# Environmental Product Declaration

EPD of multiple products, based on a representative product. See page 4 for included products.

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

## Woven vinyl flooring delivered with acoustic backing

BOLON

Industrivägen 12, SE-523 90 Ulricehamn, Sweden

| | |
|---|---|
| Programme: | The International EPD® System, www.environdec.com |
| Programme operator: | EPD International AB |
| EPD registration number: | EPD-IES-0003986:002 |
| Publication date: | 2021-10-27 |
| Revision date: | 2025-06-04 |
| Valid until: | 2030-06-04 |

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

# 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:** | info@environdec.com |

| **Accountabilities for PCR, LCA and independent, third-party verification** |
|---|
| **Product Category Rules (PCR)** |
| CEN standard EN 15804 serves as the Core Product Category Rules (PCR) |
| Product Category Rules (PCR): PCR 2019:14 version 1.3.4 Construction products (EN 15804:2012+A2:2019) and c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810). UN CPC code: 2722 |
| PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact. |
| **Life Cycle Assessment (LCA)** |
| LCA accountability: Karin Lindqvist & Andreas Asker, Sweco AB |
| **Third-party verification** |
| Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br><br>☒ EPD verification by individual verifier<br><br>Third-party verifier: David Althoff Palm, Dalemarken AB<br>E-mail: david@dalemarken.se<br><br>Approved by: The 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 registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD: Bolon AB

Contact: Madeleine Axebrink, madeleine.axebrink@bolon.com

Description of the organisation: Bolon is a Swedish design company that makes innovative flooring solutions for public spaces. It is a third-generation family business run by sisters Annica and Marie Eklund. Under their leadership, Bolon has transformed from a traditional weaving mill into an international design brand with clients in different sectors all over the world. With a strong commitment to sustainability, Bolon designs and manufactures all its products at a facility in Ulricehamn in Sweden. The company is recognized worldwide for its award-winning flooring and its collaborations with some of the world's most acclaimed innovators and creatives.

Product-related certifications*:
The product meets the requirement of EN 14041, CE- certified.
Emissions certificate, e.g M1 and FloorScore
Raw material, Green star Best environmental practice PVC

*For updated information contact customer support or visit Bolon.com.

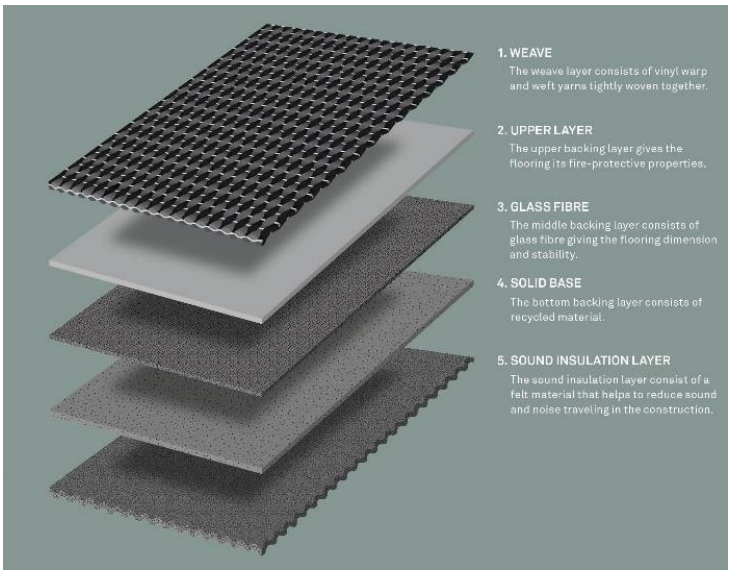
Name and location of production site: Bolon, Industrivägen 12, 523 90 Ulricehamn Sweden

## Product information

Product name: Woven vinyl flooring delivered with acoustic backing

Product identification: Bolon flooring is tested to the EN 1307 standard for textile floor coverings and classified according to, textile and laminate floor coverings (ISO 10874).

Product description: Bolon acoustic flooring is composed by five layers, one weave and four backing layers, the bottom layer is an acoustic felt backing made of 90% postconsumer pet-bottles. This gives the product its unique qualities. The weave layer is made of vinyl warp and weft yarns tightly woven together. The variations of the warp and weft yarn together with the different weaving techniques gives Bolon flooring its vast design alternatives. Floors are graded into different classes according to their resistance to wear. For example, they are suitable for hotels, shops, offices, and high traffic areas, such as public halls.




Expected service lifetime: 20-30 years

UN CPC code: 2722

**Product information**

| Characteristics* | | Comments |
|---|---|---|
| Product form | 500 x 500 mm | Acoustic tiles dimension |
| Weight | 3560-3600 g/m² | Weight depends on collection |
| Thickness | 2,3-2,5 mm | Thickness depends on collection |
| Fire resistance | $B_{fl}$-s1 | EN 13501-1 |
| Friction | >0,3 | EN 13893 |
| Colour fastness to light | >7 | EN ISO 105-B02 |

*For more information see Bolon.com and technical specification.

## LCA information

Functional unit: 1 m² of floor covering with a reference service life (RSL) of 1 year for specified characteristics application and use areas according to declared use classification ISO 10874.

Reference service life: 1 year

Type of EPD: Representative product. Has been chosen as representative based on sales statistics.

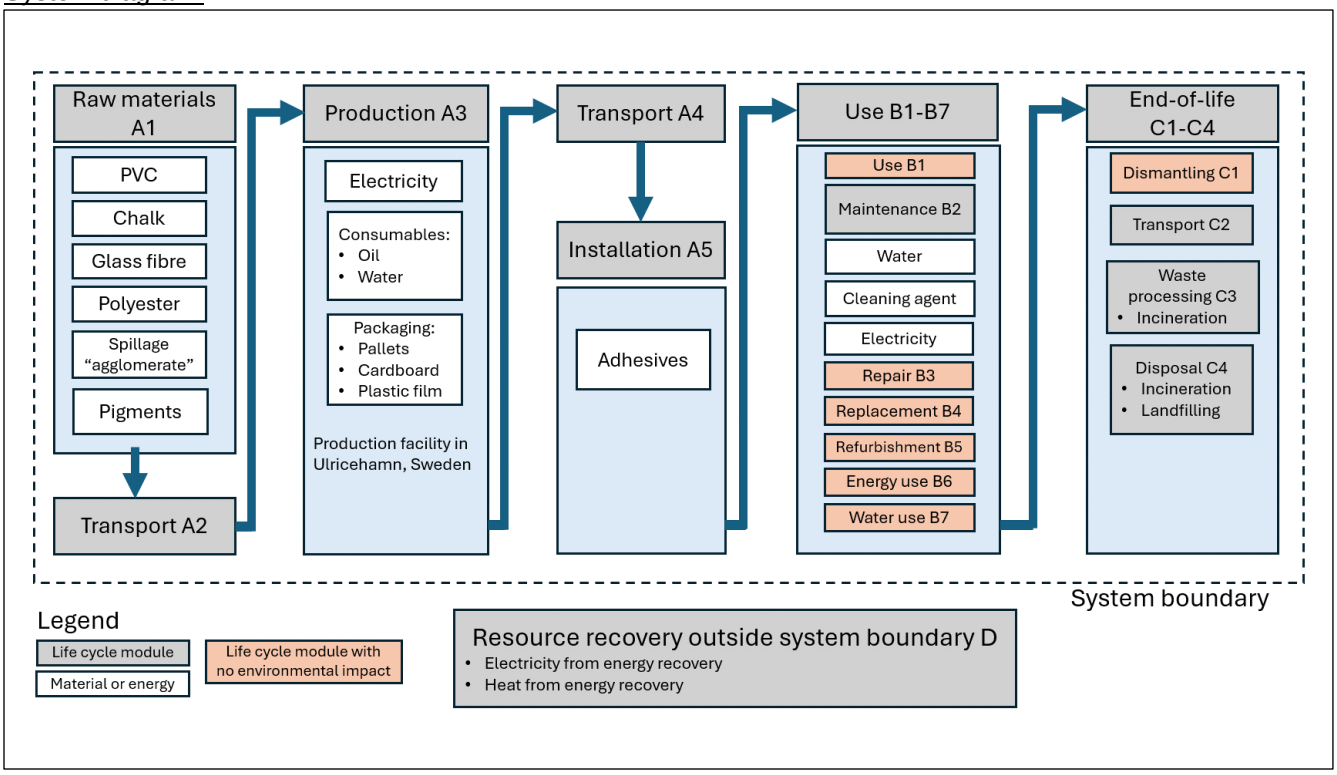
The EPD covers all products of Woven vinyl flooring that are delivered with acoustic backing produced in Ulricehamn, see Bolon.com for complete list. The difference between the products is a variation of product weight and pigmentation which can be seen under product information. The sensitivity analysis of the LCA shows that the declared GWP-GHG result for modules A1-A3 differ less than 10% compared to the GWP-GHG results of any of the included products.

