

Environmental Product Declaration



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

Starfloor Click Solid from TARKETT



| | |
|--------------------------|---|
| Programme: | The International EPD® System, www.environdec.com |
| Programme operator: | EPD International AB |
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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 Box 210 60 SE-100 31 Stockholm Sweden |
| Website: | www.environdec.com |
| E-mail: | info@environdec.com |

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| CEN standard EN 15804 serves as the Core Product Category Rules (PCR) |
| Product category rules (PCR): PCR 2019:14 version 1.11 and c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810). |
| PCR review was conducted by: <i>The Technical Committee of the International EPD® System lead by Claudia A Peña. A full list of members available on www.environdec.com. The review panel may be contacted via info@environdec.com.</i> |
| Independent third-party verification of the declaration and data, according to ISO 14025:2006: <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification |
| Third party verifier: M. Damien Prunel from LCIE Bureau Veritas. |
| Procedure for follow-up of data during EPD validity involves third party verifier: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

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

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: Tarkett

Contact: Vincent MONTI, vincent.monti@tarkett.com, Tarkett La Défense, 1 Terrasse Bellini 92400 Paris

Description of the organisation:

With an international coverage and a wide range of products, Tarkett has over 130 years of experience in providing integrated solutions for floorings to professionals and end users.

Many of the most important architectural firms in the world and building professionals have chosen Tarkett for the value of its products and for its consultation and service abilities. Therefore, Tarkett floorings and sport surfaces are present in several prestigious architectural reference points. Tarkett offers integrated solutions for floorings, able to meet the particular needs of customers. Our wide range of designs, colors and models provides an infinite series of possibilities, contributing to create a positive environment and a better quality of life for people.

Tarkett operates with the utmost respect for the environment towards the realization of eco-friendly products.

Tarkett's commitment to the environment is woven throughout its business. Cradle-to-Cradle principles are, in fact, the basis of the design and production of every solution. Particularly, the lifecycle analysis is used to continuously improve the production process, and so the products until their use stage, disposal and recycling. The commitment to the environment is also proven by the accession to the Circular Economy 100 program, where Tarkett group, with a network of companies, is working to develop a circular economy model based on the reuse of materials and preservation of natural resources. The development of products that can be reused within internal production cycles, or external ones in case of other individuals, has been an integral part of the business strategy aimed at sustainability for many years. The WCM (World Class Manufacturing) management system has been developed in 2009, and it includes the environmental pillar aimed to the elimination of losses and to the growth of process efficiency.

Product-related or management system-related certifications: ISO 9001, ISO 14001, ISO 50001, WCM manufacturing site.

Name and location of production site(s): Jaslo, Poland

Product information

Product name: Starfloor Click Solid 30, Starfloor Click Solid 55.

Product identification: Heterogeneous poly (vinyl chloride) floor coverings (EN 10582).

Product description: Starfloor Click is a modular heterogeneous compact resilient floor covering developed by Tarkett. The service lifetime recommended by Tarkett is 25 years.

Geography: European technology and process coverage.

UN CPC code: APE/NAF - 2223Z

LCA information

Functional unit / declared unit: 1m² of floor covering with a reference service life (RSL) of 1 year for specified characteristics application and use areas according to ISO 10582 and EN ISO 10874.

