

**Declaration Owner**

Dinoflex

5590 - 46th Ave S.E.

Salmon Arm, British Columbia, V1E4S1

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**Product**

Rubber Flooring (NSPSC Class Code 30161705):

- *PlayTiles®*
- *NuVista® Tiles*
- *Stride Fitness Tiles*

**Functional Unit**

The functional unit is one square meter of flooring over a 75-year period

**EPD Number and Period of Validity**

SCS-EPD-08917

EPD Valid May 1, 2023 through April 30, 2028

**Product Category Rule**

PCR Guidance for Building-Related Products and Services Part A: Life Cycle Assessment Calculation Rules and Report Requirements. Version 3.2. UL Environment. September 2018.

PCR Guidance for Building-Related Products and Services Part B: Flooring EPD Requirements. Version 2. UL Environment. December 2018.

**Program Operator**

SCS Global Services

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|                                                                                          |                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Declaration Owner:                                                                       | Dinoflex                                                                                                                                                                                                                                                                                 |
| Address:                                                                                 | 5590 - 46th Ave S.E. Salmon Arm, British Columbia, V1E4S1                                                                                                                                                                                                                                |
| Declaration Number:                                                                      | SCS-EPD-08917                                                                                                                                                                                                                                                                            |
| Declaration Validity Period:                                                             | EPD Valid May 1, 2023 through April 30, 2028                                                                                                                                                                                                                                             |
| Program Operator:                                                                        | SCS Global Services                                                                                                                                                                                                                                                                      |
| Declaration URL Link:                                                                    | <a href="https://www.scsglobalservices.com/certified-green-products-guide">https://www.scsglobalservices.com/certified-green-products-guide</a>                                                                                                                                          |
| LCA Practitioner:                                                                        | Gerard Mansell, Ph.D., SCS Global Services                                                                                                                                                                                                                                               |
| LCA Software and LCI database:                                                           | OpenLCA v1.10 software and the Ecoinvent v3.7 database                                                                                                                                                                                                                                   |
| Product RSL:                                                                             | Various                                                                                                                                                                                                                                                                                  |
| Markets of Applicability:                                                                | Global                                                                                                                                                                                                                                                                                   |
| EPD Type:                                                                                | Product-Specific                                                                                                                                                                                                                                                                         |
| EPD Scope:                                                                               | Cradle-to-Grave                                                                                                                                                                                                                                                                          |
| LCIA Method and Version:                                                                 | CML-IA and TRACI 2.1                                                                                                                                                                                                                                                                     |
| Independent critical review of the LCA and data, according to ISO 14044 and ISO 14071    | <input type="checkbox"/> internal <input checked="" type="checkbox"/> external                                                                                                                                                                                                           |
| LCA Reviewer:                                                                            | <br>Thomas Gloria, Ph.D., Industrial Ecology Consultants                                                                                                                                               |
| Part A Product Category Rule:                                                            | PCR Guidance for Building-Related Products and Services Part A: Life Cycle Assessment Calculation Rules and Report Requirements. Version 3.2. UL Environment. September. 2018                                                                                                            |
| Part A PCR Review conducted by:                                                          | Lindita Bushi, PhD (Chair); Hugues Imbeault-Tétreault, ing., M.Sc.A.; Jack Geibig                                                                                                                                                                                                        |
| Part B Product Category Rule:                                                            | PCR Guidance for Building-Related Products and Services Part B: Flooring EPD Requirements. Version 2. UL Environment. December 2018.                                                                                                                                                     |
| Part B PCR Review conducted by:                                                          | Jack Geibig (chair), Ecoform; Thomas Gloria, Industrial Ecology Consultants; Thaddeus Owen                                                                                                                                                                                               |
| Independent verification of the declaration and data, according to ISO 14025 and the PCR | <input type="checkbox"/> internal <input checked="" type="checkbox"/> external                                                                                                                                                                                                           |
| EPD Verifier:                                                                            | <br>Thomas Gloria, Ph.D., Industrial Ecology Consultants                                                                                                                                             |
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**Disclaimers:** This EPD conforms to ISO 14025, 14040, 14044, and 21930.

**Scope of Results Reported:** The PCR requirements limit the scope of the LCA metrics such that the results exclude environmental and social performance benchmarks and thresholds, and exclude impacts from the depletion of natural resources, land use ecological impacts, ocean impacts related to greenhouse gas emissions, risks from hazardous wastes and impacts linked to hazardous chemical emissions.

**Accuracy of Results:** Due to PCR constraints, this EPD provides estimations of potential impacts that are inherently limited in terms of accuracy.

**Comparability:** The PCR this EPD was based on was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner's assumptions, the source of the data used in the study, and the specifics of the product modeled.

In accordance with ISO 21930:2017, EPDs are comparable only if they comply with the core PCR, use the same sub-category PCR where applicable, include all relevant information modules and are based on equivalent scenarios with respect to the context of construction works.

## 1. Dinoflex

As a global industry leader in recycled rubber surfacing Dinoflex offers a wide range of interior flooring and exterior surfacing solutions for commercial, institutional, sport, and hospitality applications. Our commitment to passionately doing what is uniquely different has attracted architects, designers and builders to partner with Dinoflex for over 30 years.

Floors are the building block of every design space. When envisioning a new project, the purpose, function, traffic and visual impact, along with texture, color and light are vital considerations. With a wide range of innovative products, colors, and finishes, our flooring solutions empower designers and architects to blend style with LEED-certified functionality to create beautiful and inspiring spaces.