Time representativeness: 2024

Database(s) and LCA software used: LCA software SimaPro 9.6 and LCI database Ecoinvent 3.10

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

System diagram:




All floor manufacturing takes place in Ulricehamn, Sweden. Here we manufacture the thread and the backing, weave the designer surface, and combine all these elements into a high-quality floor. Recycling is an integral part of our production, the recycled material is self-declared according to ISO 14021.

The floor is then packed and shipped to customers. Installation is normally made with adhesives. Alternative installation methods are possible within Bolon recommendations. The floor coverings are water resistant and are cleaned using wet methods. Most cleaning needs can be accomplished with a vacuum cleaner, scrubbing brush, water, and a minimal dose of stain remover.

At the end of its life the product is sent to either landfill or incineration with energy recovery.

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

| | Product stage | | | Construction process stage | | Use stage | | | | | | | End of life stage | | | | Resource recovery stage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Raw material supply | Transport | Manufacturing | Transport | Construction installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| **Module** | **A1** | **A2** | **A3** | **A4** | **A5** | **B1** | **B2** | **B3** | **B4** | **B5** | **B6** | **B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Modules declared | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Geography | EU | EU | SE | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO |
| Specific data used | 27% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | <10% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | 0% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Data quality

Data for upstream processes (A1) has been collected directly from suppliers. Raw material and energy use as well as transports are included.

All data for the production (A3) has been collected from Bolon and is representative of the production practices under 2024. In the cases where no specific data could be used, available generic data was used mainly provided by Ecoinvent 3.10.

Generic data was also used for the transportation of raw material (A2), however, distance and information regarding the type of transportation was collected from Bolon.

Downstream waste management data is based on regional average treatment of PVC waste (Europe, Asia, and USA).

General information

| | |
|---|---|
| Cut-off rules | <1% for specific process, <5% for sum of all processes |
| Cut-off applications | - Impact from different pigmentations (<0,2 w% of total weight)<br>- Materials with presence <0,1 w% |
| Excluded parts | - For all life cycle modules, the production and end-of-life processes of infrastructure and capital goods are excluded except for when included in generic LCI datasets.<br>- Potential transports from retailer to installation site<br>- Maintenance products packaging and transport |
| Electricity source | Hydropower and solar power (GWP-GHG: 0,054 kg CO2 eq./kWh) |
| **Data quality** | |
| Geographical coverage | Upstream data: Good (Country specific)<br>Core module (A3): Very good (site-specific)<br>Downstream data: Medium (continent specific) |
| Technological representativeness | Upstream data: Good (Generic data based on plant averages)<br>Core module (A3): Very good (site-specific)<br>Downstream data: Good (Generic data based on plant averages) |
| Time-related coverage | Upstream data: Good<br>Core module (A3): Very good (2024 data)<br>Downstream data: Good |
| Allocation method | A physical basis (mass in module A1 and area in module A3) has been applied for the allocation of input data. Economic allocation has been used to distribute environmental burdens for recycled PVC and pre-consumer material. |
| Completeness and treatment of missing data | No data is found missing. |

# Content information

| **Product components** | **Weight, kg** | **Post-consumer material, weight-%** | **Biogenic material, weight-% and kg C/kg** |
|---|---|---|---|
| Polyvinylchloride (PVC) | 2,0 | 0 | 0 |
| Chalk | 0,96 | 0 | 0 |
| Glass fibre | 0,050 | 0 | 0 |
| Polyester | 0,51 | 12 | 0 |
| Pigments | 0,0030 | 0 | 0 |
| Other | 0,060 | 0 | 0 |
| TOTAL | 3,6 | 12 | 0 |
| **Packaging materials** | **Weight, kg** | **Weight-% (versus the product)** | **Weight biogenic carbon, kg C/m$^2$** |
| Wood | 0,14 | 3,9 | 0,066 |
| Cardboard | 0,070 | 1,9 | 0,032 |
| Plastic | 0,0030 | 0,083 | 0 |
| TOTAL | 0,21 | 5,9 | 0,098 |

The product does not contain any substances classified as “hazardous substance” (SVHC) and fulfils REACH legislation.

## Scenario information

**Average transport distances (A4)**

| Road transport type | Road transport distance (km) | Sea transport type | Sea transport distance (km) |
|---|---|---|---|
| Euro 5 truck 16-32t | 1000 | Container ship | 1004 |

**Installation (A5)**

10% of the product is lost during installation. It is important to use an adhesive suitable for the subfloor. Different subfloors require different amounts of adhesive. Detailed guidance of installation methods and instructions is available at https://www.bolon.com/en/installation.

**Materials consumed in use phase per $m^2$ of flooring (B2)**

| Material or energy | Quantity | Reference service life | Comment |
|---|---|---|---|
| Electricity | 0,314 kWh/year | 1 year | Electricity for vacuuming |
| Floor cleaning agent | 0,09 litres/year | 1 year | Cleaning agent for wet cleaning |
| Water | 9,0 litres/year | 1 year | Water for wet cleaning |

The average number of cleanings per year is 52 (once a week). The frequency of cleanings can vary depending on the amount of traffic on the floor. Detailed cleaning and maintenance instructions are available at https://www.bolon.com/en/maintenance.

**End-of-life (C1-C4)**

The flooring is removed and transported to a waste treatment facility. Shares are region based according to table below. Flooring with permanent adhesive is not possible to recycle because of its contamination both with adhesive residues and things like wood or concrete that come with reinstallation. When recycling is not possible, it is recommended to send it to energy recovery.

| Treatment | Europe | USA | Asia |
|---|---|---|---|
| Incineration with energy recovery | 54% | 18% | 48% |
| Landfill | 46% | 82% | 52% |

# Results of the environmental performance indicators

## Mandatory impact category indicators according to EN 15804

The method used is EN 15804 +A2 Method (based on EF 3.1).

*Disclaimer: Use of the results of modules A1-A3 without considering the results of module C is discouraged.*

**Results per functional unit**

| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3-B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GWP-fossil | kg $CO_2$ eq. | 4,98E+00 | 8,07E-01 | 5,40E-01 | 0 | 2,82E-01 | 0 | 0 | 1,41E-01 | 2,62E+00 | 1,02E+00 | -9,26E-01 |
| GWP-biogenic | kg $CO_2$ eq. | -3,35E-01 | 5,12E-04 | 7,60E-01 | 0 | 3,59E-04 | 0 | 0 | 3,14E-06 | 3,78E-03 | 1,45E-03 | 0 |
| GWP-luluc | kg $CO_2$ eq. | 1,36E-01 | 2,72E-04 | 4,77E-05 | 0 | 3,44E-03 | 0 | 0 | 5,59E-05 | 2,64E-04 | 1,03E-04 | -4,94E-04 |
| GWP-total | kg $CO_2$ eq. | 4,78E+00 | 8,08E-01 | 1,30E+00 | 0 | 2,86E-01 | 0 | 0 | 1,41E-01 | 2,63E+00 | 1,02E+00 | -9,27E-01 |
| ODP | kg CFC 11 eq. | 1,62E-06 | 1,58E-08 | 2,34E-09 | 0 | 3,73E-09 | 0 | 0 | 1,97E-09 | 1,22E-08 | 4,73E-09 | -2,79E-09 |
| AP | mol $H^+$ eq. | 2,10E-02 | 3,60E-03 | 1,21E-03 | 0 | 1,53E-03 | 0 | 0 | 4,70E-04 | 1,92E-03 | 8,25E-04 | -6,91E-03 |
| EP-freshwater | kg P eq. | 9,24E-04 | 5,24E-05 | 2,69E-05 | 0 | 1,23E-04 | 0 | 0 | 1,11E-05 | 1,21E-04 | 4,34E-05 | -2,99E-04 |
| EP-marine | kg N eq. | 4,63E-03 | 1,11E-03 | 3,42E-04 | 0 | 3,24E-04 | 0 | 0 | 1,52E-04 | 5,73E-04 | 9,62E-04 | -9,57E-04 |
| EP-terrestrial | mol N eq. | 4,63E-02 | 1,21E-02 | 2,25E-03 | 0 | 3,01E-03 | 0 | 0 | 1,66E-03 | 5,27E-03 | 2,49E-03 | -1,00E-02 |
| POCP | kg NMVOC eq. | 1,92E-02 | 4,65E-03 | 9,48E-04 | 0 | 9,01E-04 | 0 | 0 | 6,53E-04 | 1,69E-03 | 8,43E-04 | -2,96E-03 |
| ADP-minerals & metals* | kg Sb eq. | 5,34E-05 | 2,49E-06 | 5,64E-07 | 0 | 1,80E-06 | 0 | 0 | 4,51E-07 | 1,93E-06 | 7,12E-07 | -3,67E-07 |
| ADP-fossil* | MJ | 6,11E+01 | 9,06E-01 | 4,99E-01 | 0 | 2,33E+00 | 0 | 0 | 1,93E-01 | 1,36E+00 | 5,08E-01 | -6,75E+00 |
| WDP* | $m^3$ | 2,40E+01 | 4,52E-02 | 2,86E-01 | 0 | 4,54E-01 | 0 | 0 | 8,91E-03 | 2,11E+00 | 4,02E-01 | -6,77E-02 |
| Acronyms | GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption | | | | | | | | | | | |