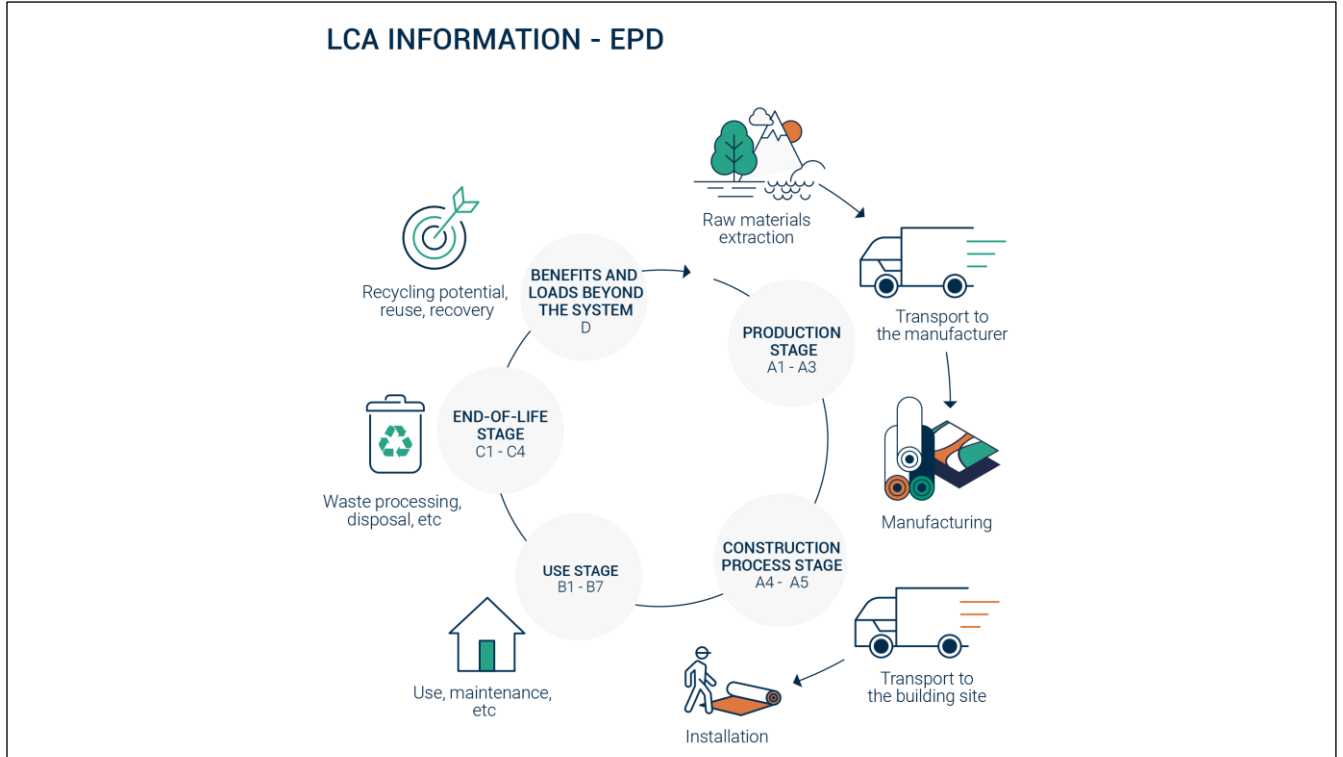
Reference service life: 25 years

Time representativeness: 2020

Database(s) and LCA software used: Ecoinvent3.6, Simapro 9.1

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

System diagram:



More information: The product is classified in accordance with EN ISO 10874, EN 685 and in reference to the FCSS (Floor Covering Standard Symbols) to be installed in various areas of application, such as: healthcare, education, commercial, education. The area of use according to the ISO 10874 is very heavy (34) for commercial classification and heavy (43) for industrial classification.

| Product | Domestic Classification | Commercial Classification | Industrial Classification |
|--------------------------|--------------------------|----------------------------|---------------------------|
| Starfloor Click Solid 30 | 23 Heavy domestic use | 31 Light commercial use | |
| Starfloor Click Solid 55 | 23 Heavy domestic use | 33 Heavy commercial use | 42 Heavy Industrial |

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

| | Product stage | | Construction process stage | | | Use stage | | | | | | | End of life stage | | | | Resource recovery stage |
|----------------------|--|-----------|----------------------------|------------------------------|---------------------------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|----------------------------|-----------|------------------|----------------------------|------------------------------------|
| | Raw material supply | Transport | Manufacturing | Transport | Construction installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| Module | A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| Modules declared | X | X | X | X | X | | X | | | | | | X | X | X | X | X |
| Geography | European technology and process coverage | | | | | | | | | | | | | | | European | |
| Specific data used | - | 100% | 100% | 100% | 100% | - | - | - | - | - | - | - | - | - | - | 100% For recycling process | 100% For recycling process |
| Variation – products | -4% to 4% | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | - | - | - | European average for Tarkett | | - | - | - | - | - | - | - | - | - | - | - | - |

