00E+0	-1.04E+0	0.00E+0	1.56E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total renewable primary energy	*kg CO2 eq*	1.30E+2	2.98E+1	1.12E-1	2.01E+0	3.36E+1	6.40E+1	1.80E-2	0.00E+0	3.12E-2	0.00E+0
Non renewable primary energy excl. RM	*kg CO2 eq*	4.27E+2	6.89E+1	7.88E+0	8.99E+0	1.64E+2	1.75E+2	1.26E+0	0.00E+0	7.07E-1	0.00E+0
Non renewable primary energy used as RM	*kg CFC11 eq*	1.97E+2	5.12E+1	0.00E+0	1.44E+1	0.00E+0	1.31E+2	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total non renewable primary energy	*mol H+ eq*	6.24E+2	1.20E+2	7.88E+0	2.34E+1	1.64E+2	3.06E+2	1.26E+0	0.00E+0	7.07E-1	0.00E+0
Use of secondary material	*kg P eq*	4.54E-1	1.38E-1	0.00E+0	1.38E-2	0.00E+0	3.03E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of renewable secondary fuels	*kg PO4 eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of non renewable secondary fuels	*kg N eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Recovered energy	*mol N eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Net use of fresh water	*kg NMVOC eq*	6.78E-1	1.39E-1	8.88E-4	3.06E-2	1.63E-1	3.43E-1	1.42E-4	0.00E+0	8.96E-4	0.00E+0
Hazardous waste disposed	*kg Sb eq*	1.52E+0	3.11E-1	5.79E-3	1.21E-1	2.00E-1	8.80E-1	9.21E-4	0.00E+0	8.15E-4	0.00E+0
Non hazardous waste disposed	*MJ*	2.86E+1	2.33E+0	4.55E-1	2.49E+0	3.02E+0	1.70E+1	7.30E-2	0.00E+0	3.17E+0	0.00E+0
Radioactive waste disposed (High)	*m3 depriv.*	4.49E-4	5.50E-5	5.83E-7	9.69E-6	2.53E-4	1.31E-4	9.34E-8	0.00E+0	8.24E-8	0.00E+0
Radioactive waste disposed (Inter-Low)	*disease inc.*	2.10E-3	2.52E-4	5.27E-5	6.48E-5	9.50E-4	7.64E-4	8.39E-6	0.00E+0	4.49E-6	0.00E+0
Components for re-use	*kBq U-235 eq*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for recycling	*CTUe*	3.89E-1	2.06E-2	0.00E+0	1.09E-1	0.00E+0	2.59E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for energy recovery	*CTUh*	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Exported energy	*CTUh*	4.31E-1	7.17E-2	0.00E+0	7.20E-2	0.00E+0	2.87E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0

4.3.2.3. Resources, waste categories and outgoing flows in case of INCINERATION at end of use

RESOURCES, WASTES CATEGORIES AND OUTGOING FLOWS - INCINERATION - 75 YEARS - per m²

Impacts CML v4.3	Units	Total	Production	Construction		Use		End-of-life			D Benefits & load beyond system boundaries
			A1 – A3 Total Production	A4 Transport	A5 Installation	B2 Mainten. (75 years)	B4 Replace (75 years)	C2 Transport	C3 Waste processing	C4 Disposal	
Renewable primary energy excl. RM	kg CO2 eq	1.09E+2	2.10E+1	1.12E-1	3.05E+0	3.36E+1	5.06E+1	1.80E-2	0.00E+0	1.11E+0	-1.11E+1
Renewable primary energy used as RM	kg CO2 eq	2.34E+1	8.83E+0	0.00E+0	-1.04E+0	0.00E+0	1.56E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total renewable primary energy	kg CO2 eq	1.33E+2	2.98E+1	1.12E-1	2.01E+0	3.36E+1	6.61E+1	1.80E-2	0.00E+0	1.11E+0	-1.11E+1
Non renewable primary energy excl. RM	kg CO2 eq	6.58E+2	6.89E+1	7.88E+0	8.99E+0	1.64E+2	3.29E+2	1.26E+0	0.00E+0	7.75E+1	-8.04E+1
Non renewable primary energy used as RM	kg CFC11 eq	-6.19E+0	5.12E+1	0.00E+0	1.44E+1	0.00E+0	-4.12E+0	0.00E+0	0.00E+0	-6.76E+1	0.00E+0
Total non renewable primary energy	mol H+ eq	6.51E+2	1.20E+2	7.88E+0	2.34E+1	1.64E+2	3.25E+2	1.26E+0	0.00E+0	9.91E+0	-8.04E+1
Use of secondary material	kg P eq	4.54E-1	1.38E-1	0.00E+0	1.38E-2	0.00E+0	3.03E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of renewable secondary fuels	kg PO4 eq	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of non renewable secondary fuels	kg N eq	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Recovered energy	mol N eq	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Net use of fresh water	kg NMVOC eq	7.37E-1	1.39E-1	8.88E-4	3.06E-2	1.63E-1	3.82E-1	1.42E-4	0.00E+0	2.06E-2	-5.30E-2
Hazardous waste disposed	kg Sb eq	5.61E+0	3.11E-1	5.79E-3	1.21E-1	2.00E-1	3.60E+0	9.21E-4	0.00E+0	1.36E+0	-6.44E-2
Non hazardous waste disposed	MJ	2.09E+1	2.33E+0	4.55E-1	2.49E+0	3.02E+0	1.19E+1	7.30E-2	0.00E+0	5.98E-1	-8.34E-1
Radioactive waste disposed (High)	m3 depriv.	4.67E-4	5.50E-5	5.83E-7	9.69E-6	2.53E-4	1.43E-4	9.34E-8	0.00E+0	6.06E-6	-9.64E-5
Radioactive waste disposed (Inter-Low)	disease inc.	2.18E-3	2.52E-4	5.27E-5	6.48E-5	9.50E-4	8.21E-4	8.39E-6	0.00E+0	3.32E-5	-4.31E-4
Components for re-use	kBq U-235 eq	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for recycling	CTUe	3.89E-1	2.06E-2	0.00E+0	1.09E-1	0.00E+0	2.59E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for energy recovery	CTUh	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Exported energy	CTUh	6.89E+1	7.17E-2	0.00E+0	7.20E-2	0.00E+0	4.59E+1	0.00E+0	0.00E+0	2.28E+1	0.00E+0

