# Environmental Product Declaration

In accordance with ISO 14025:2006, EN 15804:2012+A2:2019/AC:2021 and EN 16810:2017 for:

## ID Evolution / Collective Pursuit / PP Modular flooring 2.5 mm from TARKETT GDL



Programme:

Programme operator: EPD registration number: Publication date: Valid until: The International EPD<sup>®</sup> System, <u>www.environdec.com</u> EPD International AB S-P-14100 2024-05-31 2029-05-30

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











## **Programme information**

|            | The International EPD <sup>®</sup> System                           |
|------------|---|
| Programme: | EPD International AB<br>Box 210 60<br>SE-100 31 Stockholm<br>Sweden |
|            | www.environdec.com<br>info@environdec.com                           |

#### Accountabilities for PCR, LCA and independent, third-party verification

#### Product Category Rules (PCR)

Product category rules (PCR): <*Construction Products*, 2019:04, version 1.3.2> Complementary product category rules (c-PCR): <*Resilient, Textile And Laminate Floor Coverings* (*EN 16810:2017*), C-PCR-004, version 2019-12-20> CEN standard EN 15804 serve as the core PCR, EN 16810 serve as the complementary PCR.

Product category classification: UN CPC 3691

PCR review was conducted by: The Technical Committee of the International EPD® System. Chair of the PCR review: Lars-Gunnar Lindfors. The review panel may be contacted via info@ environdec.com>

#### Life Cycle Assessment (LCA)

LCA accountability: <Solomon J. Zhou, April He, Aryn Yang, Tony Sun, Abby Qin, TÜV SÜD Certification and Testing (China) Co., Ltd.>

#### Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

EPD verification by individual verifier

Third-party verifier: < Sunil Kumar, SIPL Pvt Ltd >

Approved by: The International EPD® System

Procedure for follow-up of data during EPD validity involves third-party verifier:

 $\boxtimes$  Yes  $\Box$  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 may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same version number up to the first two digits) 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.





## **Company information**

#### Owner of the EPD:

TARKETT GDL Phone: +33 1 4120 4296 Email: <u>myriam.tryjefaczka@tarkett.com</u> Address: 11, An der Feckel, L-9779 Lentzweiler, Luxembourg

#### Description of the organisation:

TARKETT GDL is a Luxembourgish company registered in the Register of Commerce of Luxembourg under the number B 92165, having its registered office located at 11, An der Feckel, L-9779 Lentzweiler, Luxembourg, as well as its Affiliates.

#### Location of production site:

Zhejiang, China

## **Product information**

Product name: ID Evolution / Collective Pursuit / PP Modular flooring 2.5 mm

Product identification by standard: Resilient, Textile and Laminate Floor Coverings

**UN CPC code:** 36910, Floor coverings of plastics, in rolls or in the form of tiles; wall or ceiling coverings of plastics

## Modules declared, geographical scope, share of specific data, and variation between products and sites:

|                        | Product stage |    |      | Construction<br>process stage |    | Use<br>stage | End-of-life stage |    |    |    | Benefits and loads beyond the system boundary |
|------------------------|---------------|----|------|-------------------------------|----|--------------|-------------------|----|----|----|---|
| Module                 | A1            | A2 | A3   | A4                            | A5 | B2           | C1                | C2 | C3 | C4 | D   |
| Modules<br>declared    | Х             | Х  | х    | х                             | х  | х            | Х                 | Х  | Х  | Х  | X   |
| Geography              | China         |    |      | Global                        |    |              |                   |    |    |    |   |
| Share of specific data | 0%            | 0% | >90% | ١                             | ١  | ١            | ١                 | ١  | ١  | ١  | ١   |
| Variation – products   | ١             | ١  | ١    | ١                             | ١  | ١            | ١                 | ١  | ١  | ١  | ٨   |
| Variation - sites      | 1             | 1  | 1    | ١                             | ١  | ١            | 1                 | 1  | 1  | 1  | 1   |





#### **Product description:**

ID Evolution / Collective Pursuit / PP Modular flooring 2.5 mm is Tarkett's latest non-PVC collection of modular tiles made from 64% mineral content combining strength, durability and environmental consciousness. The product ensures excellent indoor air quality through ultra-low VOC emissions. Also made of polypropylene, a material commonly used in car bumpers, the collection is tailored for high traffic areas: workplace, stores and shops, higher education, collective housing as well as aged care. Its glue down installation method promises endurance and long-lasting stability.