Content information

According to PCR 2019:14 v1.11, several similar products can be included in the same EPD if "differences between the mandatory impact indicators lower than $\pm 10\%$ (concerning A1-A3) could be presented using the impacts of a representative product". The next table presents how products are grouped :

| Product | Weight, kg/m ² | Representative product group |
|--------------------------|---------------------------|------------------------------|
| Starfloor Click Solid 30 | 8.90E+00 | Starfloor Click Solid |
| Starfloor Click Solid 55 | 8.85E+00 | |

The components for Starfloor Click Solid group are detailed here:

| Starfloor Click Solid | | | |
|-----------------------------|---------------------------|----------------------------------|------------------------------|
| Product components | Weight, kg/m ² | Post-consumer material, weight-% | Renewable material, weight-% |
| PVC Suspension | 2.87E+00 | 0% | 0% |
| Plasticizers | 7.70E-01 | 0% | 0% |
| Epoxidised soya bean oil | 1.40E-01 | 0% | 83% |
| Mineral fillers | 4.87E+00 | 0% | 0% |
| Stabilizer CaZn | 2.00E-03 | 0% | 0% |
| Titanium dioxide | 1.00E-02 | 0% | 0% |
| Pigments | 3.20E-02 | 0% | 0% |
| Surface Treatment | 3.00E-02 | 0% | 0% |
| EthénylBenzene | 3.00E-02 | 0% | 0% |
| Additives | 4.00E-02 | 0% | 0% |
| Glass Reinforcement | 1.20E-01 | 0% | 0% |
| TOTAL | 8.91E+00 | 0% | 1.30% |
| Packaging materials | Weight, kg/m ² | Weight-% (versus the product) | |
| Product Packaging Cardboard | 3.00E-02 | 0.34% | |
| TOTAL | 3.00E-02 | 0.34% | |

Product manufacturing

Production process

The production of the homogeneous resilient flooring is divided into the following stages:

Extrusion: continuous mixing and heating process where raw materials are fused and, optionally, shaped through a die, suitable for making shapes such as rods (welding rods), granules or thick sheets (Rigid LVT core layer).

Calendering: continuous shaping process of thermoplastic material which allows the making of thin sheets or films (thickness < 1 mm). The calender is fed through an extruder.

Pressing: semi-continuous process which allows the lamination of several layers priorly produced by extrusion and/or calendering.

Profiling: semi-continuous process where a connection system is machined on the material edges.

Pad attaching: semi-continuous process where an acoustic backing is bonded on the back side of the product.

Packaging: semi-continuous process where the finished product is either wrapped around a cardboard core, packed in plastic film and protected with plastic side plates on the edges (rolls) OR stacked head-to-toe and packed into cardboard boxes (planks or tiles).

Production waste

| Waste type | Amount | Unit |
|---|----------|-------------------|
| Hazardous waste to external recycling | 2.70E-03 | kg/m ² |
| Non-hazardous waste to external recycling | 1.86E-01 | kg/m ² |
| Hazardous waste water to external treatment | 1.05E-02 | kg/m ² |
| Non-hazardous waste-water to external treatment | 2.11E-01 | kg/m ² |

NB: Post manufacturing recycling concerns the recycling of the losses inside the plant production. Therefore, there is no end-of-life impact on losses (except the recycling preparation). Post-manufacturing recycled content is 35%.

Health, safety and environmental aspects during production

Starfloor Click production site complies with the ISO 14001 Environmental Management System and the ISO 9001 Quality Management System.

Delivery and installation

Delivery

The average distribution distance between the factory and the installation site is 1589 km. It has been calculated considering the average distance between European countries where Tarkett is selling the Starfloor Click products and the factory plant in Jaslo (Poland). The distribution is made by truck.

Installation

The different parts of flooring are arranged together so that they can fit perfectly between them on the floor. The different parts of the flooring are cut to fit the surface to be covered.

| Description | Amount | Unit |
|-------------------------|----------|--------------------|
| Electricity consumption | 3.35E-02 | kWh/m ² |

Waste

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

Packaging

50 % of the packaging materials goes to incineration and 50 % goes to landfill.