5. Life Cycle Assessment – Carbon emissions and removals

Carbon Emissions and Removals over the ESL of 75 years

PARAMETER	A1	A2	A3	A4	A5	B1	B2	B4	C2	C4	TOTAL LIFE CYCLE (A1-C4)
BCRP [kg CO2]	0.0093	-	-	-	-	-	-	0.01852578	-	-	0.0278
BCEP [kg CO2]	-	-	-	-	-	-	-	0.01852578	-	0.0093	0.0278
BCRK [kg CO2]	-	-	0.0589	-	-	-	-	0.117735307	-	-	0.1766
BCEK [kg CO2]	-	-	-	-	0.0589	-	-	0.117735307	-	-	0.1766
BCEW [kg CO2]	-	-	-	-	-	-	-	-	-	-	-
CCE [kg CO2]	-	-	-	-	-	-	-	-	-	-	-
CCR [kg CO2]	-	-	-	-	-	-	-	-	-	-	-
CWNR [kg CO2]	-	-	-	-	-	-	-	-	-	-	-

BCRP: Biogenic Carbon Removal from Product / BCEP: Biogenic Carbon Emission from Product / BCRK: Biogenic Carbon Removal from Packaging / BCEK: Biogenic Carbon Emission from Packaging / BCEW: Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes / CCE: Calcination Carbon Emissions / CCR: Carbonation Carbon Removals / CWNR: Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes

6. LCA Interpretation

As the product must be replaced twice during its life cycle, the replacement stage is the most important because it covers all the stages of the life cycle twice.
Maintenance stage has a great impact on several indicators, due mainly to the detergent and his chemicals which compose it.
Production of raw material, especially PVC has an impact on the results.

7. Additional Environmental Information

7.1. Environment and Health During Manufacturing

Gerflor's factory conforms to:

- ISO 9001 Quality Management System,
- ISO 14001 Environmental Management System,
- ISO 50001 Energy Management System.

Gerflor uses 100% certified renewable electricity in its plants.

7.2. Environment and Health During Installation

The manufacturer's guidelines should be adhered to during the installation of this product.

7.3. Environment and Health During the use stage

The product is certified FloorScore, M1, and IAC Gold (for several references). The measured concentration of total volatile organic compounds (TVOC) is lessthan/equal to 0.5 mg/m^3 (in accordance with CDPH/EHLB Standard Method v1.2-2017).

The product is not exposed to soil and water during the use stage.

8. Further Information

Additional information can be found on **www.gerflor.com**.

9. References

ISO 14025
ISO 14025:2006: Environmental labels and declarations — Type III environmental declarations —Principles and procedures

EN 15804
EN 15804:2012-04+A2 2019: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category ofconstruction products

UL Environment
UL Environment General Program Instructions March2022 Version 2.7

Ecoinvent V3.8
Ecoinvent Life Cycle Inventory database Version 3.8
http://www.ecoinvent.org

UL Standard 10010. PCR Part A
PCR -Part A: Life Cycle Assessment Calculation Rulesand Report Requirements. Version 4.0. UL Environnment.
https://industries.ul.com/environment

UL 10010-7. PCR Part B
PCR - Part B: Flooring EPD Requirements. Second Edition. Dated September 28. 2018. UL Environment.
https://www.ul.com/