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*
*The results of the impact category abiotic depletion of minerals and metals may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of this indicators for decision-making purposes.*

*Note: 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.*

## Additional mandatory and voluntary impact category indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP-GHG[1] | kg $CO_2$ eq. | 5,11E+00 | 8,08E-01 | 5,40E-01 | 0 | 2,85E-01 | 0 | 0 | 1,41E-01 | 2,62E+00 | 1,02E+00 | -9,27E-01 |

## Resource use indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| PERE | MJ | 2,43E+01 | 1,86E-01 | 1,32E+00 | 0 | 6,62E-01 | 0 | 0 | 2,59E-02 | 3,88E-01 | 1,39E-01 | -1,17E+00 |
| PERM | MJ | 3,99E+00 | 0,00E+00 | -3,99E+00 | 0 | 0,00E+00 | 0 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PERT | MJ | 2,83E+01 | 1,86E-01 | -2,67E+00 | 0 | 6,62E-01 | 0 | 0 | 2,59E-02 | 3,88E-01 | 1,39E-01 | -1,17E+00 |
| PENRE | MJ | 6,42E+01 | 9,45E-01 | 5,52E-01 | 0 | 2,45E+00 | 0 | 0 | 2,02E-01 | 8,13E+00 | 2,62E+01 | -7,08E+00 |
| PENRM | MJ | 4,74E+01 | 0,00E+00 | -1,20E-01 | 0 | 0,00E+00 | 0 | 0 | 0,00E+00 | -2,16E+01 | -2,57E+01 | 0,00E+00 |
| PENRT | MJ | 1,12E+02 | 9,45E-01 | 4,32E-01 | 0 | 2,45E+00 | 0 | 0 | 2,02E-01 | -1,35E+01 | 5,32E-01 | -7,08E+00 |
| SM | kg | 1,89E+00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RSF | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NRSF | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FW | $m^3$ | 5,34E-01 | 1,64E-03 | 1,61E-02 | 0 | 1,90E-02 | 0 | 0 | 3,15E-04 | 1,16E-01 | 3,95E-02 | -2,05E-03 |
| Acronyms | PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water | | | | | | | | | | | |

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

### Waste indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Hazardous waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-hazardous waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radioactive waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

### Output flow indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Components for re-use | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Material for recycling | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Materials for energy recovery | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exported energy, electricity | MJ | 4,80E-01 | 0 | 4,25E-01 | 0 | 0 | 0 | 0 | 0 | 2,24E+00 | 0 | 0 |
| Exported energy, thermal | MJ | 2,72E+00 | 0 | 2,41E+00 | 0 | 0 | 0 | 0 | 0 | 1,27E+01 | 0 | 0 |

## Differences versus previous versions

Updates since the publication of the first version of this EPD include differences in production, such as energy mix and share of recycled materials, and a different distribution of markets. The updates to present conditions give new results for all environmental indicators. This version of the EPD is also updated in accordance with the newer version of PCR 2019:14 (v. 1.3.4).

# References

CEN (2003) EN 13893, Resilient, laminate and textile floor coverings - Measurement of dynamic coefficient of friction on dry floor surfaces

CEN (2014) EN ISO 105-B02, Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test

CEN (2017) EN 16810:2017, Resilient, textile and laminate floor coverings – Environmental product declarations – Product category rules

CEN (2018a) EN 1307:2014+A3:2018, Textile floor coverings – Classification

CEN (2018b) EN 14041:2018, Resilient, textile, laminate and modular multilayer floor coverings - Essential characteristics

CEN (2019a) EN 15804:2012+A2:2019/AC:2021, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products

CEN (2019b) EN 13501-1, Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests

c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810:2017)

General Programme Instructions of the International EPD® System. Version 4.0.

ISO (2006): ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures

ISO (2012): ISO 10874:2009, Resilient, textile and laminate floor coverings – Classification

ISO (2017): ISO 14021:2016, Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling)

LCA report: Life Cycle Assessment of Woven Vinyl Flooring. Rolls, Tiles and Acoustic Tiles. 2025.

PCR 2019:14 version 1.3.4 Construction products (EN 15804:2012+A2:2019)

EPD®

www.environdec.com

# Environmental Product Declaration

EPD of multiple products, based on a representative product. See page 4 for included products.

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

## Woven vinyl flooring delivered as tiles

BOLON

Industrivägen 12, SE-523 90 Ulricehamn, Sweden

| | |
|---|---|
| Programme: | The International EPD® System, www.environdec.com |
| Programme operator: | EPD International AB |
| EPD registration number: | EPD-IES-0003985:002 |
| Publication date: | 2021-10-27 |
| Revision date: | 2025-06-04 |
| Valid until: | 2030-06-04 |

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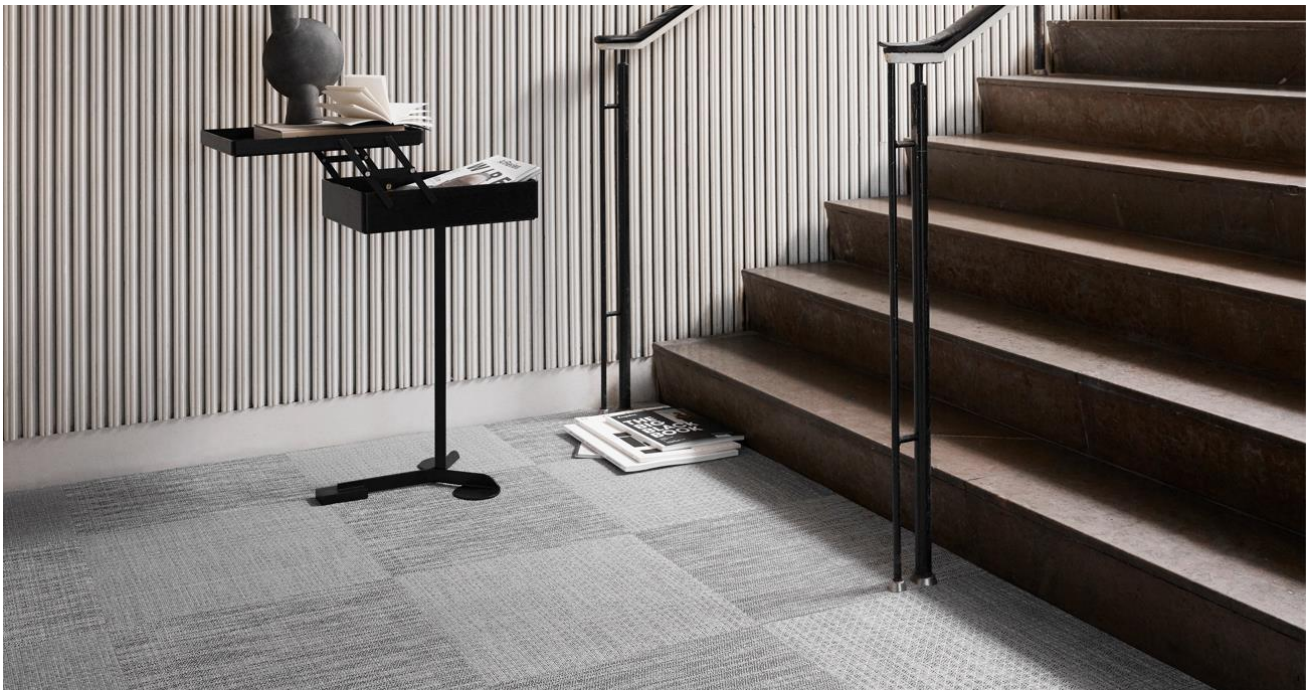

# General information

## 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:** | info@environdec.com |

| **Accountabilities for PCR, LCA and independent, third-party verification** |
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| **Product Category Rules (PCR)** |
| CEN standard EN 15804 serves as the Core Product Category Rules (PCR) |
| Product Category Rules (PCR): PCR 2019:14 version 1.3.4 Construction products (EN 15804:2012+A2:2019) and c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810). UN CPC code: 2722 |
| PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact. |
| **Life Cycle Assessment (LCA)** |
| LCA accountability: Karin Lindqvist & Andreas Asker, Sweco AB |
| **Third-party verification** |
| Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br><br>☒ EPD verification by individual verifier<br><br>Third-party verifier: David Althoff Palm, Dalemarken AB<br>E-mail: david@dalemarken.se<br><br>Approved by: The 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 registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD: Bolon AB

Contact: Madeleine Axebrink, madeleine.axebrink@bolon.com

Description of the organisation: Bolon is a Swedish design company that makes innovative flooring solutions for public spaces. It is a third-generation family business run by sisters Annica and Marie Eklund. Under their leadership, Bolon has transformed from a traditional weaving mill into an international design brand with clients in different sectors all over the world. With a strong commitment to sustainability, Bolon designs and manufactures all its products at a facility in Ulricehamn in Sweden. The company is recognized worldwide for its award-winning flooring and its collaborations with some of the world's most acclaimed innovators and creatives.