## 2. Product

### 2.1 PRODUCT DESCRIPTION

The products include rubber floor tiles/mats containing recycled styrene butadiene (SBR) and ethylene propylene diene monomer (EPDM) rubber. The Dinoflex flooring products included in this EPD are manufactured from a combination of recycled styrene butadiene (SBR) and ethylene propylene diene monomer (EPDM) rubber, binders, catalysts and pigments and manufactured at the company's facility in Salmon Arm, British Columbia.

| Product Line         | Product Format | Description                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PlayTiles®           | Square Cut     | Dinoflex PlayTiles® create a safe place to let kids be kids. Parents will have peace of mind knowing their kids are playing on an ASTM certified surface. Specially designed to reduce injuries from falls, kids can run, jump, swing, and slide on a product that supports play.                                                                                               |
| NuVista® Tiles       | Square Cut     | Dinoflex NuVista® Tiles provide a durable, high traction decorative landscape surface for rooftop areas and ground level locations when you are looking to revitalize the space. Suitable for rooftop patio retreats and community gardens, landscape designs and sophisticated green roof systems resilient rubber paver tiles are an all-weather solution for year-round use. |
| Stride Fitness Tiles | Square Cut     | Engineered with an impact absorbing grid to reduce sound and vibration, these tiles are the ideal interior flooring solution for workout areas located over occupied spaces. This molded recycled rubber tile features a color layer that is built to last and will not separate even with the heaviest of weights being dropped.                                               |

## 2.2 PRODUCT FLOW DIAGRAM

A flow diagram illustrating the production processes and life cycle phases included in the scope of the EPD is provided below.



## 2.3 APPLICATION

The rubber flooring products provide the primary function of flooring for interior and exterior applications. The flooring products are used in various residential and commercial applications including retail, healthcare, education, and hospitality.

## 2.4 DECLARATION OF METHODOLOGICAL FRAMEWORK

The scope of the EPD is cradle-to-grave, including raw material extraction and processing, transportation, product manufacture, product delivery, installation and use, and product disposal. The life cycle phases included in the product system boundary are shown below.

Cut-off and allocation procedures are described below and conform to the PCR and ISO standards.

**Table 1.** Life cycle phases included in the product system boundary.

| Product                                |                           |               | Construction Process |                             | Use |             |        |             |               |                        |                       | End-of-life               |           |                  |          | Benefits and loads beyond the system boundary |
|----------------------------------------|---------------------------|---------------|----------------------|-----------------------------|-----|-------------|--------|-------------|---------------|------------------------|-----------------------|---------------------------|-----------|------------------|----------|-----------------------------------------------|
| A1                                     | A2                        | A3            | A4                   | A5                          | B1  | B2          | B3     | B4          | B5            | B6                     | B7                    | C1                        | C2        | C3               | C4       | D                                             |
| Raw material extraction and processing | Transport to manufacturer | Manufacturing | Transport            | Construction - installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | Deconstruction demolition | Transport | Waste processing | Disposal | Reuse, recovery and/or recycling potential    |
| X                                      | X                         | X             | X                    | X                           | X   | X           | X      | X           | X             | X                      | X                     | X                         | X         | X                | X        | MND                                           |

X = included | MND = Module Not Declared

## 2.5 TECHNICAL DATA

Technical specifications for the rubber flooring product are summarized in Table 2 through Table 8.

**Table 2.** Product characteristics for the **PlayTile** flooring product.

| Characteristic                          |                    | Description                      |                                        |               |                |
|-----------------------------------------|--------------------|----------------------------------|----------------------------------------|---------------|----------------|
| Sustainable certifications              |                    | Health Product Declaration (HPD) |                                        |               |                |
| VOC emissions test method               |                    | FloorScore®                      |                                        |               |                |
| Characteristic                          |                    | Average Value                    | Unit                                   | Min Value     | Max Value      |
| Product thickness                       |                    | 47.63 (1.88)                     | mm (in)                                | 38.10 (1.50)  | 57.15 (2.25)   |
| Wear layer thickness (where applicable) |                    | 6.00 (0.24)                      | mm (in)                                | 6.00 (0.24)   | 6.00 (0.24)    |
| Product weight                          |                    | 30,515 (100.0)                   | g/m <sup>2</sup> (oz/ft <sup>2</sup> ) | 28,074 (92.0) | 32,956 (108.0) |
| Product Form                            | Tiles - Square Cut | 609.6 (24.0)                     | mm (in)                                | 609.6 (24.0)  | 609.6 (24.0)   |
|                                         |                    | 609.6 (24.0)                     | mm (in)                                | 609.6 (24.0)  | 609.6 (24.0)   |

**Table 3.** Product characteristics for the **NuVista® Tile** flooring product.

| Characteristic                          |                    | Description                      |                                        |               |                |
|-----------------------------------------|--------------------|----------------------------------|----------------------------------------|---------------|----------------|
| Sustainable certifications              |                    | Health Product Declaration (HPD) |                                        |               |                |
| VOC emissions test method               |                    | FloorScore®                      |                                        |               |                |
| Characteristic                          |                    | Average Value                    | Unit                                   | Min Value     | Max Value      |
| Product thickness                       |                    | 44.45 (1.75)                     | mm (in)                                | 25.40 (1.00)  | 63.50 (2.50)   |
| Wear layer thickness (where applicable) |                    | 6.00 (0.24)                      | mm (in)                                | 6.00 (0.24)   | 6.00 (0.24)    |
| Product weight                          |                    | 32,346 (106.0)                   | g/m <sup>2</sup> (oz/ft <sup>2</sup> ) | 24,412 (80.0) | 40,280 (132.0) |
| Product Form                            | Tiles - Square Cut | 609.6 (24.0)                     | mm (in)                                | 609.6 (24.0)  | 609.6 (24.0)   |
|                                         |                    | 609.6 (24.0)                     | mm (in)                                | 609.6 (24.0)  | 609.6 (24.0)   |

**Table 4.** Product characteristics for the **Stride Fitness Tile** flooring product.

| Characteristic                          |                    | Description                      |                                        |               |                |
|-----------------------------------------|--------------------|----------------------------------|----------------------------------------|---------------|----------------|
| Sustainable certifications              |                    | Health Product Declaration (HPD) |                                        |               |                |
| VOC emissions test method               |                    | FloorScore®                      |                                        |               |                |
| Characteristic                          |                    | Average Value                    | Unit                                   | Min Value     | Max Value      |
| Product thickness                       |                    | 47.63 (1.88)                     | mm (in)                                | 25.40 (1.00)  | 69.85 (2.75)   |
| Wear layer thickness (where applicable) |                    | 6.00 (0.24)                      | mm (in)                                | 6.00 (0.24)   | 6.00 (0.24)    |
| Product weight                          |                    | 28,074 (92.0)                    | g/m <sup>2</sup> (oz/ft <sup>2</sup> ) | 13,427 (44.0) | 42,721 (140.0) |
| Product Form                            | Tiles - Square Cut | 609.6 (24.0)                     | mm (in)                                | 609.6 (24.0)  | 609.6 (24.0)   |
|                                         |                    | 609.6 (24.0)                     | mm (in)                                | 609.6 (24.0)  | 609.6 (24.0)   |

## 2.6 MARKET PLACEMENT/APPLICATION RULES

Technical specifications of the flooring products are summarized below. Detailed product performance results can be found on the manufacturer's website <https://dinoflex.com/resources>.