Use Stage

Reference Service Life (RSL)

For this product, the stated RSL is 1 year. It should be noted, however, that the service life of a Heterogenous polyvinylchloride floor covering may vary depending on the amount and nature of floor traffic and the type and frequency of maintenance. The manufacturer has provided this service life on the basis of his experience of flooring manufacture and supply. This RSL is applicable as long as the product use complies with that defined by ISO 14041 and ISO10874 in accordance with the product's classification. **The service lifetime recommended by Tarkett is 25 years.**

Cleaning and maintenance

Cleaning regime is based on traditional cleaning protocol integrating manual and mechanical operations. Depending on premises considered, these consumptions may vary. The considered regime fits high traffic areas. The maintenance scenario is :

- **Common maintenance : 4 times a week**
- **Periodic maintenance : twice a year**

| Description | Amount | Unit |
|-------------------------|----------|-------------------------|
| Electricity consumption | 1.13E-01 | kWh/year/m ² |
| Water consumption | 5.14E+00 | L/year/m ² |
| Detergent consumption | 7.00E-02 | L/year/m ² |

Prevention of structural damage

To avoid excessive wear, usage should be restricted to the stated areas of application as outlined by the norm ISO 10874.

End of Life

3 distinct End-of-Life scenarios have been modeled for Starfloor Click. Tarkett recommend using the ReStart program at End-of-Use to recycle the product. However, to showcase the value of Tarkett's recycling activities, environmental impacts of two alternative scenarios have been calculated.

1/ Recycling.

100% of the Starfloor Click can be recycled at its end of use stage, thanks to the ReStart® program, enabling Tarkett to collect installation losses and post-use flooring from construction sites to recycle it and/or re-use it as high quality raw material back in Tarkett plants.. Thus, Starfloor Click is recycled back at the Jaslo plant, and the transport between construction site and recycling facility is 1589 km by truck. Environmental impacts of recycling are presented in module **C/1**.

2/ Incineration with energy recovery

Incineration with energy recovery is a rising waste management method in many of the countries in which Starfloor Click is sold. While Tarkett wishes to recycle 100% of sold Starfloor Click. Incineration with energy recovery is an alternative option if recycling is impossible. Environmental impacts of incineration with energy recovery are presented in module **C/2**.

3/ Landfilling

Landfilling waste is still a prominent waste management scenario. This option is however not recommended by Tarkett. Environmental impacts of landfilling are presented in module **C/3**.

Benefits and loads beyond system boundary

1/ Recycling.

The benefit is due to the recycling post-use flooring that allows avoiding the emissions of virgin materials. Starfloor Click can be 100% recycled at post-installation and post-consumer stage. Benefits from avoided raw material production and avoided transport are calculated in module **D/1**.

2/ Incineration with energy recovery

Benefits from installation offcuts recycling and incineration energy recovery are calculated in **D/2**.

3/ Landfilling

Benefits accounted in this scenario exclusively come from installation offcuts recycling and are presented in **D/3**

Results for product group

Starfloor Click Solid.

Environmental Information

Potential environmental impact in case of recycling at End-of-use

Results per functional or declared unit in case of incineration - Starfloor Click Solid.

| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1/1 | C2/1 | C3/1 | C4/1 | D/1 |
|-----------------------|-------------------------------------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| GWP-total | kg CO ₂ eq. | 1.34E+01 | 1.26E+00 | 5.50E-01 | 0.00E+00 | 2.68E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E+00 | 0.00E+00 | 3.54E-01 | -1.14E+01 |
| GWP-fossil | kg CO ₂ eq. | 1.30E+01 | 1.26E+00 | 4.74E-01 | 0.00E+00 | 2.60E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E+00 | 0.00E+00 | 0.00E+00 | -1.07E+01 |
| GWP- biogenic | kg CO ₂ eq. | -3.31E-01 | 5.17E-04 | 5.48E-02 | 0.00E+00 | 1.68E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.62E-04 | 0.00E+00 | 3.54E-01 | -2.51E-02 |
| GWP- Luluc | kg CO ₂ eq. | 7.17E-01 | 4.43E-04 | 2.16E-02 | 0.00E+00 | 5.74E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.25E-04 | 0.00E+00 | 0.00E+00 | -6.66E-01 |
| ODP | kg CFC 11 eq. | 4.10E-06 | 2.87E-07 | 1.42E-07 | 0.00E+00 | 2.37E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.36E-07 | 0.00E+00 | 0.00E+00 | -3.66E-06 |
| AP | mol H ⁺ eq. | 6.08E-02 | 5.14E-03 | 2.18E-03 | 0.00E+00 | 1.56E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.65E-03 | 0.00E+00 | 0.00E+00 | -5.07E-02 |
| EP-freshwater | kg P eq | 4.51E-03 | 9.28E-05 | 1.43E-04 | 0.00E+00 | 2.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.73E-04 | 0.00E+00 | 0.00E+00 | -3.91E-03 |
| EP-freshwater | kg PO ₄ ³⁻ eq | 1.38E-02 | 2.85E-04 | 4.39E-04 | 0.00E+00 | 6.56E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.31E-04 | 0.00E+00 | 0.00E+00 | -1.20E-02 |
| EP-marine | kg N eq. | 1.31E-02 | 1.53E-03 | 5.46E-04 | 0.00E+00 | 4.21E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.89E-03 | 0.00E+00 | 0.00E+00 | -1.10E-02 |
| EP-terrestrial | mol N eq. | 1.21E-01 | 1.68E-02 | 4.76E-03 | 0.00E+00 | 2.94E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.16E-02 | 0.00E+00 | 0.00E+00 | -9.51E-02 |
| POCP | kg NMVOC eq. | 4.57E-02 | 5.14E-03 | 1.73E-03 | 0.00E+00 | 7.12E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.69E-03 | 0.00E+00 | 0.00E+00 | -3.88E-02 |
| ADP- minerals&metals* | kg Sb eq. | 9.90E-04 | 3.43E-05 | 3.19E-05 | 0.00E+00 | 2.80E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.39E-05 | 0.00E+00 | 0.00E+00 | -9.13E-04 |
| ADP-fossil* | MJ | 2.85E+02 | 1.91E+01 | 9.81E+00 | 0.00E+00 | 5.43E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.56E+01 | 0.00E+00 | 0.00E+00 | -2.46E+02 |
| WDP | m ³ | 1.47E+01 | 5.32E-02 | 4.47E-01 | 0.00E+00 | 1.36E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.91E-02 | 0.00E+00 | 0.00E+00 | -1.35E+01 |

Acronyms

GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

Environmental Information

Potential environmental impact in case of recycling at End-of-use

Results per functional or declared unit in case of incineration - Starfloor Click Solid.

| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1/1 | C2/1 | C3/1 | C4/1 | D/1 |
|-----------|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| PERE | MJ | 4.36E+01 | 2.70E-01 | 1.33E+00 | 0.00E+00 | 9.50E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.02E-01 | 0.00E+00 | 0.00E+00 | -1.31E+01 |
| PERM | MJ | 5.14E+00 | 0.00E+00 | 1.54E-01 | 0.00E+00 | 9.90E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -4.78E+00 |
| PERT | MJ | 4.88E+01 | 2.70E-01 | 1.49E+00 | 0.00E+00 | 9.50E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.02E-01 | 0.00E+00 | 0.00E+00 | -1.79E+01 |
| PENRE | MJ | 2.22E+02 | 1.91E+01 | 7.94E+00 | 0.00E+00 | 5.36E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.56E+01 | 0.00E+00 | 0.00E+00 | -1.88E+02 |
| PENRM | MJ | 6.26E+01 | 0.00E+00 | 1.88E+00 | 0.00E+00 | 5.56E-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 | -5.82E+01 |
| PENRT | MJ | 2.85E+02 | 1.91E+01 | 9.81E+00 | 0.00E+00 | 5.36E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.56E+01 | 0.00E+00 | 0.00E+00 | -2.46E+02 |
| 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 | 2.67E-01 |
| 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 | 2.31E-01 | 1.97E-03 | 7.13E-03 | 0.00E+00 | 5.71E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.67E-03 | 0.00E+00 | 0.00E+00 | -2.05E-01 |

