# Environmental Product Declaration

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

## Pilote 3D

from

## Balsan

| | |
|---|---|
| Programme: | The International EPD System, www.environdec.com |
| Programme operator: | EPD International AB |
| Licensee: | N/A |
| Type of EPD: | EPD of a single product from a manufacturer |
| EPD registration number: | EPD-IES-0032144:001 |
| Version date: | 2026-05-26 |
| Validity date: | 2031-05-26 |

*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<br>Box 210 60<br>SE-100 31 Stockholm<br>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):** ***CONSTRUCTION PRODUCTS PCR 2019:14 VERSION 2.0.1, UN CPC code 2723*** |
| **PCR review was conducted by: The Technical Committee of the International EPD System,** ***The review panel may be contacted via support@environdec.com.*** |
| **c-PCR:** ***c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810), version 1.0.0*** |

| Third-party Verification |
|---|
| Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br><br>☒ **Individual EPD verification without a pre-verified LCA/EPD tool**<br>Third-party verifier: *Marie Bellemare, Marie Bellemare Consulting*<br><br>Approved by: International EPD System |
| Procedure for follow-up of data during EPD validity involves third party verifier:<br><br>☐ 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.

In this EPD, a dot (.) is used as the decimal separator and no thousand separator is used.

# INFORMATION ABOUT EPD OWNER

Owner of the EPD: Balsan
Address: Balsan Moquette, 2, Corbilly 36330 Arthon, France
Contact: Cedric CHARTON, cedric.charton@balsan.com
Address and contact information of the LCA practitioner commissioned by the EPD owner: Mad Max Environnement, 1, chemin Le Hézard, 50490, Saint Sauveur Villages, France, represented by Maxime ROBERT, mrobert@madmax-environnement.fr
Description of the organisation: Designer and manufacturer of textile floor coverings (carpet rolls and carpet tiles).

Product-related or management system-related certifications: NF EN 1307, NF EN 14041

# PRODUCT INFORMATION

Product name: Pilote 3D
Product identification: Modular textile floor covering (loose-lay carpet tiles), 50 × 50 cm per tile, total mass 4.105 kg/m², 100% recycled polyamide 6 fibers, proportion of recycled material 15%, total pile weight 620 g/m², Surface pile weight 420 g/m², total thickness 6.5 mm, backing bituminous compound.
Visual representation of the product

UN CPC code: 2723 - Carpets and other textile floor coverings, tufted
Other codes for product classification: N/A
Product description: According to the use class as defined in EN 1307 the product can be used in all professional areas which require class 33 or less. It is intended exclusively for indoor use and must be installed in accordance with NF DTU 53.12. It is not suitable for outdoor applications or areas exposed to permanent moisture.
During the use phase, the product contributes to the functional performance of the building by ensuring a stable and comfortable floor covering, while requiring periodic maintenance.
The product has an Estimated Service Life (ESL) of 15 years under normal conditions of use; however, in accordance with EN 16810, the Reference Service Life (RSL) used for the LCA modelling is 1 year.

Description of main processes of manufacturing:
The first manufacturing step consists of producing the tufted carpet using a 1/10 loop tufting machine, a primary polyester nonwoven backing, and ECONYL® polyamide yarn. This process involves inserting the yarn into the primary backing at a defined stitch rate in order to achieve a yarn mass of approximately 620 g/m². The energy used during this operation is mainly electricity, required to operate the tufting machines.

The second step consists of applying a styrene–butadiene latex compounded with calcium carbonate (referred to as precoat). The purpose of this operation is to anchor the yarn to the primary backing. It is carried out on a continuous coating line and is a key step for achieving the required wear resistance performance of the finished product.

The compound is water-based, with a dry content of 78%, and is applied by foaming in order to control the applied weight. After application of the latex layer, the material undergoes a first drying stage in an oven operating with heating coils supplied by a thermal fluid. The material then passes through a second drying oven to dissipate residual stresses and ensure the dimensional stability of the product. After inspection, the material is wound into rolls of 75 linear metres and transferred to the Neuvy production site.
The next step consists of slitting the material to a width of 2.06 m so that it can be processed into tiles on the heavy coating line at the Neuvy site. The slit rolls are fed sequentially into the line and undergo a reheating operation to relax the material. In parallel, the tile backing is produced by applying a first layer of bituminous compound onto a polyester spunbond nonwoven. A glass fibre grid is then applied onto this bitumen layer, followed by the application of a second bitumen layer. The relaxed, precoated carpet is subsequently pressed onto the second bitumen layer while it is still hot.

The product is then cooled to ambient temperature in a cooling chamber before being cut into 50 × 50 cm tiles using a hydraulic press. The tiles are inspected and packed in cartons containing 20 tiles, which are then placed on pallets.
The pallets are finally transported to the logistics service provider’s warehouse for storage and subsequent distribution.

The production has been modelled on data supplied by the manufacturer for its factory in France. All factory data are measured in square meters and it is assumed that the process consumptions are governed by area of flooring processed rather than mass (manufacturer’s usual method of calculation). These quantities have been calculated by dividing the annual consumption per the quantity of m² produced in a year.