#### **Typical application:**

ID Evolution / Collective Pursuit / PP Modular flooring 2.5 mm is widely used in residential and commercial using, including home, hotel, restaurant, hospital, which is more healthy, low VOC, great in surface resistance and easy maintaining.

#### **Physical characteristics:**

| Characteristics                            | PP (2.5mm) |
|--|------------|
| Product thickness, mm                      | 2.50       |
| Wear layer thickness (before calendar), mm | 0.40       |
| Substrate thickness (before calendar), mm  | 1.90       |
| Net weight, kg/m <sup>2</sup>              | 4.10       |
| Gross weight, kg/m <sup>2</sup>            | 4.21       |
| Product length, mm                         | 610~1840   |
| Product width, mm                          | 122~1000   |

## LCA information

Declared unit: 1m<sup>2</sup> of PP modular flooring 2.5 mm

Reference service life: 10 years

Time representativeness: 2022.10.01~2023.09.30

#### **Product representativeness:**

In accordance with the PCR, similar products from a single or several manufacturing sites covered by the same PCR and manufactured by the same company with the same major steps in the core processes may be grouped and thereby included in the same EPD. For the EPDs referring to this LCA report, only 1 type of product is assessed, no specific case is needed to be set.

#### Database(s) and LCA software used:

Ecoinvent (cut-off) 3.9.1, Ecoinvent (APOS) 3.8 and Industry data 2.0 Database, Simapro 9.5.0.0 Software

#### System diagram:



THE INTERNATIONAL EPD® SYSTEM



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

#### Excluded life-cycle modules:

No life-cycle stage is omitted. In accordance with the c-PCR, floor covering during its lifetime in the use stage has no environmental aspects and impacts during their normal use and is neither repaired, replaced or refurbished (other than at the end of life). As a result, floor coverings are not contributing to modules B1 and B3 to B7. For floor coverings the modules B1, B3 to B7 are not relevant to the environmental performance of a product. In such cases the irrelevant module shall be declared as "not relevant".

#### Cut-off rules:

In accordance with the c-PCR, in case of insufficient input data or data gaps for a unit process, the cut-off criteria shall be 1% of renewable and non-renewable primary energy usage and 1% of the total mass input of that unit process. The total of neglected input flows per information module shall be a maximum of 5% of energy usage and mass.

In this life cycle assessment, 0% of total energy usage and less than 0.02% of total mass input is cutoff, and none of module is cut-off, which conforms to the c-PCR. Trimmings in module A1 were all recycled, reground and re-fed, the materials input and output of close-loop production process is cutoff. Packaging belts, stretch films, manuals and labels inputs as package of product were omitted. In addition, the consumption and emissions of roads and plants' infrastructure, equipment of each process, personnel and living facilities in the plants were ignored.

#### Allocation rules:

The manufacturing energy and resource use and manufacturing emissions and wastes from the manufacturing process are allocated according to the total yield of factory by area (m<sup>2</sup>).

#### Scenarios:

The products assessed in the present report relate to scenario assumptions.

In the A5 module, the adhesive usage is assumed according to manuals of matching adhesives. The representative type of pressure-sensitive adhesive used for PP modular flooring 2.5 mm is UZIN\_MK\_250, with a recommended dosage of up to 1,200 g/m<sup>2</sup>. Splicing slot does not require consumables or energy.





In the B2 module, the reference service life of products is set to be 10 years. Maintenance of the products assessed in this report is assumed, as shown in the following table:

| Maintenance process | Frequency      | Consumption per year                     |
|---------------------|----------------|--|
| Vacuum cleaning     | Once per week  | 0.0598 kWh/m <sup>2</sup> of electricity |
| Washing             | Twice per week | 2.08 kg/m <sup>2</sup> of tap water      |
| Waxing              | Twice per year | 0.0378 kg/m <sup>2</sup> of flooring wax |

In the C2 module, the end-of-life transport distance of the product is assumed to be 100 km, referring to *Product Environmental Footprint Category Rules Guidance Version 6.3.* 

In the C4 module, the end-of-life disposal of the product is assumed to be landfill of the product as a whole.