## 2.7 PROPERTIES OF DECLARED PRODUCT AS DELIVERED

The rubber flooring products are delivered for installation in the form of tiles of various dimensions.

## 2.8 MATERIAL COMPOSITION

The primary materials include recycled and virgin EPDM and SBR rubber, binders, catalysts and pigments.

**Table 5.** Material content for the rubber flooring products in kg per square meter and percent of total mass.

| Product              | SBR Rubber | Regrind Rubber | EPDM  | Water | Other | Total |
|----------------------|------------|----------------|-------|-------|-------|-------|
| PlayTiles®           | 30.3       | 0.00           | 5.39  | 0.162 | 3.52  | 39.4  |
|                      | 77%        | 0%             | 14%   | 0.41% | 8.9%  | 100%  |
| NuVista® Tiles       | 5.39       | 23.6           | 0.00  | 0.135 | 3.30  | 32.4  |
|                      | 17%        | 73%            | 0%    | 0.42% | 10%   | 100%  |
| Stride Fitness Tiles | 21.2       | 0.00           | 0.539 | 0.162 | 2.25  | 24.2  |
|                      | 88%        | 0%             | 2.2%  | 0.67% | 9.3%  | 100%  |

No substances required to be reported as hazardous are associated with the production of this product.

## 2.9 MANUFACTURING

The Dinoflex flooring products all share a similar composition, manufactured from a combination of SBR and EPDM rubber, bonded with a binder, and manufactured at the Dinoflex facility in Salmon Arm, British Columbia.

To manufacture Dinoflex tiles, ingredients are mixed and poured into individual molds. After curing, the products are ready to be packaged for shipment on wooden pallets, covered with a plastic hood, and secured by steel strapping.

## 2.10 PACKAGING

The products are packaged for shipment using plastic wrap, steel strapping and wooden pallets.

**Table 6.** Material content for the flooring product packaging in kg per square meter.

| Product              | Plastic               | Steel                 | Wood | Total |
|----------------------|-----------------------|-----------------------|------|-------|
| PlayTiles®           | 1.68x10 <sup>-2</sup> | 1.68x10 <sup>-2</sup> | 1.24 | 1.27  |
|                      | 1.3%                  | 1.3%                  | 97%  | 100%  |
| NuVista® Tiles       | 1.68x10 <sup>-2</sup> | 1.68x10 <sup>-2</sup> | 1.24 | 1.27  |
|                      | 1.3%                  | 1.3%                  | 97%  | 100%  |
| Stride Fitness Tiles | 1.68x10 <sup>-2</sup> | 1.68x10 <sup>-2</sup> | 1.24 | 1.27  |
|                      | 1.3%                  | 1.3%                  | 97%  | 100%  |

## 2.11 PRODUCT INSTALLATION

Installation of the product is accomplished using hand tools with negligible impacts. The impacts associated with packaging disposal are included with the installation phase as per PCR requirements.

## 2.12 USE CONDITIONS

No special conditions of use are noted.

## 2.13 REFERENCE SERVICE LIFE

The Reference Service Life (RSL) of the flooring products varies based on the manufacturer's warranted lifetime.

## 2.14 RE-USE PHASE

The flooring products are not reused at end-of-life.

## 2.15 DISPOSAL

At end-of-life, the products are disposed of in a landfill.

## 2.16 FURTHER INFORMATION

Further information on the product can be found on the manufacturer's website [www.dinoflex.com](http://www.dinoflex.com).

# 3. LCA: Calculation Rules

## 3.1 FUNCTIONAL UNIT

The functional unit used in the study is defined as 1 m<sup>2</sup> of floor covering installed for use over a 75-year period. The corresponding reference flow for each product system is presented in Table 7. For the present assessment, a reference service lifetime (RSL) corresponding to the manufacturer's estimated lifetime is assumed. The total number of required product lifecycles during the 75-year period over which the product system is modeled is also summarized for the product in Table 7.

**Table 7.** Reference flows and RSL for the rubber flooring products.

| Product Name         | Reference flow (kg/m <sup>2</sup> ) | Reference Service Life –RSL (years) | Replacement Cycle (ESL/RSL-1) |
|----------------------|-------------------------------------|-------------------------------------|-------------------------------|
| PlayTiles®           | 39.39                               | 10                                  | 7.5                           |
| NuVista® Tiles       | 32.41                               | 20                                  | 3.8                           |
| Stride Fitness Tiles | 24.18                               | 10                                  | 7.5                           |



### 3.2 SYSTEM BOUNDARY

The scope of the EPD is cradle-to-grave, including raw material extraction and processing, transportation, product manufacture, product delivery, installation and use, and product disposal. The life cycle phases included in the EPD scope are described in Table 8 and illustrated in Figure 1.