Name and location of production site(s): Arthon and Neuvy (France)
References to relevant websites: https://www.balsan.com/moquette-pilote-3d

EPD shall not include rating, judgements, or direct comparisons with other products or companies.
“Other products” include previous or alternative versions of the studied product, i.e., the EPD shall not display changes in the environmental performance results of a product over time, or differences with regard to a hypothetical version of the product using, e.g., alternative production processes or input materials.
“Other companies” means that the EPD shall not in any way imply that the EPD owner is, for example, “a market leader” or “more sustainable” (or similar) compared to its competitors.

# CONTENT DECLARATION

- The mass (weight) of one unit of a product, as purchased or per declared unit: 4.105 kg/m²
- Information on the environmental and hazardous/toxic properties of a substances contained in the product: The product does not contain any substances listed in the REACH Candidate List of Substances of Very High Concern (SVHC) above 0.1% (w/w), in accordance with Article 33 of Regulation (EC) No 1907/2006 (REACH).
- The declared share of biogenic/recycled materials: 15% of recycled materials

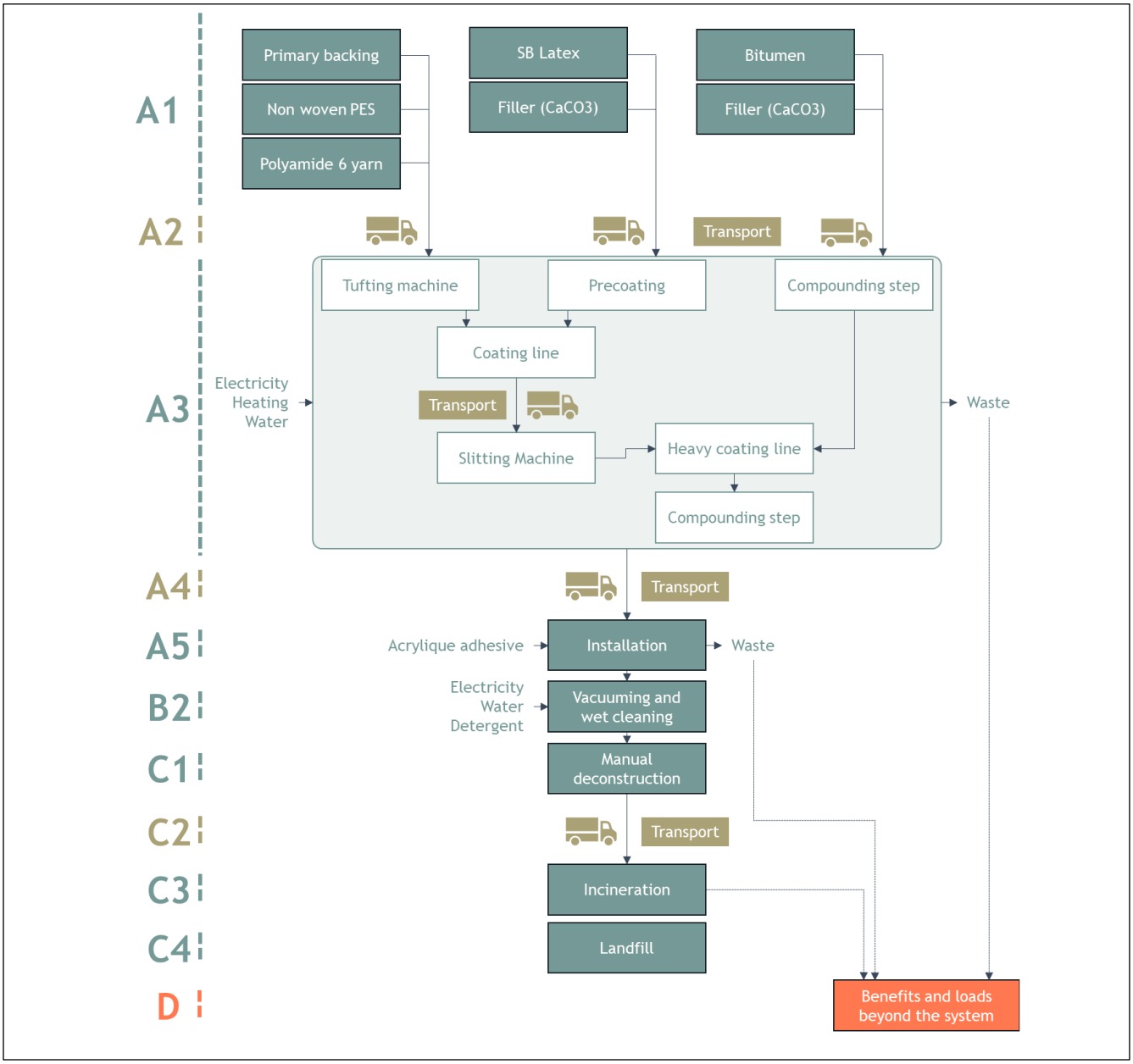
| Product content | Mass, kg | Post-consumer recycled material, mass-% of product | Biogenic material, mass-% of product | Biogenic material, kg C/product |
|---|---|---|---|---|
| Polyamide 6 | 6.20E-01 | 100% | 0% | 0.0E+00 |
| Polyester | 1.70E-01 | 0% | 0% | 0.0E+00 |
| Glass fibre | 1.50E-02 | 0% | 0% | 0.0E+00 |
| SBR-latex | 1.34E-01 | 0% | 0% | 0.0E+00 |
| Mineral filler | 2.49E+00 | 0% | 0% | 0.0E+00 |
| Bitumen | 6.54E-01 | 0% | 0% | 0.0E+00 |
| Other components | 2.03E-02 | 0% | 0% | 0.0E+00 |
| TOTAL | 4.105E+00 | 15% | 0% | 0.0E+00 |