Product-related certifications*:
The product meets the requirement of EN 14041, CE- certified.
Emissions certificate, e.g M1 and FloorScore
Raw material, Green star Best environmental practice PVC

*For updated information contact customer support or visit Bolon.com.

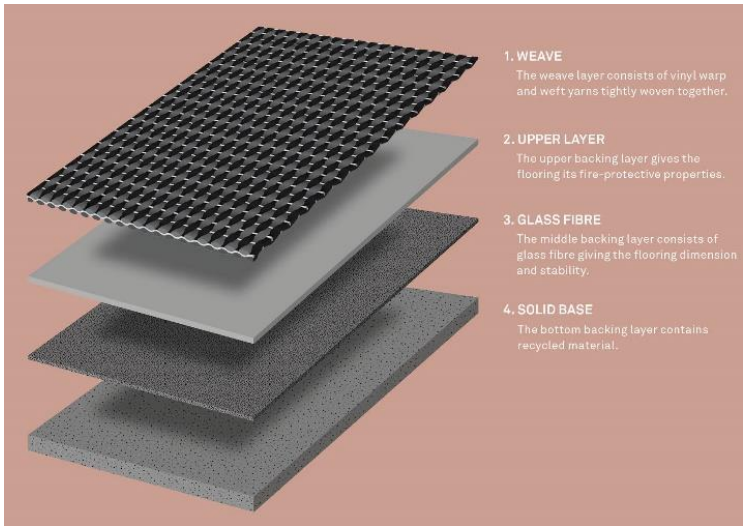
Name and location of production site: Bolon, Industrivägen 12, 523 90 Ulricehamn Sweden

## Product information

Product name: Woven vinyl flooring delivered as tiles

Product identification: Bolon flooring is tested to the EN 1307 standard for textile floor coverings and classified according to, textile and laminate floor coverings (ISO 10874).

Product description: Bolon flooring in tiles is composed by four layers, one weave and three backing layers, giving the product its unique qualities. The weave layer is made of vinyl warp and weft yarns tightly woven together. The variations of the warp and weft yarn together with the different weaving techniques gives Bolon flooring its vast design alternatives. Floors are graded into different classes according to their resistance to wear. For example, they are suitable for hotels, shops, offices, and high traffic areas, such as public halls




Expected service lifetime: 20-30 years

UN CPC code: 2722

**Product information**

| Characteristics* | | Comments |
|---|---|---|
| Product form | 500 x 500 mm | Tiles dimension |
| Weight | 3890-3930 g/m² | Weight depends on collection |
| Thickness | 2,3-2,5 mm | Thickness depends on collection |
| Fire resistance | $B_{fl}$-s1 | EN 13501-1 |
| Friction | >0,3 | EN 13893 |
| Colour fastness to light | >7 | EN ISO 105-B02 |

*For more information see Bolon.com and technical specification.

## LCA information

Functional unit: 1 m² of floor covering with a reference service life (RSL) of 1 year for specified characteristics application and use areas according to declared use classification ISO 10874.

Reference service life: 1 year

Type of EPD: Representative product. Has been chosen as representative based on sales statistics.

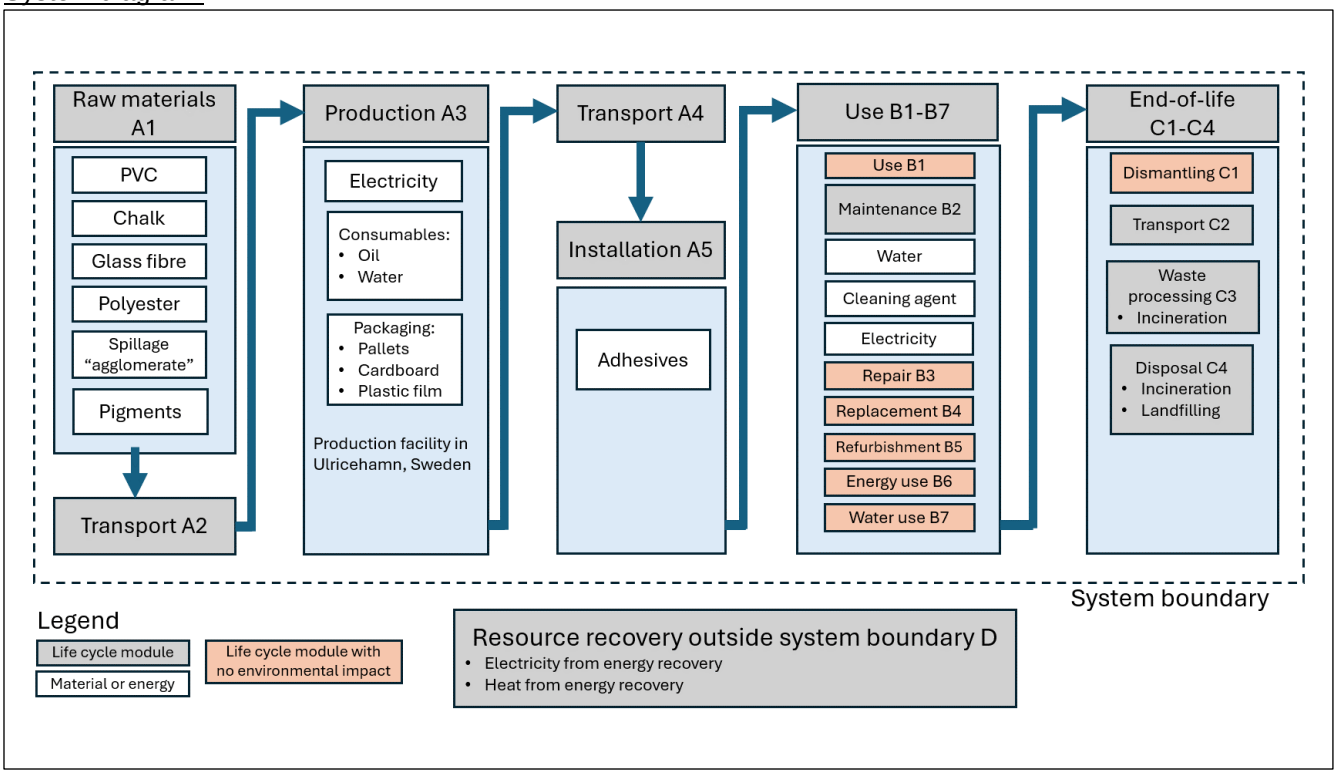
The EPD covers all products of Woven vinyl flooring that are delivered as tiles produced in Ulricehamn, see Bolon.com for complete list. The difference between the products is a variation of product weight and pigmentation which can be seen under product information. The sensitivity analysis of the LCA shows that the declared GWP-GHG result for modules A1-A3 differ less than 10% compared to the GWP-GHG results of any of the included products.

Time representativeness: 2024

Database(s) and LCA software used: LCA software SimaPro 9.6 and LCI database Ecoinvent 3.10

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

System diagram:




All floor manufacturing takes place in Ulricehamn, Sweden. Here we manufacture the thread and the backing, weave the designer surface, and combine all these elements into a high-quality floor. Recycling is an integral part of our production, the recycled material is self-declared according to ISO 14021.

The floor is then packed and shipped to customers. Installation is normally made with adhesives. Alternative installation methods are possible within Bolon recommendations. The floor coverings are water resistant and are cleaned using wet methods. Most cleaning needs can be accomplished with a vacuum cleaner, scrubbing brush, water, and a minimal dose of stain remover.

At the end of its life the product is sent to either landfill or incineration with energy recovery.