**Table 8.** *The modules and unit processes included in the scope for the flooring product system.*

| Module | Module description from the PCR                                                                                                                                                                                                                                     | Unit Processes Included in Scope                                                                                                                                               |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A1     | Extraction and processing of raw materials; any reuse of products or materials from previous product systems; processing of secondary materials; generation of electricity from primary energy resources; energy, or other, recovery processes from secondary fuels | Extraction and processing of raw materials for the flooring components.                                                                                                        |
| A2     | Transport (to the manufacturer)                                                                                                                                                                                                                                     | Transport of component materials to the manufacturing facility                                                                                                                 |
| A3     | Manufacturing, including ancillary material production                                                                                                                                                                                                              | Manufacturing of flooring products and packaging (incl. upstream unit processes)                                                                                               |
| A4     | Transport (to the building site)                                                                                                                                                                                                                                    | Transport of product (including packaging) to the building site                                                                                                                |
| A5     | Construction-installation process                                                                                                                                                                                                                                   | The product is installed using the manufacturer's recommended, or similar, adhesives with negligible impacts. Only impacts from packaging disposal are included in this phase. |
| B1     | Product use                                                                                                                                                                                                                                                         | Use of the flooring in a commercial building setting. There are no associated emissions or impacts from the use of the product                                                 |
| B2     | Product maintenance                                                                                                                                                                                                                                                 | Maintenance of products over the 75-year ESL, including periodic cleaning.                                                                                                     |
| B3     | Product repair                                                                                                                                                                                                                                                      | The flooring is not expected to require repair over its lifetime.                                                                                                              |
| B4     | Product replacement                                                                                                                                                                                                                                                 | The materials and energy required for replacement of the product over the 75-year ESL of the assessment are included in this phase                                             |
| B5     | Product refurbishment                                                                                                                                                                                                                                               | The flooring is not expected to require refurbishment over its lifetime.                                                                                                       |
| B6     | Operational energy use by technical building systems                                                                                                                                                                                                                | There is no operational energy use associated with the use of the product                                                                                                      |
| B7     | Operational water use by technical building systems                                                                                                                                                                                                                 | There is no operational water use associated with the use of the product                                                                                                       |
| C1     | Deconstruction, demolition                                                                                                                                                                                                                                          | Demolition of the product is accomplished using hand tools with no associated emissions and negligible impacts                                                                 |
| C2     | Transport (to waste processing)                                                                                                                                                                                                                                     | Transport of flooring product to waste treatment at end-of-life                                                                                                                |
| C3     | Waste processing for reuse, recovery and/or recycling                                                                                                                                                                                                               | The product is disposed of by landfilling which require no waste processing                                                                                                    |
| C4     | Disposal                                                                                                                                                                                                                                                            | Disposal of flooring product in municipal landfill                                                                                                                             |
| D      | Reuse-recovery-recycling potential                                                                                                                                                                                                                                  | Module Not Declared                                                                                                                                                            |

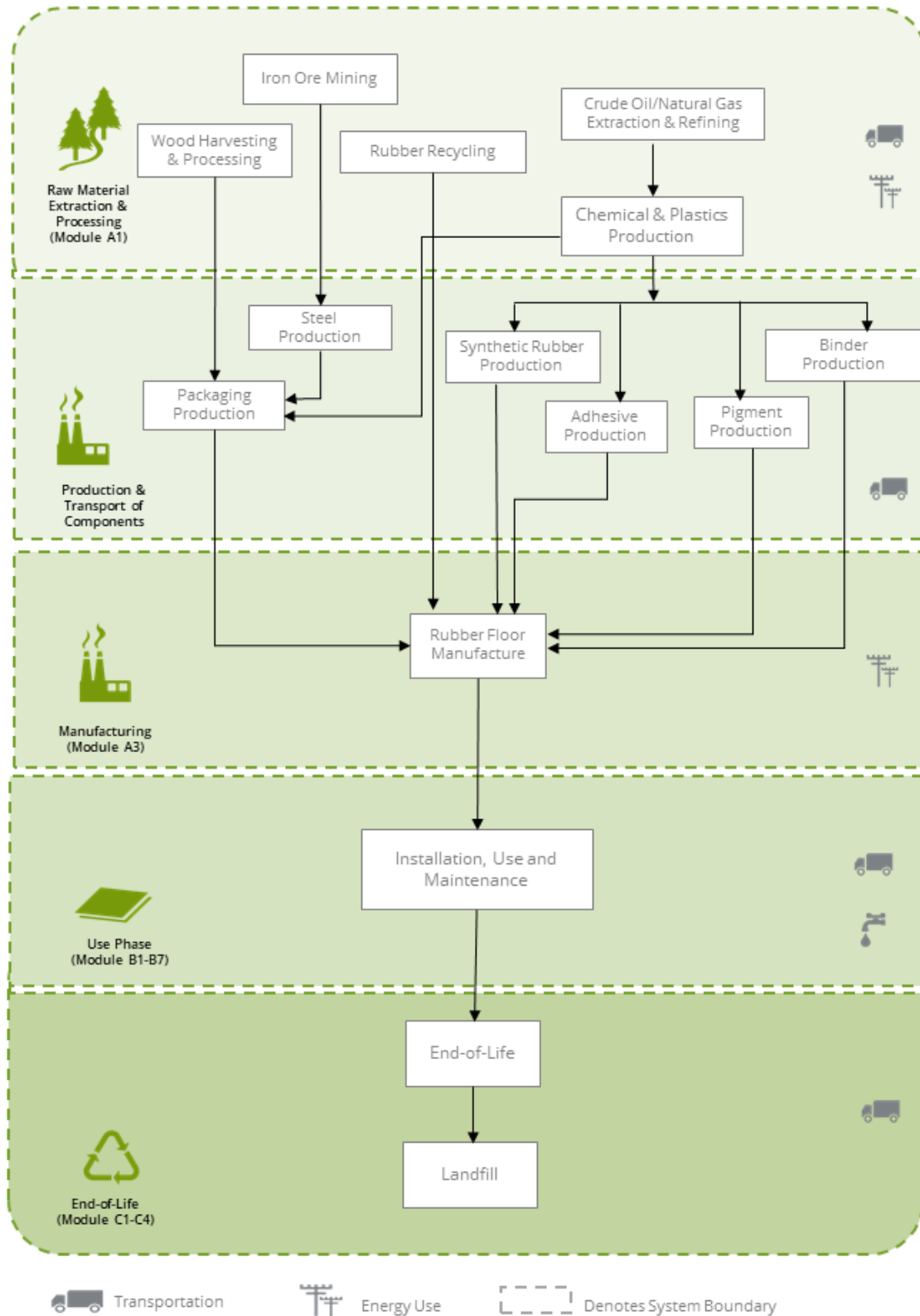


Figure 1. Flow Diagram for the life cycle of the rubber flooring products.