| Packaging materials | Mass, kg | Mass-% (versus the product) | Biogenic material, kg C/product or declared unit |
|---|---|---|---|
| Packaging – Pallet | 0.120 | 2.9 % | 3.12E-02 |
| Packaging – Cardboard | 0.101 | 2.4 % | 3.70E-02 |
| Packaging – PE Film | 0.001 | 0.02 % | 0.0E+00 |
| Packaging – EVA Adhesive | 0.006 | 0.1 % | 0.0E+00 |
| TOTAL | 0.228 | 5.5 % | 6.82E-02 |

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

# LCA INFORMATION

Functional unit Providing coverage and aesthetic finish for 1 m² of interior flooring, installed in accordance with NF DTU 53.12 and maintained periodically over a Reference Service Life of 1 year.
Conversion factor to mass if mass is not used as functional/declared unit (not applicable for services).
Reference service life: 1 year
Time representativeness: The LCA study, based on data from Balsan in 2024, was conducted and reported in 2026
Geographical scope: France (A3), Global (A1-A2, A4-D).
Database(s) and LCA software used: Ecoinvent 3.10, SimaPro LCA software 9.6.0.1.
Description of system boundaries: Cradle to grave and module D (A + B + C + D).
Process flow diagram:




More information:
The EPD is prepared in accordance with EN 15804:2012+A2:2019/AC:2021, NF EN 15804+A2/CN:2022, ISO 21930:2017, EN 16810:2017, ISO 14025:2006, the EF 3.1 characterisation factors, and PCR 2019:14-c-PCR-004 for the European market.

Modelling does not include infrastructures, production tools, factory construction, cleaning, administration department and employee transport, except in the case of data included in the generic databases.

Data quality assessment summary:
The data quality assessment has been carried out in accordance with EN 15941 Section 7.3.3.
Primary data for manufacturing processes (Module A3) are based on the production year 2024.
Overall, the data quality is considered good to very good, with most datasets showing high representativeness in terms of technology, geography, and time.
However, some limitations have been identified:

- The geographical representativeness of natural gas supply is rated as poor due to the unknown origin of the gas.
- The transport distances for end-of-life processes are based on assumptions and show limited precision.
- The maintenance scenario is based on standardised usage assumptions and shows variability depending on user practices.

These limitations are not expected to significantly affect the overall conclusions of the study.

Manufacturing datas:
Electricity used in processes under the control of the EPD owner (Module A3) is modelled based on a renewable electricity contract supported by Guarantees of Origin (GOs).

The electricity mix corresponds to renewable energy sources, and the associated climate change impacts are:

- 8.99E-03 kg $CO_2$ eq/kWh for Arthon site
- 9.07E-03 kg $CO_2$ eq/kWh for Neuvy site.

These values reflect the contractual electricity supply and are consistent with the requirements for electricity modelling in EPDs.

Downstream stages and module D scenarios: The following scenarios are applied for downstream life cycle stages (A4–C4) and Module D, in accordance with PCR 2019:14 Sections 4.8.2 to 4.8.5.

**A4 – Transport to site:**
Transport is modelled using Balsan's sales data:

| Information | Units |
|---|---|
| **Type of vehicle used for transport** | Manufacturing site to logistics platform: diesel truck >32 tons, EURO5<br>Logistics platform to implementation site: diesel truck >32 tons, EURO5 ; Transport, freight, sea, container ship |
| **Distance** | Neuvy to logistics platform: 33.6 km by road<br>Distribution: 479 km by road in Europe and 941 km by sea in the world |
| **Capacity Utilisation** | 100% capacity utilisation (default data from the Ecoinvent) |
| **Bulk density of transported products** | 6.67E+02 kg/$m^3$ |
| **Volume capacity utilisation factor (factor: =1 or <1 or >1 for compressed or nested packaged products)** | 1 |
| **Description of the scenario:**<br>The product is distributed throughout the world, with a weighted average transport distance of 479 km by road in Europe and 941 km by sea in the world, based on annual sales volumes. | |

**A5 – Installation:**
Installation is modelled using:

| Information | Units |
|---|---|
| **Ancillary materials for installation (specified by material)** | Acrylic adhesive, 120 g/m² |
| **Water use** | None |
| **Other resource use** | None |
| **Quantitative description of energy type (regional mix) and consumption during the installation process** | None |
| **Description of the scenario:**<br>Installation requires the use of an acrylic adhesive in aqueous emulsion. The adhesive UZIN U 1000, covered by an EPD is used for the modelling with a 120g/m² weight. No additional materials or energy inputs are required for installation.<br><br>A product loss rate of 3% is assumed based on a collective French FDES (UFTM). Installation waste is treated via landfill. | |

**B2 – Maintenance:**
Maintenance scenario describes annual consumption and the results are calculated for the RSL of 1 years. It is taken from UFTM (French union for carpets) FDES covering 160 similar products.
This one year-scenario, considered representative of average maintenance for the installed surface, is applied to the product:

- Vacuum cleaning: 208 times per year
- Wet cleaning: 1.5 times per year

The estimated annual resource consumption is:

- Electricity: 0.314 kWh/m²/year
- Freshwater: 0.004 kg/m²/year
- Detergent: 0.09 kg/m²/year.