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

| | Product stage | | | Construction process stage | | Use stage | | | | | | | End of life stage | | | | Resource recovery stage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Raw material supply | Transport | Manufacturing | Transport | Construction installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| **Module** | **A1** | **A2** | **A3** | **A4** | **A5** | **B1** | **B2** | **B3** | **B4** | **B5** | **B6** | **B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Modules declared | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Geography | EU | EU | SE | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO |
| Specific data used | 27% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | <10% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | 0% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Data quality

Data for upstream processes (A1) has been collected directly from suppliers. Raw material and energy use as well as transports are included.

All data for the production (A3) has been collected from Bolon and is representative of the production practices under 2024. In the cases where no specific data could be used, available generic data was used mainly provided by Ecoinvent 3.10.

Generic data was also used for the transportation of raw material (A2), however, distance and information regarding the type of transportation was collected from Bolon.

Downstream waste management data is based on regional average treatment of PVC waste (Europe, Asia, and USA).

General information

| | |
|---|---|
| Cut-off rules | <1% for specific process, <5% for sum of all processes |
| Cut-off applications | - Impact from different pigmentations (<0,2 w% of total weight)<br>- Materials with presence <0,1 w% |
| Excluded parts | - For all life cycle modules, the production and end-of-life processes of infrastructure and capital goods are excluded except for when included in generic LCI datasets.<br>- Potential transports from retailer to installation site<br>- Maintenance products packaging and transport |
| Electricity source | Hydropower and solar power (GWP-GHG: 0,054 kg CO2 eq./kWh) |
| **Data quality** | |
| Geographical coverage | Upstream data: Good (Country specific)<br>Core module (A3): Very good (site-specific)<br>Downstream data: Medium (continent specific) |
| Technological representativeness | Upstream data: Good (Generic data based on plant averages)<br>Core module (A3): Very good (site-specific)<br>Downstream data: Good (Generic data based on plant averages) |
| Time-related coverage | Upstream data: Good<br>Core module (A3): Very good (2024 data)<br>Downstream data: Good |
| Allocation method | A physical basis (mass in module A1 and area in module A3) has been applied for the allocation of input data. Economic allocation has been used to distribute environmental burdens for recycled PVC and pre-consumer material. |
| Completeness and treatment of missing data | No data is found missing. |

# Content information

| **Product components** | **Weight, kg** | **Post-consumer material, weight-%** | **Biogenic material, weight-% and kg C/kg** |
|---|---|---|---|
| Polyvinylchloride (PVC) | 2,5 | 0 | 0 |
| Chalk | 1,2 | 0 | 0 |
| Glass fibre | 0,050 | 0 | 0 |
| Polyester | 0,036 | 0 | 0 |
| Pigments | 0,0030 | 0 | 0 |
| Other | 0,070 | 0 | 0 |
| TOTAL | 3,9 | 0 | 0 |
| **Packaging materials** | **Weight, kg** | **Weight-% (versus the product)** | **Weight biogenic carbon, kg C/m$^2$** |
| Wood | 0,14 | 3,6 | 0,066 |
| Cardboard | 0,070 | 1,8 | 0,032 |
| Plastic | 0,0030 | 0,077 | 0 |
| TOTAL | 0,21 | 5,5 | 0,098 |

The product does not contain any substances classified as “hazardous substance” (SVHC) and fulfils REACH legislation.

## Scenario information

**Average transport distances (A4)**

| Road transport type | Road transport distance (km) | Sea transport type | Sea transport distance (km) |
|---|---|---|---|
| Euro 5 truck 16-32t | 849 | Container ship | 6885 |

**Installation (A5)**

10% of the product is lost during installation. It is important to use an adhesive suitable for the subfloor. Different subfloors require different amounts of adhesive. Detailed guidance of installation methods and instructions is available at https://www.bolon.com/en/installation.

**Materials consumed in use phase per $m^2$ of flooring (B2)**

| Material or energy | Quantity | Reference service life | Comment |
|---|---|---|---|
| Electricity | 0,314 kWh/year | 1 year | Electricity for vacuuming |
| Floor cleaning agent | 0,09 litres/year | 1 year | Cleaning agent for wet cleaning |
| Water | 9,0 litres/year | 1 year | Water for wet cleaning |

The average number of cleanings per year is 52 (once a week). The frequency of cleanings can vary depending on the amount of traffic on the floor. Detailed cleaning and maintenance instructions are available at https://www.bolon.com/en/maintenance.

**End-of-life (C1-C4)**

The flooring is removed and transported to a waste treatment facility. Shares are region based according to table below. Flooring with permanent adhesive is not possible to recycle because of its contamination both with adhesive residues and things like wood or concrete that come with reinstallation. When recycling is not possible, it is recommended to send it to energy recovery.

| Treatment | Europe | USA | Asia |
|---|---|---|---|
| Incineration with energy recovery | 54% | 18% | 48% |
| Landfill | 46% | 82% | 52% |

# Results of the environmental performance indicators

## Mandatory impact category indicators according to EN 15804

The method used is EN 15804 +A2 Method (based on EF 3.1).

*Disclaimer: Use of the results of modules A1-A3 without considering the results of module C is discouraged.*

**Results per functional unit**

| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3-B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GWP-fossil | kg $CO_2$ eq. | 4,57E+00 | 1,02E+00 | 5,73E-01 | 0 | 2,82E-01 | 0 | 0 | 1,54E-01 | 2,86E+00 | 1,11E+00 | -8,93E-01 |
| GWP-biogenic | kg $CO_2$ eq. | -3,14E-01 | 3,90E-04 | 7,60E-01 | 0 | 3,59E-04 | 0 | 0 | 3,43E-06 | 4,12E-03 | 1,59E-03 | 0 |
| GWP-luluc | kg $CO_2$ eq. | 1,36E-01 | 3,92E-04 | 5,11E-05 | 0 | 3,44E-03 | 0 | 0 | 6,10E-05 | 2,88E-04 | 1,12E-04 | -4,76E-04 |
| GWP-total | kg $CO_2$ eq. | 4,39E+00 | 1,02E+00 | 1,33E+00 | 0 | 2,86E-01 | 0 | 0 | 1,54E-01 | 2,87E+00 | 1,11E+00 | -8,94E-01 |
| ODP | kg CFC 11 eq. | 1,18E-06 | 1,85E-08 | 2,50E-09 | 0 | 3,73E-09 | 0 | 0 | 2,15E-09 | 1,33E-08 | 5,16E-09 | -2,69E-09 |
| AP | mol $H^+$ eq. | 1,81E-02 | 1,12E-02 | 1,24E-03 | 0 | 1,53E-03 | 0 | 0 | 5,13E-04 | 2,10E-03 | 9,01E-04 | -6,66E-03 |
| EP-freshwater | kg P eq. | 8,28E-04 | 5,71E-05 | 2,84E-05 | 0 | 1,23E-04 | 0 | 0 | 1,21E-05 | 1,32E-04 | 4,74E-05 | -2,88E-04 |
| EP-marine | kg N eq. | 3,87E-03 | 2,98E-03 | 3,56E-04 | 0 | 3,24E-04 | 0 | 0 | 1,66E-04 | 6,26E-04 | 1,05E-03 | -9,23E-04 |
| EP-terrestrial | mol N eq. | 3,85E-02 | 3,29E-02 | 2,32E-03 | 0 | 3,01E-03 | 0 | 0 | 1,81E-03 | 5,75E-03 | 2,72E-03 | -9,65E-03 |
| POCP | kg NMVOC eq. | 1,62E-02 | 1,02E-02 | 9,72E-04 | 0 | 9,01E-04 | 0 | 0 | 7,13E-04 | 1,85E-03 | 9,21E-04 | -2,86E-03 |
| ADP-minerals & metals* | kg Sb eq. | 5,13E-05 | 2,57E-06 | 5,88E-07 | 0 | 1,80E-06 | 0 | 0 | 4,93E-07 | 2,11E-06 | 7,77E-07 | -3,54E-07 |
| ADP-fossil* | MJ | 5,58E+01 | 9,88E-01 | 5,16E-01 | 0 | 2,33E+00 | 0 | 0 | 2,10E-01 | 1,48E+00 | 5,54E-01 | -6,51E+00 |
| WDP* | $m^3$ | 2,71E+01 | 4,94E-02 | 3,09E-01 | 0 | 4,54E-01 | 0 | 0 | 9,72E-03 | 2,31E+00 | 4,39E-01 | -6,53E-02 |
| Acronyms | GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption | | | | | | | | | | | |

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*
*The results of the impact category abiotic depletion of minerals and metals may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of this indicators for decision-making purposes.*