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 production and output flows in case of recycling at End-of-use

Waste production

| Results per functional or declared unit in case of incineration - Starfloor Click Solid. | | | | | | | | | | | | | | | | |
|--|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1/1 | C2/1 | C3/1 | C4/1 | D/1 |
| Hazardous waste disposed | kg | 4.53E-01 | 1.23E-02 | 1.51E-02 | 0.00E+00 | 6.81E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.29E-02 | 0.00E+00 | 0.00E+00 | -4.00E-01 |
| Non-hazardous waste disposed | kg | 4.06E+00 | 1.00E+00 | 2.14E-01 | 0.00E+00 | 8.40E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.87E+00 | 0.00E+00 | 0.00E+00 | -3.53E+00 |
| Radioactive waste disposed | kg | 5.94E-04 | 1.30E-04 | 2.65E-05 | 0.00E+00 | 3.09E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-04 | 0.00E+00 | 0.00E+00 | -5.26E-04 |

Output flows

| Results per functional or declared unit in case of incineration - Starfloor Click Solid. | | | | | | | | | | | | | | | | |
|--|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1/1 | C2/1 | C3/1 | C4/1 | D/1 |
| Components for re-use | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Material for recycling | kg | 1.86E-01 | 0.00E+00 | 2.73E-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 | 8.02E+00 | 0.00E+00 |
| Materials for energy recovery | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, electricity | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, thermal | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

Additional indicator

| Results per functional or declared unit in case of incineration - Starfloor Click Solid. | | | | | | | | | | | | | | | | |
|--|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Indicator | Unit | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1/1 | C2/1 | C3/1 | C4/1 | D/1 |
| GWP-GHG ¹ | kg CO ₂ eq. | 1.37E+01 | 1.26E+00 | 4.95E-01 | 0.00E+00 | 2.66E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E+00 | 0.00E+00 | 0.00E+00 | -1.14E+01 |

¹ GWP-GHG is the sum of GWP-Fossil and GWP-LULUC indicators.

Additional information – Potential impacts and flows in case of incineration

| Results per functional or declared unit in case of incineration - Starfloor Click Solid. | | | | | | |
|--|-------------------------------------|----------|----------|----------|----------|-----------|
| Indicator | Unit | C1/2 | C2/2 | C3/2 | C4/2 | D/2 |
| GWP-total | kg CO ₂ eq. | 0.00E+00 | 1.49E-01 | 8.74E+00 | 1.44E-02 | -4.72E+00 |
| GWP-fossil | kg CO ₂ eq. | 0.00E+00 | 1.49E-01 | 8.37E+00 | 1.44E-02 | -4.68E+00 |
| GWP- biogenic | kg CO ₂ eq. | 0.00E+00 | 6.06E-05 | 3.73E-01 | 9.65E-06 | -9.98E-03 |
| GWP- Luluc | kg CO ₂ eq. | 0.00E+00 | 5.19E-05 | 8.54E-04 | 4.01E-06 | -2.47E-02 |
| ODP | kg CFC 11 eq. | 0.00E+00 | 3.37E-08 | 6.25E-07 | 5.92E-09 | -6.64E-07 |
| AP | mol H ⁺ eq. | 0.00E+00 | 6.07E-04 | 1.44E-02 | 1.36E-04 | -1.86E-02 |
| EP-freshwater | kg P eq | 0.00E+00 | 1.09E-05 | 8.65E-04 | 1.48E-06 | -1.60E-03 |
| EP-freshwater | kg PO ₄ ³⁻ eq | 0.00E+00 | 7.61E-07 | 6.05E-05 | 1.03E-07 | -1.12E-04 |
| EP-marine | kg N eq. | 0.00E+00 | 1.82E-04 | 4.13E-03 | 4.72E-05 | -2.97E-03 |
| EP-terrestrial | mol N eq. | 0.00E+00 | 1.99E-03 | 3.83E-02 | 5.17E-04 | -2.96E-02 |
| POCP | kg NMVOC eq. | 0.00E+00 | 6.10E-04 | 1.06E-02 | 1.50E-04 | -9.04E-03 |
| ADP-minerals&metals* | kg Sb eq. | 0.00E+00 | 4.02E-06 | 1.00E-04 | 1.32E-07 | -3.47E-05 |
| ADP-fossil* | MJ | 0.00E+00 | 2.24E+00 | 2.94E+01 | 4.02E-01 | -7.85E+01 |
| WDP | m ³ | 0.00E+00 | 6.23E-03 | 2.73E+01 | 3.22E-02 | -7.55E-01 |