Low voltage electricity mixes are used in proportion to the distribution of sales for France (82%) and global (18%).

No wastewater is generated during the maintenance process, as water and detergent are applied for cleaning and remain within the carpet before evaporating during drying.

**B1, B3-B7 – Use stage:**
As per EN 16810, floor coverings do not generate environmental impacts during normal use and are not repaired, replaced, or refurbished.

**C1 – De-construction:**
At the end of its reference service life the carpet tiles are removed manually from the building. No specific energy consumption or additional materials are required for this operation.

**C2–C4 – End-of-life:**
The acrylic adhesive used for the product installation is considered is the final waste scenarios as it is not separated, making its total waste weight 4.225 kg.
Waste is assumed to be transported over a distance of 50 km.

| Information | Units |
|---|---|
| Type of vehicle used for transport | Ecoinvent process: Transport, freight, lorry 16-32 metric ton, EURO5 {RoW}<br>Operating with Diesel |
| Distance | 50 km by road |
| Capacity Utilisation | 100% capacity utilisation (default data from the Ecoinvent) |
| Bulk density of transported products | 6.50E+02 kg/$m^3$ |
| Volume capacity utilisation factor (factor: =1 or <1 or >1 for compressed or nested packaged products) | 1 |

The end-of-life scenario applied in the LCA modelling is 100% landfill. This assumption is aligned with the collective FDES developed by UFTM, covering 160 similar products, and is used here to ensure consistency with sectoral practices. The results for the alternative 100% incineration scenario are provided in the 'Additional LCA results' section.

| Processes | Units |
|---|---|
| Collection process specified by type | 4.225 kg collected separately |
| | 0 kg collected with mixed construction waste |
| Recovery system specified by type | 0 kg for re-use |
| | 0 kg for recycling |
| | 0 kg for energy recovery |
| Disposal specified by type | 4.225 kg for final deposition |
| Assumptions for scenario development | Scenario based on collective FDES developed by UFTM |

**Module D – Benefits beyond the system boundary:**
Yarn losses and product packaging end-of-life are accounted in Module D.

Energy recovery from incineration (D-I) is modelled with the following efficiencies:

- 25% electricity
- 45% thermal energy

Recovered electricity substitutes the Global grid mix, while recovered thermal energy substitutes rest of world stream. Energy recovery is calculated based on the lower heating value (LHV) of the material.

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

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

- A maximum of 5% of the total energy usage and mass per module may be omitted

All inputs and outputs flows have been considered, including raw materials as per the product composition provided by the manufacturer and packaging of raw materials as well as the final product. Energy and water consumptions have also been considered at 100% according to the data provided.

**Modules A1-A3:**
A1 – Raw Material Supply: All processes were modelled using appropriate data modules.
A2 – Transport: Transport of raw material packaging was considered negligible.
A3 – Manufacturing: 100% of the manufacturing processes were modelled.
**Modules A4-A5:**
All inputs and outputs flows have been considered.
**Module B1 et B3 – B7:**
No flows are allocated to this module; it is empty.
**Module B2:**
All inputs and outputs flows have been considered.
**Module C1-C4:**
100% of the end-of-life processes were modelled.
**Module D:**
All inputs and outputs flows have been considered.

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 | GLO | GLO | FR | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO |
| Share of primary data | 30% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | 0% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | 0% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

The share of primary data is calculated based on GWP-GHG results:

$$Share\ of\ primary\ data = \sum GWPGHG_{primary\ datas} / \sum GWPGHG_{total\ A1\text{-}A3}$$

Primary data considered are production consumption of energy and water, production waste, packaging and supplier data for transport. EPD from suppliers used as a data source do not contain their share of primary are conservatively assumed to be based on 0% primary data.

It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Main GWP-GHG contributors are displayed in the following table.

| Process | Source type | Source | Reference year | Data category | Share of primary data, of GWP-GHG results for A1-A3 |
|---|---|---|---|---|---|
| A1 Polyamide yarn | EPD | EPD (Registration No. of EPD International AB: S-P-08203) | 2024 | Secondary data | 0% |
| A1 First backing PES | Database | Ecoinvent v3.10 | 2024 | Secondary data | 0% |
| A1 Other raw materials | Database | EPD, Ecoinvent v3.10 | 2024 | Secondary data | 0% |
| A3 Fossil fuels (GPL and natural gas) | Collected data | Ecoinvent v3.10 | 2024 | Primary data | 14% |
| A3 Raw materials compensation | EPD | Manufacturer LCA | 2024 | Secondary data | 0% |
| A3 Other processes | Collected data | Ecoinvent v3.10 | 2024 | Primary data | 12% |
| A2 Transport | Database | Ecoinvent v3.10 | 2024 | Primary data | 5% |
| Total share of primary data, of GWP-GHG results for A1-A3 | | | | | 30% |

The GWP-GHG intensity of recycled PA6 is 1.52E+00 kg CO2 eq. It is based on the supplier-specific ECONYL® EPD. Impacts are taken directly from this EPD, including the allocation approach defined by the supplier.