### 3.3 PRODUCT SPECIFIC CALCULATION FOR USE PHASE

The recommended cleaning regime is highly dependent on the use of the premises where the floor covering is installed. In high traffic areas more frequent cleaning will be needed compared to areas where there is low traffic. For the purposes of this EPD, average maintenance (moderate traffic levels) is presented based on typical installations.

### 3.4 UNITS

All data and results are presented using SI units.

### 3.5 ESTIMATES AND ASSUMPTIONS

- The Dinoflex Salmon Arm, British Columbia production facility is located in south-central British Columbia. Ecoinvent inventory datasets were used to represent the specific energy mix for Canada to estimate resource use and emissions from electricity use at the Dinoflex manufacturing facility.
- Electricity use at the Salmon Arm, British Columbia, Canada manufacturing facility was allocated to the Dinoflex flooring products based on the product mass as a fraction of the total facility production volume.
- The Reference Service Life (RSL) of the products was modeled based on information provided by the manufacturer assuming their products are installed and maintained as recommended and used for the specific application noted.
- Downstream transport was modeled based on information provided by the manufacturer representing transport for global product distribution.
- The use and maintenance phase of the product life cycle was modeled based on information provided by the manufacturer including recommended installation and cleaning methods, as well as cleaning frequency.
- For the product end-of-life, disposal of product and product packaging is modeled based on the PCR guidance regarding recycling rates of product and packaging materials.
- For final disposal of the packaging material and flooring products at end-of-life, all materials are assumed to be transported 20 miles by diesel truck to either a landfill or material reclamation facility (for recycling). Datasets representing disposal in a landfill and waste incineration are from Ecoinvent.
- Modeling of recycled materials follows the recycled content method (also known as 100-0 method or cut-off method) whereby only the burdens of reprocessing the waste material are allocated to the system from the use of the recycled material.

The PCR requires the results for several inventory flows related to construction products to be reported including energy and resource use and waste and outflows. These are aggregated inventory flows, and do not characterize any potential impact; results should be interpreted taking into account this limitation.

### 3.6 CUT-OFF RULES

According to the PCR, processes contributing greater than 1% of the total environmental impact indicator for each impact are included in the inventory. No data gaps were allowed which were expected to significantly affect the outcome of the indicator results. No known flows are deliberately excluded from this EPD.

### 3.7 DATA SOURCES

Primary data were provided by Dinoflex for their manufacturing facility and select suppliers. The sources of secondary LCI data are the Ecoinvent database.

**Table 9.** Data sources for the Dinoflex rubber flooring products.

| Component                 | Dataset                                                                                                                                                                | Data Source           | Publication date |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|
| <b>PRODUCT</b>            |                                                                                                                                                                        |                       |                  |
| Rubber                    |                                                                                                                                                                        |                       |                  |
| Recycled SBR/Crumb rubber | Recycled Rubber - AERP                                                                                                                                                 | Primary data; EI v3.8 | 2021             |
| EPDM                      | synthetic rubber production   synthetic rubber   Cutoff, S/RoW                                                                                                         | EI v3.8               | 2021             |
| Binder                    | polyurethane production, flexible foam   polyurethane, flexible foam   Cutoff, S/RoW                                                                                   | EI v3.8               | 2021             |
| Adhesive                  | methylene diphenyl diisocyanate production   methylene diphenyl diisocyanate   Cutoff, S/RoW; polyurethane adhesive production   polyurethane adhesive   Cutoff, S/GLO | EI v3.8               | 2021             |
| Catalyst                  | chemical production, organic   chemical, organic   Cutoff, S/GLO                                                                                                       | EI v3.8               | 2021             |
| Pigment                   | market for titanium dioxide   titanium dioxide   Cutoff, S/RoW                                                                                                         | EI v3.8               | 2021             |
| Cork                      | cork slab production   cork slab   Cutoff, S/RER                                                                                                                       | EI v3.8               | 2021             |
| Water                     | market group for tap water   tap water   Cutoff, S/GLO                                                                                                                 | EI v3.8               | 2021             |
| <b>PACKAGING</b>          |                                                                                                                                                                        |                       |                  |
| Wrapping Film             | packaging film production, low density polyethylene   packaging film, low density polyethylene   Cutoff, S/RoW                                                         | EI v3.8               | 2021             |
| Steel Strapping           | steel production, converter, low-alloyed   steel, low-alloyed   Cutoff, S/RoW                                                                                          | EI v3.8               | 2021             |
| Wood                      | EUR-flat pallet production   EUR-flat pallet   Cutoff, S/RoW                                                                                                           | EI v3.8               | 2021             |
| <b>TRANSPORT</b>          |                                                                                                                                                                        |                       |                  |
| Road transport            | transport, freight, lorry 16-32 metric ton, EURO4   transport, freight, lorry 16-32 metric ton, EURO4   Cutoff, S/RoW                                                  | EI v3.8               | 2021             |
| Ship transport            | transport, freight, sea, container ship   transport, freight, sea, container ship   Cutoff, S/GLO                                                                      | EI v3.8               | 2021             |
| <b>RESOURCES</b>          |                                                                                                                                                                        |                       |                  |
| Grid electricity          | market for electricity, medium voltage   electricity, medium voltage   Cutoff, S/CA-BC                                                                                 | EI v3.8               | 2021             |
| Heat – natural gas        | heat production, natural gas, at boiler modulating >100kW   heat, district or industrial, natural gas   Cutoff, S/RoW                                                  | EI v3.8               | 2021             |
| Heat – propane            | heat production, propane, at industrial furnace >100kW   heat, district or industrial, other than natural gas   Cutoff, S/RoW                                          |                       |                  |

### 3.8 DATA QUALITY

The data quality assessment addressed the following parameters: time-related coverage, geographical coverage, technological coverage, precision, completeness, representativeness, consistency, reproducibility, sources of data, and uncertainty.