| Results per functional or declared unit in case of incineration - Starfloor Click Solid. | | | | | | |
|--|----------------|----------|----------|----------|----------|-----------|
| Indicator | Unit | C1/2 | C2/2 | C3/2 | C4/2 | D/2 |
| PERE | MJ | 0.00E+00 | 3.16E-02 | 2.66E+00 | 3.25E-03 | -5.79E+00 |
| PERM | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -1.54E-01 |
| PERT | MJ | 0.00E+00 | 3.16E-02 | 2.66E+00 | 3.25E-03 | -5.95E+00 |
| PENRE | MJ | 0.00E+00 | 2.24E+00 | 2.94E+01 | 4.02E-01 | -7.61E+01 |
| PENRM | MJ. | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -1.88E+00 |
| PENRT | MJ | 0.00E+00 | 2.24E+00 | 2.94E+01 | 4.02E-01 | -7.80E+01 |
| SM | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.67E-01 |
| RSF | MJ | 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 |
| FW | m ³ | 0.00E+00 | 2.31E-04 | 8.27E-01 | 4.25E-04 | -3.04E-02 |

| Results per functional or declared unit in case of incineration - Starfloor Click Solid. | | | | | | |
|--|------|----------|----------|----------|----------|-----------|
| Indicator | Unit | C1/2 | C2/2 | C3/2 | C4/2 | D/2 |
| Hazardous waste disposed | kg | 0.00E+00 | 1.44E-03 | 5.11E+00 | 2.37E-04 | -5.70E-02 |
| Non-hazardous waste disposed | kg | 0.00E+00 | 1.18E-01 | 1.00E+00 | 2.73E+00 | -9.15E-01 |
| Radioactive waste disposed | kg | 0.00E+00 | 1.53E-05 | 1.42E-04 | 2.64E-06 | -3.14E-04 |

| Results per functional or declared unit in case of incineration - Starfloor Click Solid. | | | | | | |
|--|------|----------|----------|----------|----------|----------|
| Indicator | Unit | C1/2 | C2/2 | C3/2 | C4/2 | D/2 |
| Components for re-use | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Material for recycling | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Materials for energy recovery | kg | 0.00E+00 | 0.00E+00 | 8.91E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, electricity | MJ | 0.00E+00 | 0.00E+00 | 2.06E+01 | 0.00E+00 | 0.00E+00 |
| Exported energy, thermal | MJ | 0.00E+00 | 0.00E+00 | 6.07E+01 | 0.00E+00 | 0.00E+00 |