# ENVIRONMENTAL PERFORMANCE

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

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).
Biogenic carbon leaving the product system in module A5 have been balanced out already in modules A1-A3.

### Mandatory impact category indicators according to EN 15804

**Results per functional or declared unit**

| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GWP-total | kg $CO_2$ eq. | 3.65E+00 | 2.66E-01 | 6.86E-01 | 0.00E+00 | 1.07E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.11E-02 | 0.00E+00 | 3.78E-01 | -8.18E-02 |
| GWP-fossil | kg $CO_2$ eq. | 4.00E+00 | 2.66E-01 | 3.28E-01 | 0.00E+00 | 1.04E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.11E-02 | 0.00E+00 | 3.78E-01 | -7.76E-02 |
| GWP-biogenic | kg $CO_2$ eq. | -3.57E-01 | 4.69E-05 | 3.57E-01 | 0.00E+00 | 1.52E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.00E-06 | 0.00E+00 | 1.85E-05 | -5.87E-02 |
| GWP-luluc | kg $CO_2$ eq. | 8.28E-03 | 9.84E-05 | 3.58E-04 | 0.00E+00 | 3.18E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.63E-05 | 0.00E+00 | 8.25E-06 | 1.12E-04 |
| ODP | kg CFC 11 eq. | 2.81E-06 | 5.11E-09 | 8.55E-08 | 0.00E+00 | 2.07E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.74E-10 | 0.00E+00 | 1.38E-09 | -8.64E-09 |
| AP | mol $H^+$ eq. | 1.88E-02 | 1.89E-03 | 1.36E-03 | 0.00E+00 | 6.45E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.37E-04 | 0.00E+00 | 2.83E-04 | -1.37E-04 |
| EP-freshwater | kg P eq. | 8.58E-05 | 1.91E-06 | 5.99E-06 | 0.00E+00 | 5.57E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.78E-07 | 0.00E+00 | 3.31E-07 | -5.96E-07 |
| EP-marine | kg N eq. | 4.82E-03 | 5.34E-04 | 3.56E-04 | 0.00E+00 | 1.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.38E-05 | 0.00E+00 | 4.26E-04 | -1.21E-05 |
| EP-terrestrial | mol N eq. | 4.65E-02 | 5.91E-03 | 3.70E-03 | 0.00E+00 | 1.24E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.83E-04 | 0.00E+00 | 1.25E-03 | -3.40E-04 |
| POCP | kg NMVOC eq. | 1.58E-02 | 2.06E-03 | 1.12E-03 | 0.00E+00 | 3.83E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 | 0.00E+00 | 5.65E-04 | -1.85E-04 |
| ADP-minerals&metals* | kg Sb eq. | 1.71E-05 | 6.65E-07 | 6.42E-07 | 0.00E+00 | 1.84E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.35E-07 | 0.00E+00 | 9.46E-08 | -2.70E-08 |
| ADP-fossil* | MJ | 9.06E+01 | 3.76E+00 | 7.09E+00 | 0.00E+00 | 4.11E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.76E-01 | 0.00E+00 | 9.66E-01 | -1.09E+00 |
| WDP* | $m^3$ | 4.59E+00 | 1.70E-02 | 1.96E-01 | 0.00E+00 | 5.88E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-03 | 0.00E+00 | -2.13E-02 | -3.10E-03 |
| Acronyms | GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption | | | | | | | | | | | | | | | |

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

## Additional mandatory and voluntary impact category indicators

**Results per functional or declared unit**

| 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. | 4.01E+00 | 2.66E-01 | 3.29E-01 | 0.00E+00 | 1.07E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.11E-02 | 0.00E+00 | 3.78E-01 | -2.32E-02 |
| Particulate matter | disease inc. | 1.65E-07 | 2.36E-08 | 6.12E-09 | 0.00E+00 | 5.50E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.24E-09 | 0.00E+00 | 6.61E-09 | 0.00E+00 |
| Ionising radiation[2] | kBq U-235 eq | 5.47E-02 | 1.53E-03 | 1.72E-03 | 0.00E+00 | 3.20E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-04 | 0.00E+00 | 6.10E-04 | 0.00E+00 |
| Ecotoxicity freshwater | CTUe | 2.87E+01 | 8.58E-01 | 9.37E-01 | 0.00E+00 | 8.98E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-01 | 0.00E+00 | 1.20E+00 | 0.00E+00 |
| Human toxicity, cancer | CTUh | 8.22E-09 | 1.56E-09 | 3.21E-10 | 0.00E+00 | 3.90E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-10 | 0.00E+00 | 2.56E-10 | 0.00E+00 |
| Human toxicity, non-cancer | CTUh | 4.13E-08 | 2.23E-09 | 1.41E-09 | 0.00E+00 | 1.78E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.58E-10 | 0.00E+00 | 2.28E-09 | 0.00E+00 |
| Land use | Pt | 4.96E+01 | 3.33E+00 | 1.69E+00 | 0.00E+00 | 9.11E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.44E-01 | 0.00E+00 | 2.34E+00 | 0.00E+00 |