**Table 10.** *Data quality assessment for the flooring product system.*

| Data Quality Parameter                                                                                                                                                                                            | Data Quality Discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Time-Related Coverage:</b><br>Age of data and the minimum length of time over which data is collected                                                                                                          | The most recent available data are used, based on other considerations such as data quality and similarity to the actual operations. Typically, these data are less than 5 years old. All of the data used represented an average of at least one year's worth of data collection, and up to three years in some cases. Manufacturer-supplied data (primary data) are based on annualized production for 2019.                                                                                                                                                             |
| <b>Geographical Coverage:</b><br>Geographical area from which data for unit processes is collected to satisfy the goal of the study                                                                               | The data used in the analysis provide the best possible representation available with current data. Electricity use for product manufacture is modeled using representative data for Canada. Surrogate data used in the assessment are representative of global or European operations. Data representative of European operations are considered sufficiently similar to actual processes. Data representing product disposal are based on regional statistics.                                                                                                           |
| <b>Technology Coverage:</b><br>Specific technology or technology mix                                                                                                                                              | For the most part, data are representative of the actual technologies used for processing, transportation, and manufacturing operations. Representative fabrication datasets, specific to the type of material, are used to represent the actual processes, as appropriate.                                                                                                                                                                                                                                                                                                |
| <b>Precision:</b><br>Measure of the variability of the data values for each data expressed                                                                                                                        | Precision of results are not quantified due to a lack of data. Data collected for operations were typically averaged for one or more years and over multiple operations, which is expected to reduce the variability of results.                                                                                                                                                                                                                                                                                                                                           |
| <b>Completeness:</b><br>Percentage of flow that is measured or estimated                                                                                                                                          | The LCA model included all known mass and energy flows for production of the flooring products. In some instances, surrogate data used to represent upstream and downstream operations may be missing some data which is propagated in the model. No known processes or activities contributing to more than 1% of the total environmental impact for each indicator are excluded.                                                                                                                                                                                         |
| <b>Representativeness:</b><br>Qualitative assessment of the degree to which the data set reflects the true population of interest                                                                                 | Data used in the assessment represent typical or average processes as currently reported from multiple data sources and are therefore generally representative of the range of actual processes and technologies for production of these materials. Considerable deviation may exist among actual processes on a site-specific basis; however, such a determination would require detailed data collection throughout the supply chain back to resource extraction.                                                                                                        |
| <b>Consistency:</b><br>Qualitative assessment of whether the study methodology is applied uniformly to the various components of the analysis                                                                     | The consistency of the assessment is considered to be high. Data sources of similar quality and age are used; with a bias towards Ecoinvent v3.7 data where available. Different portions of the product life cycle are equally considered.                                                                                                                                                                                                                                                                                                                                |
| <b>Reproducibility:</b><br>Qualitative assessment of the extent to which information about the methodology and data values would allow an independent practitioner to reproduce the results reported in the study | Based on the description of data and assumptions used, this assessment would be reproducible by other practitioners. All assumptions, models, and data sources are documented.                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Sources of the Data:</b><br>Description of all primary and secondary data sources                                                                                                                              | Data representing energy use at Dinoflex's manufacturing facility represents an annual average and are considered of high quality due to the length of time over which these data are collected, as compared to a snapshot that may not accurately reflect fluctuations in production. For secondary LCI data, Ecoinvent v3.7 LCI data are used.                                                                                                                                                                                                                           |
| <b>Uncertainty of the Information:</b><br>Uncertainty related to data, models, and assumptions                                                                                                                    | Uncertainty related to materials in the products and packaging is low. Actual supplier data for upstream operations were not available and the study relied upon the use of existing representative datasets. These datasets contained relatively recent data (<10 years) but lacked geographical representativeness. Uncertainty related to the impact assessment methods used in the study are high. The impact assessment method required by the PCR includes impact potentials, which lack characterization of providing and receiving environments or tipping points. |

### 3.9 PERIOD UNDER REVIEW

The period of review is October 2018 – September 2019.

### 3.10 ALLOCATION

Manufacturing resource use was allocated to the products based on mass. Impacts from transportation were allocated based on the mass of material and distance transported.

### 3.11 COMPARABILITY

The PCR this EPD was based on was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner's assumptions, the source of the data used in the study, and the specifics of the product modeled.

## 4. LCA: Scenarios and Additional Technical Information

### *Delivery and Installation stage (A4 - A5)*

Distribution of the flooring products to the point of installation is included in the assessment. Transportation parameters for modeling transport to regional consumer markets are summarized in Table 11. A distance of 800 km is assumed for transport by diesel truck from the distribution center to point of installation, consistent with PCR guidance.

**Table 11.** Product distribution parameters, per 1 m<sup>2</sup> (A4).

| Transport Mode       | Fuel utilization            | Capacity utilization (%) |       |
|----------------------|-----------------------------|--------------------------|-------|
| Diesel truck         | 18.7 L/100km                | 76%                      |       |
| Ocean freighter      | 0.25 kg/tkm                 | 65%                      |       |
| Product              | Gross mass transported (kg) | Transport Distance (km)  |       |
|                      |                             | Road                     | Ship  |
| PlayTiles®           | 40.7                        | 984                      | 1,226 |
| NuVista® Tiles       | 33.7                        | 984                      | 1,226 |
| Stride Fitness Tiles | 25.5                        | 984                      | 1,226 |

Installation of the product is accomplished using hand tools with no associated emissions and negligible impacts. The impacts associated with packaging disposal are included with the installation phase as per PCR requirements.

**Table 12.** Installation parameters for the rubber flooring products, per 1 m<sup>2</sup> (A5).

| Parameter                                                     |         | PlayTiles®            | NuVista® Tiles        | Stride Fitness Tiles  |
|---------------------------------------------------------------|---------|-----------------------|-----------------------|-----------------------|
| Ancillary materials (kg)                                      |         | Neg.                  | Neg.                  | Neg.                  |
| Net freshwater consumption (m <sup>3</sup> )                  |         | -                     | -                     | -                     |
| Electricity consumption (kWh)                                 |         | -                     | -                     | -                     |
| Product loss per functional unit (kg)                         |         | Neg.                  | Neg.                  | Neg.                  |
| Waste materials generated by product installation (kg)        |         | Neg.                  | Neg.                  | Neg.                  |
| Output materials resulting from on-site waste processing (kg) |         | n/a                   | n/a                   | n/a                   |
| Mass of packaging waste (kg)                                  | Plastic | 1.68x10 <sup>-2</sup> | 1.68x10 <sup>-2</sup> | 1.68x10 <sup>-2</sup> |
|                                                               | Steel   | 1.68x10 <sup>-2</sup> | 1.68x10 <sup>-2</sup> | 1.68x10 <sup>-2</sup> |
|                                                               | Wood    | 1.24                  | 1.24                  | 1.24                  |
| Biogenic carbon contained in packaging (kg CO <sub>2</sub> )  |         | 2.23                  | 2.23                  | 2.23                  |
| Direct emissions (kg)                                         |         | -                     | -                     | -                     |

**Use stage (B1)**

No impacts are associated with the use of the product over the Reference Service Lifetime.