Period of validity: 5 years

#### **Other Information:**

#### Energy resource

The data for the production of electricity applied is electricity consumption mix on the market, i.e., the China National Grid East China Regional Grid Mix in the Ecoinvent 3.9.1 (cut-off) database. Its climate impact is 0.881 kgCO<sub>2</sub>eq/kWh. The reference year of electricity dataset is 2014~2022.

### **Additional information**

#### **Renewable energy attribute**

The manufacturer has purchased and redeemed 1000.000 MWh of International Renewable Energy Certificate (I-REC) to optimize the electricity attribute of production in the reporting period of 2023.01~2023.08.

## **Content declarations**

#### **Content information:**

| Product component                      | PP (2.5mm) |
|--|------------|
| PP resin, kg/m <sup>2</sup>            | 0.5791     |
| Magnesium hydroxide, kg/m <sup>2</sup> | 0.9930     |
| Calcium carbonate, kg/m <sup>2</sup>   | 1.7574     |
| Additives, kg/m <sup>2</sup>           | 0.0498     |
| Films, kg/m <sup>2</sup>               | 0.6860     |
| Coating, kg/m <sup>2</sup>             | 0.0318     |
| Total, kg/m <sup>2</sup>               | 4.0970     |

In accordance with the PCR, claims for biogenic carbon content are omitted as the biogenic carbon contained in the product is significantly less than 5 % of the total mass. In addition, no post-consumer material was used for the production of product.





| Dangerous substances from the<br>candidate list of SVHC for Authorisation | EC No. | CAS No. | Weight-% per declared unit |
|---|--------|---------|----------------------------|
| None  | None   | None    | 0%                         |

#### Package information:

| Packaging material                          | PP (2.5mm) |  |  |  |  |  |
|---|------------|--|--|--|--|--|
| Wood pallets, kg/m <sup>2</sup>             | 0.05443    |  |  |  |  |  |
| Corrugated board boxes, kg/m <sup>2</sup>   | 0.05862    |  |  |  |  |  |
| Corrugated board corners, kg/m <sup>2</sup> | 0.00105    |  |  |  |  |  |
| Packaging belts, kg/m <sup>2</sup>          | 0.00021    |  |  |  |  |  |
| Stretch films, kg/m <sup>2</sup>            | 0.00004    |  |  |  |  |  |
| Labels, kg/m <sup>2</sup>                   | 0.00021    |  |  |  |  |  |

In accordance with the PCR, since the share of biobased materials of packages are unknown, this part of the content declaration is declared as 0% as a conservative estimation.





## Results of the environmental performance indicators per 1m<sup>2</sup> of resilient floor coverings

This LCA analysis applied the EN 15804+A2(adapted) V1.00 as the calculation method.