*Note: 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.*

## Additional mandatory and voluntary impact category indicators

| Results per functional unit | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP-GHG[1] | kg $CO_2$ eq. | 4,70E+00 | 1,02E+00 | 5,73E-01 | 0 | 2,85E-01 | 0 | 0 | 1,54E-01 | 2,86E+00 | 1,11E+00 | -8,94E-01 |

## Resource use indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| PERE | MJ | 2,42E+01 | 1,97E-01 | 1,33E+00 | 0 | 6,62E-01 | 0 | 0 | 2,83E-02 | 4,23E-01 | 1,51E-01 | -1,12E+00 |
| PERM | MJ | 3,99E+00 | 0,00E+00 | -3,99E+00 | 0 | 0,00E+00 | 0 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PERT | MJ | 2,82E+01 | 1,97E-01 | -2,66E+00 | 0 | 6,62E-01 | 0 | 0 | 2,83E-02 | 4,23E-01 | 1,51E-01 | -1,12E+00 |
| PENRE | MJ | 5,92E+01 | 1,03E+00 | 5,71E-01 | 0 | 2,45E+00 | 0 | 0 | 2,20E-01 | 7,64E+00 | 2,38E+01 | -6,83E+00 |
| PENRM | MJ | 4,30E+01 | 0,00E+00 | -1,20E-01 | 0 | 0,00E+00 | 0 | 0 | 0,00E+00 | -1,96E+01 | -2,33E+01 | 0,00E+00 |
| PENRT | MJ | 1,02E+02 | 1,03E+00 | 4,51E-01 | 0 | 2,45E+00 | 0 | 0 | 2,20E-01 | -1,20E+01 | 5,80E-01 | -6,83E+00 |
| SM | kg | 2,61E+00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RSF | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NRSF | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FW | $m^3$ | 6,02E-01 | 1,76E-03 | 1,76E-02 | 0 | 1,90E-02 | 0 | 0 | 3,44E-04 | 1,26E-01 | 4,32E-02 | -1,98E-03 |
| Acronyms | PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water | | | | | | | | | | | |

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

### Waste indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Hazardous waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-hazardous waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radioactive waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

### Output flow indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Components for re-use | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Material for recycling | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Materials for energy recovery | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exported energy, electricity | MJ | 4,80E-01 | 0 | 4,25E-01 | 0 | 0 | 0 | 0 | 0 | 2,03E+00 | 0 | 0 |
| Exported energy, thermal | MJ | 2,72E+00 | 0 | 2,41E+00 | 0 | 0 | 0 | 0 | 0 | 1,15E+01 | 0 | 0 |

## Differences versus previous versions

Updates since the publication of the first version of this EPD include differences in production, such as energy mix and share of recycled materials, and a different distribution of markets. The updates to present conditions give new results for all environmental indicators. This version of the EPD is also updated in accordance with the newer version of PCR 2019:14 (v. 1.3.4).

# References

CEN (2003) EN 13893, Resilient, laminate and textile floor coverings - Measurement of dynamic coefficient of friction on dry floor surfaces

CEN (2014) EN ISO 105-B02, Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test

CEN (2017) EN 16810:2017, Resilient, textile and laminate floor coverings – Environmental product declarations – Product category rules

CEN (2018a) EN 1307:2014+A3:2018, Textile floor coverings – Classification

CEN (2018b) EN 14041:2018, Resilient, textile, laminate and modular multilayer floor coverings - Essential characteristics

CEN (2019a) EN 15804:2012+A2:2019/AC:2021, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products

CEN (2019b) EN 13501-1, Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests

c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810:2017)

General Programme Instructions of the International EPD® System. Version 4.0.

ISO (2006): ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures

ISO (2012): ISO 10874:2009, Resilient, textile and laminate floor coverings – Classification

ISO (2017): ISO 14021:2016, Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling)

LCA report: Life Cycle Assessment of Woven Vinyl Flooring. Rolls, Tiles and Acoustic Tiles. 2025.

PCR 2019:14 version 1.3.4 Construction products (EN 15804:2012+A2:2019)

EPD®

www.environdec.com

# Environmental Product Declaration

EPD of multiple products, based on a representative product. See page 4 for included products.

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

## Woven vinyl flooring delivered as rolls

BOLON

Industrivägen 12, SE-523 90 Ulricehamn, Sweden

| | |
|---|---|
| Programme: | The International EPD® System, www.environdec.com |
| Programme operator: | EPD International AB |
| EPD registration number: | EPD-IES-0003839:002 |
| Publication date: | 2021-10-27 |
| Revision date: | 2025-06-04 |
| Valid until: | 2030-06-04 |

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

# 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:** | info@environdec.com |

| **Accountabilities for PCR, LCA and independent, third-party verification** |
|---|
| **Product Category Rules (PCR)** |
| CEN standard EN 15804 serves as the Core Product Category Rules (PCR) |
| Product Category Rules (PCR): PCR 2019:14 version 1.3.4 Construction products (EN 15804:2012+A2:2019) and c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810). UN CPC code: 2722 |
| PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact. |
| **Life Cycle Assessment (LCA)** |
| LCA accountability: Karin Lindqvist & Andreas Asker, Sweco AB |
| **Third-party verification** |
| Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br><br>☒ EPD verification by individual verifier<br><br>Third-party verifier: David Althoff Palm, Dalemarken AB<br>E-mail: david@dalemarken.se<br><br>Approved by: The 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 registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD: Bolon AB

Contact: Madeleine Axebrink, madeleine.axebrink@bolon.com

Description of the organisation: Bolon is a Swedish design company that makes innovative flooring solutions for public spaces. It is a third-generation family business run by sisters Annica and Marie Eklund. Under their leadership, Bolon has transformed from a traditional weaving mill into an international design brand with clients in different sectors all over the world. With a strong commitment to sustainability, Bolon designs and manufactures all its products at a facility in Ulricehamn in Sweden. The company is recognized worldwide for its award-winning flooring and its collaborations with some of the world's most acclaimed innovators and creatives.

Product-related certifications*:
The product meets the requirement of EN 14041, CE- certified.
Emissions certificate, e.g M1 and FloorScore
Raw material, Green star Best environmental practice PVC

*For updated information contact customer support or visit Bolon.com.

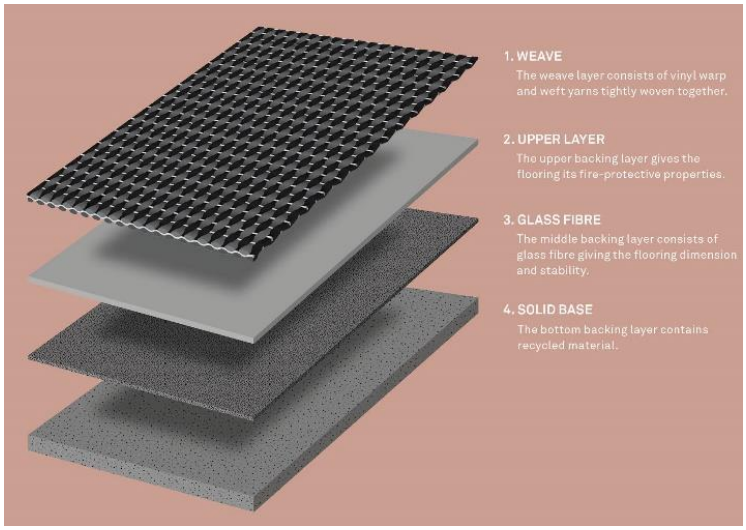
Name and location of production site: Bolon, Industrivägen 12, 523 90 Ulricehamn Sweden

## Product information

Product name: Woven vinyl flooring delivered as rolls

Product identification: Bolon flooring is tested to the EN 1307 standard for textile floor coverings and classified according to, textile and laminate floor coverings (ISO 10874).

Product description: Bolon flooring in rolls is composed by four layers, one weave and three backing layers, giving the product its unique qualities. The weave layer is made of vinyl warp and weft yarn tightly woven together. The variations of the warp and weft yarn together with the different weaving techniques gives Bolon flooring its vast design alternatives. Floors are graded into different classes according to their resistance to wear. For example, they are suitable for hotels, shops, offices, and high traffic areas, such as public halls.




Expected service lifetime: 20-30 years

UN CPC code: 2722

**Product information**

| Characteristics* | | Comments |
|---|---|---|
| Product form | 2000 mm, 25 m | Roll width and length |
| Weight | 2890-2930 g/m² | Weight depends on collection |
| Thickness | 2,3-2,5 mm | Thickness depends on collection |
| Fire resistance | $B_{fl}$-s1 | EN 13501-1 |
| Friction | >0,3 | EN 13893 |
| Colour fastness to light | >7 | EN ISO 105-B02 |

*For more information see Bolon.com and technical specification.