**Maintenance stage (B2)**

According to the manufacturer, typical maintenance involves regular sweeping and damp mopping, as well as periodic machine cleaning of the flooring. The present assessment is based on a recommended weekly cleaning schedule including sweeping and mopping with a neutral cleaner and monthly machine cleaning.

**Table 13.** Maintenance parameters for the flooring products, per 1 m<sup>2</sup>.

| Parameter                  | Unit                               | Value                                   |
|----------------------------|------------------------------------|-----------------------------------------|
| Maintenance cycle          | Cycles / RSL                       | Weekly                                  |
| Maintenance cycle          | Cycles / ESL                       | 3,900                                   |
| Maintenance process        | -                                  | Mopping                                 |
| Net freshwater consumption | m <sup>3</sup> /m <sup>2</sup> /yr | 0.0058                                  |
| Cleaning agent             | kg/m <sup>2</sup> /yr              | 0.0119                                  |
| Maintenance process        | -                                  | Machine cleaning                        |
| Electricity                | kWh/m <sup>2</sup> /yr             | 0.022                                   |
| Further assumptions        | -                                  | Moderate traffic;<br>weekly maintenance |

**Repair/Refurbishment stage (B3; B5)**

Product repair and refurbishment are not relevant during the lifetime of the product.

**Replacement stage (B4)**

The materials and energy required for replacement of the product over the 75-year ESL of the assessment are included in this stage.

**Building operation stage (B6 – B7)**

There is no operational energy or water use associated with the use of the product.

**Disposal stage (C1 - C4)**

The disposal stage includes demolition of the products (C1); transport of the flooring products to waste treatment facilities (C2); waste processing (C3); and associated emissions as the product degrades in a landfill (C4). For the rubber flooring products, no emissions are generated during demolition (C1) while no waste processing (C3) is required for landfill disposal. Transportation of waste materials at end-of-life (C2) assumes a 161 km average distance to disposal, consistent with the PCR. The recycling rates used for the product packaging are based on national waste disposal statistics regarding recycling rates for North America as specified in the PCR. No recycling of the product materials is assumed at end-of-life. The relevant disposal statistics used for the packaging are summarized in Table 14.

**Table 14.** *Recycling rates for packaging materials at end-of-life.*

| Material                           | Packaging |
|------------------------------------|-----------|
| <b>Recycling Rates</b>             |           |
| Steel                              | 5.4%      |
| Plastics                           | 14.5%     |
| Wood                               | 26.1%     |
| <b>Disposal of Non-recyclables</b> |           |
| Incineration                       | 45%       |
| Landfill                           | 55%       |

**Table 15.** *End-of-life disposal scenario parameters for the flooring products.*

| Parameter                                           | PlayTiles® | NuVista® Tiles | Stride Fitness Tiles |
|-----------------------------------------------------|------------|----------------|----------------------|
| Assumptions for scenario development                | Landfill   | Landfill       | Landfill             |
| Collection process                                  |            |                |                      |
| Collected with mixed construction waste (kg)        | 39.4       | 32.6           | 24.2                 |
| Recovery                                            | n/a        | n/a            | n/a                  |
| Landfill disposal (kg)                              | 39.4       | 32.6           | 24.2                 |
| Removals of biogenic carbon (kg CO <sub>2</sub> eq) | n/a        | n/a            | n/a                  |



## 5. LCA: Results

Results of the Life Cycle Assessment are presented below. It is noted that LCA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks. All LCA results are stated to three significant figures in agreement with the PCR for this flooring product and therefore the sum of the total values may not exactly equal 100%.

The following environmental impact category indicators are reported using characterization factors based on the U.S. EPA's Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts – TRACI 2.1 and CML-IA.

| CML-IA Impact Category                                                       | Unit                                | TRACI 2.1 Impact Category                                       | Unit                  |
|------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------|-----------------------|
| Global Warming Potential ( <b>GWP</b> )                                      | kg CO <sub>2</sub> eq               | Global Warming Potential ( <b>GWP</b> )                         | kg CO <sub>2</sub> eq |
| Depletion potential of the stratospheric ozone layer ( <b>ODP</b> )          | kg CFC 11 eq                        | Ozone Depletion Potential ( <b>ODP</b> )                        | kg CFC 11 eq          |
| Acidification Potential of soil and water ( <b>AP</b> )                      | kg SO <sub>2</sub> eq               | Acidification Potential ( <b>AP</b> )                           | kg SO <sub>2</sub> eq |
| Eutrophication Potential ( <b>EP</b> )                                       | kg PO <sub>4</sub> <sup>3-</sup> eq | Eutrophication Potential ( <b>EP</b> )                          | kg N eq               |
| Photochemical Oxidant Creation Potential ( <b>POCP</b> )                     | kg C <sub>2</sub> H <sub>4</sub> eq | Smog Formation Potential ( <b>SFP</b> )                         | kg O <sub>3</sub> eq  |
| Abiotic depletion potential ( <b>ADP-elements</b> ) for non-fossil resources | kg Sb eq                            | Fossil Fuel Depletion Potential ( <b>ADP<sub>fossil</sub></b> ) | MJ Surplus, LHV       |
| Abiotic depletion potential ( <b>ADP-fossil fuels</b> ) for fossil resources | MJ, LHV                             | -                                                               | -                     |

These impact categories are globally deemed mature enough to be included in Type III environmental declarations. Other categories are being developed and defined and LCA should continue making advances in their development. However, the EPD users shall not use additional measures for comparative purposes.