## Resource use indicators

**Results per functional or declared unit**

| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PERE | MJ | 3.90E+01 | 5.56E-02 | 2.79E+00 | 0.00E+00 | 6.08E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.57E-03 | 0.00E+00 | 2.98E-02 | -4.90E-01 |
| PERM[3] | MJ | -6.50E-01 | 0.00E+00 | -2.95E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -3.11E-01 |
| PERT | MJ | 3.83E+01 | 5.56E-02 | -1.57E-01 | 0.00E+00 | 6.08E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.57E-03 | 0.00E+00 | 2.98E-02 | -8.00E-01 |
| PENRE | MJ | 6.33E+01 | 3.76E+00 | 4.59E+00 | 0.00E+00 | 4.11E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.76E-01 | 0.00E+00 | 9.66E-01 | -1.46E+00 |
| PENRM | MJ | 4.84E+01 | 0.00E+00 | 3.13E+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 |
| PENRT | MJ | 1.12E+02 | 3.76E+00 | 7.71E+00 | 0.00E+00 | 4.11E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.76E-01 | 0.00E+00 | 9.66E-01 | -1.46E+00 |
| SM | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.97E-02 |

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

[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

[3] The negative PERM value in A5 reflects the embodied energy of the packaging leaving the product system at its end-of-waste state, per EN 15804+A2 / INIES guidelines.

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | $m^3$ | 1.10E-01 | 5.26E-04 | 4.26E-03 | 0.00E+00 | 2.46E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.68E-05 | 0.00E+00 | -1.84E-02 | -2.38E-04 |
| Acronyms | PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water | | | | | | | | | | | | | | | |

## Waste indicators

| Results per functional or declared unit | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3** | **B4** | **B5** | **B6** | **B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Hazardous waste disposed | kg | 8.26E-02 | 1.17E-04 | 2.98E-03 | 0.00E+00 | 1.31E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.76E-05 | 0.00E+00 | 9.51E-05 | -5.38E-04 |
| Non-hazardous waste disposed | kg | 1.46E+00 | 3.19E-01 | 2.04E-01 | 0.00E+00 | 1.09E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.46E-02 | 0.00E+00 | 4.12E+00 | 3.76E-04 |
| Radioactive waste disposed | kg | 3.66E-04 | 1.04E-06 | 9.16E-05 | 0.00E+00 | 3.96E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.16E-07 | 0.00E+00 | 3.75E-07 | -5.08E-06 |

## Output flow indicators

| Results per functional or declared unit | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **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 | -4.14E-05 |
| Material for recycling | kg | 2.31E-01 | 0.00E+00 | 1.49E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -5.16E-02 |
| Materials for energy recovery | kg | 5.42E-04 | 0.00E+00 | 1.63E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, electricity | MJ | 2.08E+00 | 0.00E+00 | 1.26E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, thermal | MJ | 6.81E-02 | 0.00E+00 | 7.32E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

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

The 2 end-of life scenarios were modelled separately. LCA results are presented here with:

- Scenario L: 100% landfill disposal (C4-L; D-L)
- Scenario I: 100% municipal waste incineration with energy recovery and incineration residues landfill (C3-I; C4-I; D-I)

Column D corresponds to the module D cumulated for A1-C2 modules.

### Mandatory impact category indicators according to EN 15804

| Results per functional or declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **C3-I** | **C4-I** | **C4-L** | **D** | **D-L** | **D-I** |
| GWP-total | 2.13E+00 | 5.09E-01 | 3.78E-01 | -8.18E-02 | 0.00E+00 | -5.01E+00 |
| GWP-fossil | 2.13E+00 | 5.09E-01 | 3.78E-01 | -7.76E-02 | 0.00E+00 | -5.01E+00 |
| GWP-biogenic | 8.54E-05 | 4.35E-04 | 1.85E-05 | -5.87E-02 | 0.00E+00 | -1.77E-03 |
| GWP-luluc | 3.64E-05 | 1.99E-04 | 8.25E-06 | 1.12E-04 | 0.00E+00 | -3.44E-03 |
| ODP | 2.66E-09 | 2.50E-09 | 1.38E-09 | -8.64E-09 | 0.00E+00 | -4.78E-08 |
| AP | 1.20E-03 | 1.64E-03 | 2.83E-04 | -1.37E-04 | 0.00E+00 | -2.05E-02 |
| EP-freshwater | 2.30E-06 | 6.81E-06 | 3.31E-07 | -5.96E-07 | 0.00E+00 | -1.49E-04 |
| EP-marine | 5.48E-04 | 4.77E-04 | 4.26E-04 | -1.21E-05 | 0.00E+00 | -3.35E-03 |
| EP-terrestrial | 5.65E-03 | 5.43E-03 | 1.25E-03 | -3.40E-04 | 0.00E+00 | -3.71E-02 |
| POCP | 1.49E-03 | 1.58E-03 | 5.65E-04 | -1.85E-04 | 0.00E+00 | -1.33E-02 |
| ADP-minerals&metals* | 4.26E-07 | 2.19E-06 | 9.46E-08 | -2.70E-08 | 0.00E+00 | -2.90E-06 |
| ADP-fossil* | 1.47E+00 | 3.10E+00 | 9.66E-01 | -1.09E+00 | 0.00E+00 | -6.38E+01 |
| WDP* | 4.95E-02 | 5.71E-02 | -2.13E-02 | -3.10E-03 | 0.00E+00 | -4.59E-01 |