## LCA information

Functional unit: 1 m² of floor covering with a reference service life (RSL) of 1 year for specified characteristics application and use areas according to declared use classification ISO 10874.

Reference service life: 1 year

Type of EPD: Representative product. Has been chosen as representative based on sales statistics.

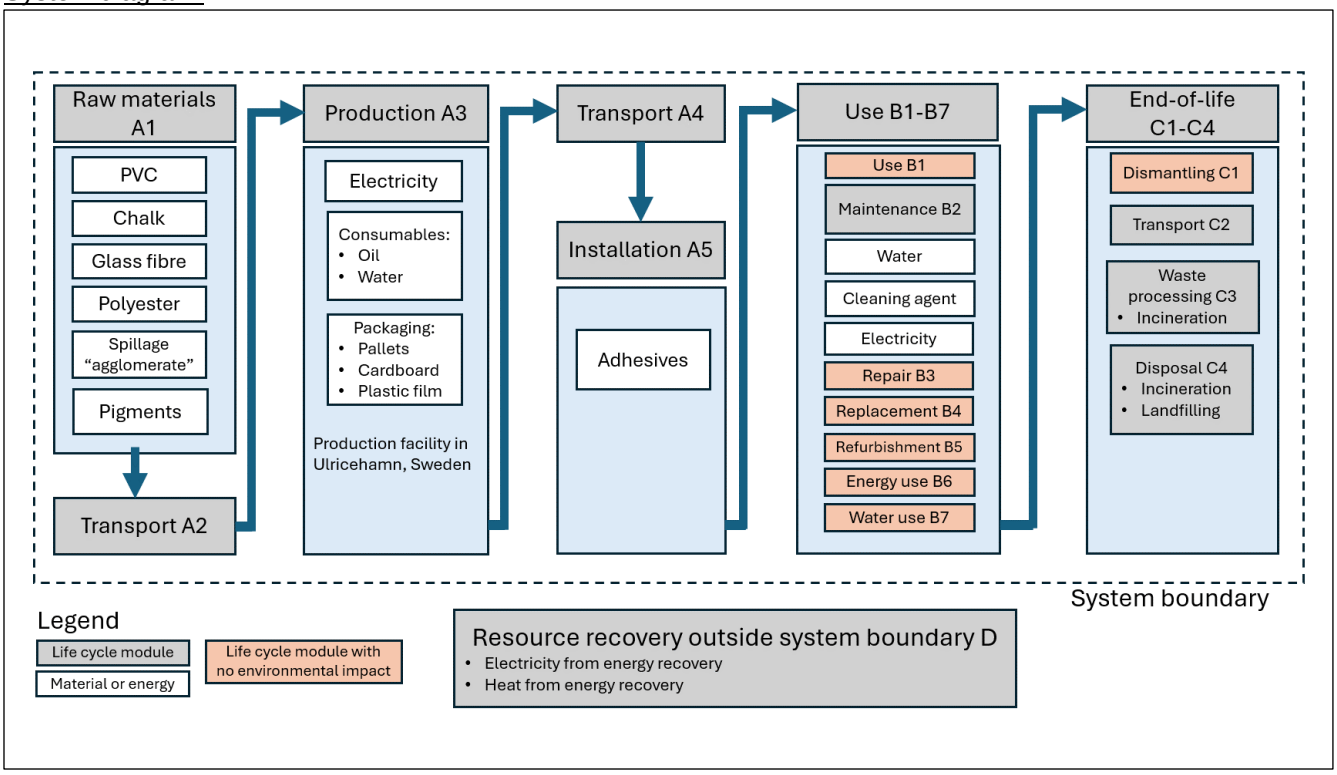
The EPD covers all products of Woven vinyl flooring that are delivered as rolls produced in Ulricehamn, see Bolon.com for complete list. The difference between the products is a variation of product weight and pigmentation which can be seen under product information. The sensitivity analysis of the LCA shows that the declared GWP-GHG result for modules A1-A3 differ less than 10% compared to the GWP-GHG results of any of the included products.

Time representativeness: 2024

Database(s) and LCA software used: LCA software SimaPro 9.6 and LCI database Ecoinvent 3.10

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

System diagram:




All floor manufacturing takes place in Ulricehamn, Sweden. Here we manufacture the thread and the backing, weave the designer surface, and combine all these elements into a high-quality floor. Recycling is an integral part of our production, the recycled material is self-declared according to ISO 14021.

The floor is then packed and shipped to customers. Installation is normally made with adhesives. Alternative installation methods are possible within Bolon recommendations. The floor coverings are water resistant and are cleaned using wet methods. Most cleaning needs can be accomplished with a vacuum cleaner, scrubbing brush, water, and a minimal dose of stain remover.

At the end of its life the product is sent to either landfill or incineration with energy recovery.

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

| | Product stage | | | Construction process stage | | Use stage | | | | | | | End of life stage | | | | Resource recovery stage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Raw material supply | Transport | Manufacturing | Transport | Construction installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| **Module** | **A1** | **A2** | **A3** | **A4** | **A5** | **B1** | **B2** | **B3** | **B4** | **B5** | **B6** | **B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Modules declared | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Geography | EU | EU | SE | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO | GLO |
| Specific data used | 28% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | <10% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | 0% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Data quality

Data for upstream processes (A1) has been collected directly from suppliers. Raw material and energy use as well as transports are included.

All data for the production (A3) has been collected from Bolon and is representative of the production practices under 2024. In the cases where no specific data could be used, available generic data was used mainly provided by Ecoinvent 3.10.

Generic data was also used for the transportation of raw material (A2), however, distance and information regarding the type of transportation was collected from Bolon.

Downstream waste management data is based on regional average treatment of PVC waste (Europe, Asia, and USA).

General information

| | |
|---|---|
| Cut-off rules | <1% for specific process, <5% for sum of all processes |
| Cut-off applications | - Impact from different pigmentations (<0,2 w% of total weight)<br>- Materials with presence <0,1 w% |
| Excluded parts | - For all life cycle modules, the production and end-of-life processes of infrastructure and capital goods are excluded except for when included in generic LCI datasets.<br>- Potential transports from retailer to installation site<br>- Maintenance products packaging and transport |
| Electricity source | Hydropower and solar power (GWP-GHG: 0,054 kg CO2 eq./kWh) |
| **Data quality** | |
| Geographical coverage | Upstream data: Good (Country specific)<br>Core module (A3): Very good (site-specific)<br>Downstream data: Medium (continent specific) |
| Technological representativeness | Upstream data: Good (Generic data based on plant averages)<br>Core module (A3): Very good (site-specific)<br>Downstream data: Good (Generic data based on plant averages) |
| Time-related coverage | Upstream data: Good<br>Core module (A3): Very good (2024 data)<br>Downstream data: Good |
| Allocation method | A physical basis (mass in module A1 and area in module A3) has been applied for the allocation of input data. Economic allocation has been used to distribute environmental burdens for recycled PVC and pre-consumer material. |
| Completeness and treatment of missing data | No data is found missing. |

# Content information

| **Product components** | **Weight, kg** | **Post-consumer material, weight-%** | **Biogenic material, weight-% and kg C/kg** |
|---|---|---|---|
| Polyvinylchloride (PVC) | 1,9 | 0 | 0 |
| Chalk | 0,90 | 0 | 0 |
| Glass fibre | 0,050 | 0 | 0 |
| Polyester | 0,036 | 0 | 0 |
| Pigments | 0,0030 | 0 | 0 |
| Other | 0,050 | 0 | 0 |
| TOTAL | 2,9 | 0 | 0 |
| **Packaging materials** | **Weight, kg** | **Weight-% (versus the product)** | **Weight biogenic carbon, kg C/m$^2$** |
| Wood | 0,12 | 4,1 | 0,057 |
| Cardboard | 0,060 | 2,1 | 0,027 |
| Plastic | 0,028 | 1,0 | 0 |
| TOTAL | 0,21 | 7,2 | 0,084 |

The product does not contain any substances classified as “hazardous substance” (SVHC) and fulfils REACH legislation.

## Scenario information

**Average transport distances (A4)**

| Road transport type | Road transport distance (km) | Sea transport type | Sea transport distance (km) |
|---|---|---|---|
| Euro 5 truck 16-32t | 847 | Container ship | 8188 |

**Installation (A5)**

10% of the product is lost during installation. It is important to use an adhesive suitable for the subfloor. Different subfloors require different amounts of adhesive. Detailed guidance of installation methods and instructions is available at https://www.bolon.com/en/installation.