Additional information – Potential impacts and flows in case of landfilling

| Results per functional or declared unit in case of landfilling - Starfloor Click Solid. | | | | | | |
|---|------------------------|----------|----------|----------|----------|-----------|
| Indicator | Unit | C1/3 | C2/3 | C3/3 | C4/3 | D/3 |
| GWP-total | kg CO ₂ eq. | 0.00E+00 | 4.46E-02 | 0.00E+00 | 1.08E+00 | -3.67E-01 |
| GWP-fossil | kg CO ₂ eq. | 0.00E+00 | 4.46E-02 | 0.00E+00 | 7.29E-01 | -3.45E-01 |
| GWP- biogenic | kg CO ₂ eq. | 0.00E+00 | 1.82E-05 | 0.00E+00 | 3.54E-01 | 8.94E-06 |
| GWP- Luluc | kg CO ₂ eq. | 0.00E+00 | 1.56E-05 | 0.00E+00 | 1.84E-05 | -2.15E-02 |
| ODP | kg CFC 11 eq. | 0.00E+00 | 1.01E-08 | 0.00E+00 | 2.77E-08 | -1.18E-07 |
| AP | mol H ⁺ eq. | 0.00E+00 | 1.82E-04 | 0.00E+00 | 6.70E-04 | -1.64E-03 |
| EP-freshwater | kg P eq. | 0.00E+00 | 3.26E-06 | 0.00E+00 | 8.18E-06 | -1.26E-04 |
| | | 0.00E+00 | 1.00E-05 | 0.00E+00 | 2.51E-05 | -3.87E-04 |
| EP-marine | kg N eq. | 0.00E+00 | 5.46E-05 | 0.00E+00 | 3.49E-03 | -3.55E-04 |
| EP-terrestrial | mol N eq. | 0.00E+00 | 5.97E-04 | 0.00E+00 | 2.68E-03 | -3.07E-03 |
| POCP | kg NMVOC eq. | 0.00E+00 | 1.83E-04 | 0.00E+00 | 9.20E-04 | -1.25E-03 |
| ADP-minerals&metals* | kg Sb eq. | 0.00E+00 | 1.21E-06 | 0.00E+00 | 6.63E-07 | -2.95E-05 |
| ADP-fossil* | MJ | 0.00E+00 | 6.72E-01 | 0.00E+00 | 2.02E+00 | -7.93E+00 |
| WDP | m ³ | 0.00E+00 | 1.87E-03 | 0.00E+00 | 9.24E-03 | -4.35E-01 |

| Results per functional or declared unit in case of landfilling - Starfloor Click Solid. | | | | | | |
|---|----------------|----------|----------|----------|----------|-----------|
| Indicator | Unit | C1/3 | C2/3 | C3/3 | C4/3 | D/3 |
| PERE | MJ | 0.00E+00 | 9.48E-03 | 0.00E+00 | 7.75E-02 | -4.22E-01 |
| PERM | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -1.54E-01 |
| PERT | MJ | 0.00E+00 | 9.48E-03 | 0.00E+00 | 7.75E-02 | -5.76E-01 |
| PENRE | MJ | 0.00E+00 | 6.72E-01 | 0.00E+00 | 2.02E+00 | -6.05E+00 |
| PENRM | MJ. | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -1.88E+00 |
| PENRT | MJ | 0.00E+00 | 6.72E-01 | 0.00E+00 | 2.02E+00 | -7.93E+00 |
| SM | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.67E-01 |
| RSF | MJ | 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 |
| FW | m ³ | 0.00E+00 | 6.94E-05 | 0.00E+00 | 2.49E-03 | -6.62E-03 |

| Results per functional or declared unit in case of landfilling - Starfloor Click Solid. | | | | | | |
|---|------|----------|----------|----------|----------|-----------|
| Indicator | Unit | C1/3 | C2/3 | C3/3 | C4/3 | D/3 |
| Hazardous waste disposed | kg | 0.00E+00 | 4.32E-04 | 0.00E+00 | 2.00E-03 | -1.29E-02 |
| Non-hazardous waste disposed | kg | 0.00E+00 | 3.53E-02 | 0.00E+00 | 8.93E+00 | -1.14E-01 |
| Radioactive waste disposed | kg | 0.00E+00 | 4.58E-06 | 0.00E+00 | 1.32E-05 | -1.70E-05 |

| Results per functional or declared unit in case of landfilling - Starfloor Click Solid. | | | | | | |
|---|------|----------|----------|----------|----------|----------|
| Indicator | Unit | C1/3 | C2/3 | C3/3 | C4/3 | D/3 |
| Components for re-use | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Material for recycling | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Materials for energy recovery | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, electricity | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, thermal | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

Information on biogenic carbon content for all groups

| Results per functional or declared unit | | |
|---|------|----------|
| BIOGENIC CARBON CONTENT | Unit | QUANTITY |
| Biogenic carbon content in product | kg C | 0.584 |
| Biogenic carbon content in packaging | kg C | <0.012 |

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂.

References

General Programme Instructions of the International EPD® System. Version 3.01.
PCR 2019:14. Version 1.11 c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810)