#### Impact category indicators

| Indicator           | Unit                   | A1       | A2       | A3       | A1-A3    | A4       | A5       | B2       | C1       | C2       | C3       | C4       | D         |
|---------------------|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| GWP-total           | kg CO <sub>2</sub> eq. | 6.54E+00 | 1.98E-01 | 4.53E+00 | 1.13E+01 | 1.16E+00 | 4.58E+00 | 1.00E+00 | 0.00E+00 | 5.67E-01 | 0.00E+00 | 2.49E-02 | -1.94E-02 |
| GWP-GHG             | kg CO <sub>2</sub> eq. | 6.53E+00 | 1.98E-01 | 4.52E+00 | 1.12E+01 | 1.16E+00 | 4.43E+00 | 1.00E+00 | 0.00E+00 | 5.67E-01 | 0.00E+00 | 2.49E-02 | -1.93E-02 |
| GWP-fossil          | kg CO <sub>2</sub> eq. | 6.50E+00 | 1.98E-01 | 4.51E+00 | 1.12E+01 | 1.16E+00 | 4.43E+00 | 1.00E+00 | 0.00E+00 | 5.67E-01 | 0.00E+00 | 2.49E-02 | -1.92E-02 |
| GWP-biogenic        | kg CO <sub>2</sub> eq. | 7.05E-03 | 6.02E-05 | 8.20E-03 | 1.53E-02 | 2.52E-04 | 1.44E-01 | 1.12E-03 | 0.00E+00 | 6.22E-05 | 0.00E+00 | 1.09E-05 | -1.59E-04 |
| GWP-luluc           | kg CO <sub>2</sub> eq. | 2.84E-02 | 9.85E-05 | 3.15E-03 | 3.16E-02 | 8.34E-04 | 4.25E-03 | 1.06E-03 | 0.00E+00 | 7.17E-05 | 0.00E+00 | 1.50E-05 | -6.61E-05 |
| ODP                 | kg CFC 11 eq.          | 4.15E-08 | 3.26E-09 | 1.94E-08 | 6.41E-08 | 1.78E-08 | 4.85E-07 | 3.13E-08 | 0.00E+00 | 8.89E-09 | 0.00E+00 | 7.21E-10 | 3.51E-09  |
| AP                  | mol H <sup>+</sup> eq. | 2.93E-02 | 8.67E-04 | 2.30E-02 | 5.32E-02 | 2.90E-02 | 1.98E-02 | 5.83E-03 | 0.00E+00 | 3.10E-03 | 0.00E+00 | 1.88E-04 | -1.12E-04 |
| EP-freshwater       | kg P eq.               | 1.01E-03 | 1.61E-05 | 8.27E-04 | 1.85E-03 | 4.89E-05 | 1.18E-03 | 2.34E-04 | 0.00E+00 | 1.06E-05 | 0.00E+00 | 2.07E-06 | -4.81E-06 |
| EP-marine           | kg N eq.               | 4.83E-03 | 3.18E-04 | 5.00E-03 | 1.01E-02 | 7.36E-03 | 3.93E-03 | 9.11E-04 | 0.00E+00 | 1.35E-03 | 0.00E+00 | 7.20E-05 | -3.54E-05 |
| EP-terrestrial      | mol N eq.              | 5.07E-02 | 3.40E-03 | 5.26E-02 | 1.07E-01 | 8.13E-02 | 4.09E-02 | 8.89E-03 | 0.00E+00 | 1.46E-02 | 0.00E+00 | 7.72E-04 | -3.83E-04 |
| POCP                | kg NMVOC eq.           | 1.75E-02 | 1.22E-03 | 1.55E-02 | 3.42E-02 | 2.23E-02 | 1.65E-02 | 4.77E-03 | 0.00E+00 | 5.71E-03 | 0.00E+00 | 2.69E-04 | -1.69E-04 |
| ADP-minerals&metals | kg Sb eq.              | 2.22E-05 | 5.38E-07 | 1.85E-05 | 4.13E-05 | 1.49E-06 | 4.01E-05 | 2.75E-06 | 0.00E+00 | 3.64E-07 | 0.00E+00 | 3.46E-08 | -7.42E-09 |
| ADP-fossil          | MJ                     | 1.33E+02 | 2.89E+00 | 5.11E+01 | 1.87E+02 | 1.47E+01 | 8.14E+01 | 2.82E+01 | 0.00E+00 | 7.36E+00 | 0.00E+00 | 6.20E-01 | -2.44E-01 |
| WDP                 | m <sup>3</sup>         | 8.29E+00 | 1.47E-02 | 8.01E-01 | 9.11E+00 | 4.19E-02 | 2.00E+00 | 9.86E-01 | 0.00E+00 | 1.39E-02 | 0.00E+00 | 2.74E-02 | -5.07E-04 |





#### **Resource use indicators**

| Indicator | Unit | A1       | A2       | A3       | A1-A3    | A4       | A5       | B2       | C1       | C2       | C3       | C4       | D         |
|-----------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| PERE      | MJ   | 6.05E+00 | 3.68E-02 | 5.85E+00 | 1.19E+01 | 1.22E-01 | 3.69E+00 | 8.68E-01 | 0.00E+00 | 2.92E-02 | 0.00E+00 | 5.31E-03 | -1.37E+00 |
| PERM      | MJ   | 0.00E+00  |
| PERT      | MJ   | 6.05E+00 | 3.68E-02 | 5.85E+00 | 1.19E+01 | 1.22E-01 | 3.69E+00 | 8.68E-01 | 0.00E+00 | 2.92E-02 | 0.00E+00 | 5.31E-03 | -1.37E+00 |
| PENRE     | MJ   | 1.33E+02 | 2.89E+00 | 5.11E+01 | 1.87E+02 | 1.47E+01 | 8.14E+01 | 2.82E+01 | 0.00E+00 | 7.36E+00 | 0.00E+00 | 6.20E-01 | -2.44E-01 |
| PENRM     | MJ   | 0.00E+00  |
| PENRT     | MJ   | 1.33E+02 | 2.89E+00 | 5.11E+01 | 1.87E+02 | 1.47E+01 | 8.14E+01 | 2.82E+01 | 0.00E+00 | 7.36E+00 | 0.00E+00 | 6.20E-01 | -2.44E-01 |
| SM        | kg   | 0.00E+00  |
| RSF       | MJ   | 0.00E+00  |
| NRSF      | MJ   | 0.00E+00  |
| FW        | m3   | 1.96E-01 | 4.62E-04 | 1.95E-02 | 2.16E-01 | 1.43E-03 | 5.24E-02 | 2.46E-02 | 0.00E+00 | 5.00E-04 | 0.00E+00 | 6.59E-04 | -3.69E-05 |