**Materials consumed in use phase per $m^2$ of flooring (B2)**

| Material or energy | Quantity | Reference service life | Comment |
|---|---|---|---|
| Electricity | 0,314 kWh/year | 1 year | Electricity for vacuuming |
| Floor cleaning agent | 0,09 litres/year | 1 year | Cleaning agent for wet cleaning |
| Water | 9,0 litres/year | 1 year | Water for wet cleaning |

The average number of cleanings per year is 52 (once a week). The frequency of cleanings can vary depending on the amount of traffic on the floor. Detailed cleaning and maintenance instructions are available at https://www.bolon.com/en/maintenance.

**End-of-life (C1-C4)**

The flooring is removed and transported to a waste treatment facility. Shares are region based according to table below. Flooring with permanent adhesive is not possible to recycle because of its contamination both with adhesive residues and things like wood or concrete that come with reinstallation. When recycling is not possible, it is recommended to send it to energy recovery.

| Treatment | Europe | USA | Asia |
|---|---|---|---|
| Incineration with energy recovery | 54% | 18% | 48% |
| Landfill | 46% | 82% | 52% |

# Results of the environmental performance indicators

## Mandatory impact category indicators according to EN 15804

The method used is EN 15804 +A2 Method (based on EF 3.1).

*Disclaimer: Use of the results of modules A1-A3 without considering the results of module C is discouraged.*

**Results per functional unit**

| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3-B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GWP-fossil | kg $CO_2$ eq. | 4,18E+00 | 7,99E-01 | 7,48E-01 | 0 | 2,82E-01 | 0 | 0 | 1,15E-01 | 2,13E+00 | 8,30E-01 | -9,13E-01 |
| GWP-biogenic | kg $CO_2$ eq. | -2,83E-01 | 2,77E-04 | 6,45E-01 | 0 | 3,59E-04 | 0 | 0 | 2,56E-06 | 3,07E-03 | 1,18E-03 | 0 |
| GWP-luluc | kg $CO_2$ eq. | 1,32E-01 | 3,14E-04 | 5,21E-05 | 0 | 3,44E-03 | 0 | 0 | 4,55E-05 | 2,15E-04 | 8,37E-05 | -4,86E-04 |
| GWP-total | kg $CO_2$ eq. | 4,03E+00 | 7,99E-01 | 1,39E+00 | 0 | 2,86E-01 | 0 | 0 | 1,15E-01 | 2,14E+00 | 8,31E-01 | -9,13E-01 |
| ODP | kg CFC 11 eq. | 1,16E-06 | 1,44E-08 | 2,71E-09 | 0 | 3,73E-09 | 0 | 0 | 1,60E-09 | 9,93E-09 | 3,85E-09 | -2,74E-09 |
| AP | mol $H^+$ eq. | 1,67E-02 | 9,60E-03 | 2,23E-03 | 0 | 1,53E-03 | 0 | 0 | 3,82E-04 | 1,56E-03 | 6,72E-04 | -6,81E-03 |
| EP-freshwater | kg P eq. | 8,01E-04 | 4,38E-05 | 3,45E-05 | 0 | 1,23E-04 | 0 | 0 | 8,99E-06 | 9,84E-05 | 3,53E-05 | -2,95E-04 |
| EP-marine | kg N eq. | 3,51E-03 | 2,53E-03 | 5,09E-04 | 0 | 3,24E-04 | 0 | 0 | 1,24E-04 | 4,67E-04 | 7,83E-04 | -9,43E-04 |
| EP-terrestrial | mol N eq. | 3,46E-02 | 2,80E-02 | 3,59E-03 | 0 | 3,01E-03 | 0 | 0 | 1,35E-03 | 4,29E-03 | 2,03E-03 | -9,86E-03 |
| POCP | kg NMVOC eq. | 1,49E-02 | 8,54E-03 | 1,66E-03 | 0 | 9,01E-04 | 0 | 0 | 5,32E-04 | 1,38E-03 | 6,86E-04 | -2,92E-03 |
| ADP-minerals & metals* | kg Sb eq. | 5,01E-05 | 1,95E-06 | 8,59E-07 | 0 | 1,80E-06 | 0 | 0 | 3,67E-07 | 1,57E-06 | 5,80E-07 | -3,62E-07 |
| ADP-fossil* | MJ | 4,86E+01 | 7,59E-01 | 8,25E-01 | 0 | 2,33E+00 | 0 | 0 | 1,57E-01 | 1,11E+00 | 4,13E-01 | -6,65E+00 |
| WDP* | $m^3$ | 2,31E+01 | 3,80E-02 | 2,76E-01 | 0 | 4,54E-01 | 0 | 0 | 7,25E-03 | 1,72E+00 | 3,27E-01 | -6,67E-02 |
| Acronyms | GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption | | | | | | | | | | | |

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*
*The results of the impact category abiotic depletion of minerals and metals may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of this indicators for decision-making purposes.*

*Note: 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.*

## Additional mandatory and voluntary impact category indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP-GHG[1] | kg $CO_2$ eq. | 4,31E+00 | 7,99E-01 | 7,48E-01 | 0 | 2,85E-01 | 0 | 0 | 1,15E-01 | 2,13E+00 | 8,30E-01 | -9,13E-01 |

## Resource use indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| PERE | MJ | 2,28E+01 | 1,50E-01 | 1,17E+00 | 0 | 6,62E-01 | 0 | 0 | 2,11E-02 | 3,16E-01 | 1,13E-01 | -1,15E+00 |
| PERM | MJ | 3,42E+00 | 0,00E+00 | -3,42E+00 | 0 | 0,00E+00 | 0 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PERT | MJ | 2,62E+01 | 1,51E-01 | -2,25E+00 | 0 | 6,62E-01 | 0 | 0 | 2,11E-02 | 3,16E-01 | 1,13E-01 | -1,15E+00 |
| PENRE | MJ | 5,15E+01 | 7,92E-01 | 1,20E+00 | 0 | 2,45E+00 | 0 | 0 | 1,64E-01 | 5,81E+00 | 1,82E+01 | -6,97E+00 |
| PENRM | MJ | 3,39E+01 | 0,00E+00 | -1,12E+00 | 0 | 0,00E+00 | 0 | 0 | 0,00E+00 | -1,50E+01 | -1,78E+01 | 0,00E+00 |
| PENRT | MJ | 8,54E+01 | 7,92E-01 | 7,59E-02 | 0 | 2,45E+00 | 0 | 0 | 1,64E-01 | -9,18E+00 | 4,33E-01 | -6,97E+00 |
| SM | kg | 1,71E+00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RSF | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NRSF | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FW | $m^3$ | 5,09E-01 | 1,35E-03 | 1,38E-02 | 0 | 1,90E-02 | 0 | 0 | 2,56E-04 | 9,42E-02 | 3,22E-02 | -2,02E-03 |
| Acronyms | PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water | | | | | | | | | | | |

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

### Waste indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Hazardous waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-hazardous waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radioactive waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

### Output flow indicators

| Results per functional unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B3-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Components for re-use | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Material for recycling | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Materials for energy recovery | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exported energy, electricity | MJ | 4,80E-01 | 0 | 4,70E-01 | 0 | 0 | 0 | 0 | 0 | 1,55E+00 | 0 | 0 |
| Exported energy, thermal | MJ | 2,72E+00 | 0 | 2,66E+00 | 0 | 0 | 0 | 0 | 0 | 8,79E+00 | 0 | 0 |

## Differences versus previous versions

Updates since the publication of the first version of this EPD include differences in production, such as energy mix and share of recycled materials, and a different distribution of markets. The updates to present conditions give new results for all environmental indicators. This version of the EPD is also updated in accordance with the newer version of PCR 2019:14 (v. 1.3.4).

# References

CEN (2003) EN 13893, Resilient, laminate and textile floor coverings - Measurement of dynamic coefficient of friction on dry floor surfaces

CEN (2014) EN ISO 105-B02, Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test

CEN (2017) EN 16810:2017, Resilient, textile and laminate floor coverings – Environmental product declarations – Product category rules

CEN (2018a) EN 1307:2014+A3:2018, Textile floor coverings – Classification

CEN (2018b) EN 14041:2018, Resilient, textile, laminate and modular multilayer floor coverings - Essential characteristics

CEN (2019a) EN 15804:2012+A2:2019/AC:2021, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products

CEN (2019b) EN 13501-1, Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests

c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810:2017)

General Programme Instructions of the International EPD® System. Version 4.0.

ISO (2006): ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures

ISO (2012): ISO 10874:2009, Resilient, textile and laminate floor coverings – Classification

ISO (2017): ISO 14021:2016, Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling)

LCA report: Life Cycle Assessment of Woven Vinyl Flooring. Rolls, Tiles and Acoustic Tiles. 2025.

PCR 2019:14 version 1.3.4 Construction products (EN 15804:2012+A2:2019)

EPD®

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