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

### Additional mandatory and voluntary impact category indicators

| Results per functional or declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **C3-I** | **C4-I** | **C4-L** | **D** | **D-L** | **D-I** |
| GWP-GHG | 2.13E+00 | 5.09E-01 | 3.78E-01 | -2.32E-02 | 0.00E+00 | -5.01E+00 |
| Particulate matter | 1.11E-08 | 1.71E-08 | 6.61E-09 | 0.00E+00 | 0.00E+00 | -2.15E-07 |
| Ionising radiation | 1.19E-03 | 1.95E-03 | 6.10E-04 | 0.00E+00 | 0.00E+00 | -1.30E-01 |
| Ecotoxicity, freshwater | 7.75E+00 | 1.85E+00 | 1.20E+00 | 0.00E+00 | 0.00E+00 | -9.46E+00 |
| Human toxicity, cancer | 2.07E-09 | 6.74E-09 | 2.56E-10 | 0.00E+00 | 0.00E+00 | -5.25E-09 |
| Human toxicity, non-cancer | 2.37E-08 | 4.23E-07 | 2.28E-09 | 0.00E+00 | 0.00E+00 | -2.12E-08 |
| Land use | 7.84E-01 | 3.22E+00 | 2.34E+00 | 0.00E+00 | 0.00E+00 | -6.64E+00 |

### Resource use indicators

| Results per functional or declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **C3-I** | **C4-I** | **C4-L** | **D** | **D-L** | **D-I** |
| PERE | 5.04E-02 | 1.29E-01 | 2.98E-02 | -4.90E-01 | 0.00E+00 | -3.98E+00 |
| PERM | 0.00E+00 | 0.00E+00 | 0.00E+00 | -3.11E-01 | 0.00E+00 | 0.00E+00 |
| PERT | 5.04E-02 | 1.29E-01 | 2.98E-02 | -8.00E-01 | 0.00E+00 | -3.98E+00 |
| PENRE | 1.47E+00 | 3.09E+00 | 9.66E-01 | -1.46E+00 | 0.00E+00 | -6.36E+01 |
| PENRM | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PENRT | 1.47E+00 | 3.09E+00 | 9.66E-01 | -1.46E+00 | 0.00E+00 | -6.36E+01 |
| SM | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.97E-02 | 0.00E+00 | 0.00E+00 |
| RSF | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | 4.48E-03 | 1.45E-03 | -1.84E-02 | -2.38E-04 | 0.00E+00 | -1.66E-02 |

### Waste indicators

| Results per functional or declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **C3-I** | **C4-I** | **C4-L** | **D** | **D-L** | **D-I** |
| Hazardous waste disposed | 1.03E+00 | 1.40E+00 | 9.51E-05 | -5.38E-04 | 0.00E+00 | -1.32E-03 |
| Non-hazardous waste disposed | 1.64E-01 | 1.78E+00 | 4.12E+00 | 3.76E-04 | 0.00E+00 | -2.72E+00 |
| Radioactive waste disposed | 9.46E-07 | 1.21E-06 | 3.75E-07 | -5.08E-06 | 0.00E+00 | -8.28E-05 |

### Output flow indicators

| Results per functional or declared unit | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **C3-I** | **C4-I** | **C4-L** | **D** | **D-L** | **D-I** |
| Components for re-use | 0.00E+00 | 0.00E+00 | 0.00E+00 | -4.14E-05 | 0.00E+00 | 0.00E+00 |
| Material for recycling | 0.00E+00 | 0.00E+00 | 0.00E+00 | -5.16E-02 | 0.00E+00 | 0.00E+00 |
| Materials for energy recovery | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, electricity | 1.16E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, thermal | 2.09E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

# ADDITIONAL ENVIRONMENTAL INFORMATION

Balsan provides recommendations for proper use and maintenance in order to optimize durability and limit environmental impacts over the product’s lifetime.

Information regarding product durability, recyclability, and end-of-life management is also considered, including guidance on disposal and potential recovery solutions where applicable.

Balsan’s commitment to sustainability is supported by ISO 9001 and ISO 14001 certified manufacturing sites. In addition, an annual CSR report is published, offering comprehensive insight into the company’s environmental policies, actions, and continuous improvement initiatives.