#### Waste indicators

| Indicator | Unit | A1       | A2       | A3       | A1-A3    | A4       | A5       | B2       | C1       | C2       | С3       | C4       | D         |
|-----------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| HWD       | kg   | 4.14E-03 | 1.83E-05 | 6.86E-05 | 4.23E-03 | 7.71E-05 | 1.28E-04 | 1.15E-04 | 0.00E+00 | 4.97E-05 | 0.00E+00 | 3.29E-06 | -2.73E-06 |
| NHWD      | kg   | 3.01E-01 | 2.52E-01 | 3.65E-01 | 9.18E-01 | 3.03E-01 | 5.51E-01 | 4.42E-02 | 0.00E+00 | 3.72E-02 | 0.00E+00 | 4.10E+00 | -5.76E-03 |
| RWD       | kg   | 2.00E-05 | 6.32E-07 | 1.04E-04 | 1.25E-04 | 1.95E-06 | 6.35E-05 | 1.67E-05 | 0.00E+00 | 5.38E-07 | 0.00E+00 | 9.17E-08 | 9.73E-07  |





#### Output flows

| Indicator | Unit | A1       | A2       | A3       | A1-A3    | A4       | A5       | B2       | C1       | C2       | C3       | C4       | D        |
|-----------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| CRU       | kg   | 0.00E+00 | 5.44E-02 |
| MFR       | kg   | 0.00E+00 |
| MER       | kg   | 0.00E+00 | 1.35E+00 |
| EEE       | MJ   | 0.00E+00 | 5.43E+01 |
| ETE       | MJ   | 0.00E+00 |

**Abbreviations:** GWP-total: Global Warming Potential total; GWP-GHG: Global Warming Potential greenhouse gas; 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; 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 non-renewable primary energy resources used as raw materials; PENRT: Total use of non-renewable primary energy resources used as raw materials; PENRT: Total use of non-renewable primary energy resources used as raw materials; PENRT: Total use of non-renewable primary energy resources; SM: Use of secondary material; RSF: Use of renewable secondary fuels; NRSF: Use of non-renewable primary energy resources; SM: Use of renewable secondary fuels; NRSF: Use of non-renewable secondary fuels; NRSF: Use of non-renewable secondary fuels; NRSF: Use of renewable secondary fuels; NRSF: Use of non-renewable primary energy resources; SM: Use of renewable secondary fuels; NRSF: Use of non-renewable secondary fuels; NRSF: Use of re-use; MFR: Materials for re-use; MFR: Materials for re-use; MFR: Materials for r





## References

- 1) ISO 14040:2006 Environmental management Life cycle assessment Principles and Framework
- 2) ISO 14044:2006 Environmental management Life cycle assessment Principles and guidelines
- 3) ISO 14025:2006, Environmental labels and declarations Type III environmental declarations Principles and procedures
- 4) EN 15804:2012+A2:2019/AC:2021, Sustainability of construction works Environmental product declarations Core rules for the product category of construction products
- 5) EPD International (2021) General Programme Instructions for the International EPD® System. Version 4.0
- 6) Product category rules (PCR): CONSTRUCTION PRODUCTS, PCR 2019:14, VERSION 1.3.2
- Zampori, L. and Pant, R., Suggestions for updating the Product Environmental Footprint (PEF) method, EUR 29682 EN, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76- 00654-1, doi:10.2760/424613, JRC115959.
- 8) Product Environmental Footprint Category Rules Guidance, Version 6.3, May 2018.
- 9) EN 16810:2017, Resilient, textile and laminate floor coverings Environmental product declarations Product category rules
- 10) PCR 2019:14-c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810), VERSION 2019-12-20





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