# ABBREVIATIONS

| 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 |
| CPC | Central product classification |
| GHG | Greenhouse Gas |
| PEF | Product Environmental Footprint |
| RSL | Reference Service Life |
| ESL | Estimated Service Life |
| Environmental Impact Indicators (EN 15804) | |
| GHG | Greenhouse Gas |
| GWP | Global Warming Potential (kg $CO_2$ eq.) |
| GWP-fossil | Global Warming Potential from fossil sources (kg $CO_2$ eq.) |
| GWP-biogenic | Global Warming Potential from biogenic sources (kg $CO_2$ eq.) |
| GWP-luluc | Global Warming Potential from land use and land use change (kg $CO_2$ eq.) |
| GWP-total | Total Global Warming Potential (kg $CO_2$ eq.) |
| GWP-GHG | Global Warming Potential for greenhouse gases (kg $CO_2$ eq.) |
| ODP | Ozone Depletion Potential (kg CFC-11 eq.) |
| AP | Acidification Potential (mol $H^+$ eq.) |
| EP | Eutrophication Potential |
| EP-freshwater | Freshwater eutrophication potential (kg P eq.) |
| EP-marine | Marine eutrophication potential (kg N eq.) |
| EP-terrestrial | Terrestrial eutrophication potential (mol N eq.) |
| POCP | Photochemical Ozone Creation Potential (kg NMVOC eq.) |
| ADP | Abiotic Depletion Potential |
| ADP-minerals&metals | Abiotic depletion potential for non-fossil resources (kg Sb eq.) |
| ADP-fossil | Abiotic depletion potential for fossil resources (MJ) |
| WDP | Water Deprivation Potential ($m^3$) |
| Resource Use Indicators | |
| PERE | Renewable primary energy (excluding as raw materials) (MJ) |
| PERM | Renewable primary energy used as raw materials (MJ) |
| PERT | Total renewable primary energy (MJ) |
| PENRE | Non-renewable primary energy (excluding as raw materials) (MJ) |
| PENRM | Non-renewable primary energy used as raw materials (MJ) |
| PENRT | Total non-renewable primary energy (MJ) |
| SM | Use of secondary material (kg) |
| RSF | Use of renewable secondary fuels (MJ) |
| NRSF | Use of non-renewable secondary fuels (MJ) |
| FW | Use of net fresh water ($m^3$) |
| HW | Hazardous Waste (disposed) (kg) |
| NHW | Non-Hazardous Waste (disposed) (kg) |
| RW | Radioactive Waste (disposed) (kg) |
| Output Flow Indicators | |
| CFR | Components for Reuse (kg) |
| MR | Material for Recycling (kg) |
| MER | Materials for Energy Recovery (kg) |
| EEE | Exported Energy, Electricity (MJ) |
| EET | Exported Energy, Thermal (MJ) |
| Lifecycle Stages / Modules | |
| A1 | Raw material supply |
| A2 | Transport |
| A3 | Manufacturing |
| A4 | Transport to site |
| A5 | Construction/Installation |
| B1 | Use |
| B2 | Maintenance |
| B3 | Repair |
| B4 | Replacement |
| B5 | Refurbishment |

| | |
|---|---|
| B6 | Operational energy use |
| B7 | Operational water use |
| C1 | Deconstruction/Demolition |
| C2 | Transport to waste processing |
| C3 | Waste processing |
| C4 | Disposal |
| D | Reuse-Recovery-Recycling potential |
| Other Relevant Terms | |
| SVHC | Substances of Very High Concern |
| EC No. | European Community Number |
| CAS No. | Chemical Abstracts Service Number |
| MJ | Megajoule |
| kg | Kilogram |
| $m^3$ | Cubic Meter |
| NMVOC | Non-Methane Volatile Organic Compounds |
| Sb eq. | Antimony Equivalents |
| P eq. | Phosphorus Equivalents |
| N eq. | Nitrogen Equivalents |
| CFC-11 eq. | Chlorofluorocarbon-11 Equivalents |
| $CO_2$ eq. | Carbon Dioxide Equivalents |
| kg C | Kilograms of Carbon |
| kg $CO_2$ eq. | Kilograms of Carbon Dioxide Equivalent |
| ND | Not Declared |

# REFERENCES

a) General Programme Instructions of the International EPD® System. Version 5.01.
b) CONSTRUCTION PRODUCTS ; PCR 2019:14 ; VERSION 2.0.1
c) RESILIENT, TEXTILE AND LAMINATE FLOOR COVERINGS (EN 16810:2017) ; C-PCR-004 (TO PCR 2019:14) ; VERSION 1.0.0 ; c-PCR to PCR 2019:14
d) ISO 14040:2006 Environmental management - Life cycle assessment - Principles and framework
e) ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and
f) guidelines
g) EN 15804+A2:2019 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
h) MME_EPD_Rapport accompagnement Pilote² - Verified LCA report.

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# VERSION HISTORY

**Version 1, 2020-07-05**
The original version of this EPD was developed under the IBU programme (Institut Bauen und Umwelt e.V.), published in 2020, according to EN 15804+A1.

**Version 2, 2026-05-26**
This EPD is an updated version developed under the International EPD® System. Compared to the previous version, the following main changes have been implemented:

- Alignment with PCR 2019:14 and EN 15804+A2 requirements
- Update of the LCA model and background datasets
- Revised electricity modelling based on renewable energy contracts (Guarantees of Origin)
- Updated end-of-life and Module D assumptions
- Improved documentation and transparency of assumptions and data quality.

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