The following inventory parameters, specified by the PCR, are also reported.

| Resources                                                                                      | Unit           | Waste and Outflows                                                                             | Unit    |
|------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------|---------|
| <b>RPR<sub>E</sub></b> : Renewable primary resources used as energy carrier (fuel)             | MJ, LHV        | <b>HWD</b> : Hazardous waste disposed                                                          | kg      |
| <b>RPR<sub>M</sub></b> : Renewable primary resources with energy content used as material      | MJ, LHV        | <b>NHWD</b> : Non-hazardous waste disposed                                                     | kg      |
| <b>NRPR<sub>E</sub></b> : Non-renewable primary resources used as an energy carrier (fuel)     | MJ, LHV        | <b>HLRW</b> : High-level radioactive waste, conditioned, to final repository                   | kg      |
| <b>NRPR<sub>M</sub></b> : Non-renewable primary resources with energy content used as material | MJ, LHV        | <b>ILLRW</b> : Intermediate- and low-level radioactive waste, conditioned, to final repository | kg      |
| <b>SM</b> : Secondary materials                                                                | MJ, LHV        | <b>CRU</b> : Components for re-use                                                             | kg      |
| <b>RSF</b> : Renewable secondary fuels                                                         | MJ, LHV        | <b>MR</b> : Materials for recycling                                                            | kg      |
| <b>NRSF</b> : Non-renewable secondary fuels                                                    | MJ, LHV        | <b>MER</b> : Materials for energy recovery                                                     | kg      |
| <b>RE</b> : Recovered energy                                                                   | MJ, LHV        | <b>EE</b> : Recovered energy exported from the product system                                  | MJ, LHV |
| <b>FW</b> : Use of net freshwater resources                                                    | m <sup>3</sup> | --                                                                                             | -       |

Modules B1, B3, B5, B6 and B7 are not associated with any impact and are therefore declared as zero. In addition, module C1 is likewise not associated with any impact as the floor is manually deconstructed. Additionally, as the rubber flooring products do not typically contain significant amounts of bio-based materials, biogenic carbon emissions and removals are not declared. Module D is not declared. In the interest of space and table readability, these modules are not included in the results presented below.

**Table 16.** Life Cycle Impact Assessment results for the rubber flooring products over a 75-yr time horizon. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits. (PlayTiles®)

| Impact Category | Unit                                   | A1                    | A2                    | A3                    | A4                    | A5                    | B2                    | B4                    | C2                    | C4                    |
|-----------------|----------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>TRACI</b>    |                                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| GWP             | kg CO <sub>2</sub> eq                  | 35.6                  | 2.19                  | 1.82                  | 8.85                  | 0.335                 | 17.2                  | 490                   | 8.03                  | 18.5                  |
|                 | %                                      | 6.1%                  | 0.38%                 | 0.31%                 | 1.5%                  | 0.057%                | 3%                    | 84%                   | 1.4%                  | 3.2%                  |
| AP              | kg SO <sub>2</sub> eq                  | 0.169                 | 1.48x10 <sup>-2</sup> | 4.08x10 <sup>-3</sup> | 4.91x10 <sup>-2</sup> | 1.62x10 <sup>-3</sup> | 7.43x10 <sup>-2</sup> | 1.89                  | 4.63x10 <sup>-2</sup> | 6.74x10 <sup>-3</sup> |
|                 | %                                      | 7.5%                  | 0.65%                 | 0.18%                 | 2.2%                  | 0.072%                | 3.3%                  | 84%                   | 2%                    | 0.3%                  |
| EP              | kg N eq                                | 0.109                 | 2.65x10 <sup>-3</sup> | 8.69x10 <sup>-3</sup> | 9.81x10 <sup>-3</sup> | 7.62x10 <sup>-3</sup> | 3.39x10 <sup>-2</sup> | 3.23                  | 5.89x10 <sup>-3</sup> | 0.354                 |
|                 | %                                      | 2.9%                  | 0.07%                 | 0.23%                 | 0.26%                 | 0.2%                  | 0.9%                  | 86%                   | 0.16%                 | 9.4%                  |
| SFP             | kg O <sub>3</sub> eq                   | 2.31                  | 0.356                 | 7.03x10 <sup>-2</sup> | 1.12                  | 4.56x10 <sup>-2</sup> | 0.895                 | 34.6                  | 1.31                  | 0.105                 |
|                 | %                                      | 5.7%                  | 0.87%                 | 0.17%                 | 2.7%                  | 0.11%                 | 2.2%                  | 85%                   | 3.2%                  | 0.26%                 |
| ODP             | kg CFC-11 eq                           | 6.64x10 <sup>-6</sup> | 4.49x10 <sup>-7</sup> | 1.42x10 <sup>-7</sup> | 2.05x10 <sup>-6</sup> | 6.36x10 <sup>-8</sup> | 4.61x10 <sup>-7</sup> | 7.37x10 <sup>-5</sup> | 1.85x10 <sup>-6</sup> | 1.45x10 <sup>-7</sup> |
|                 | %                                      | 7.8%                  | 0.53%                 | 0.17%                 | 2.4%                  | 0.074%                | 0.54%                 | 86%                   | 2.2%                  | 0.17%                 |
| FFD             | MJ surplus                             | 101                   | 4.44                  | 2.91                  | 18.7                  | 0.575                 | 62.9                  | 950                   | 16.6                  | 1.55                  |
|                 | %                                      | 8.8%                  | 0.38%                 | 0.25%                 | 1.6%                  | 0.05%                 | 5.4%                  | 82%                   | 1.4%                  | 0.13%                 |
| <b>CML</b>      |                                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| GWP             | kg CO <sub>2</sub> eq                  | 35.9                  | 2.19                  | 1.95                  | 8.87                  | 0.348                 | 17.4                  | 521                   | 8.03                  | 22.9                  |
|                 | %                                      | 5.8%                  | 0.35%                 | 0.31%                 | 1.4%                  | 0.056%                | 2.8%                  | 84%                   | 1.3%                  | 3.7%                  |
| AP              | kg SO <sub>2</sub> eq                  | 0.168                 | 1.27x10 <sup>-2</sup> | 3.79x10 <sup>-3</sup> | 4.29x10 <sup>-2</sup> | 1.31x10 <sup>-3</sup> | 7.30x10 <sup>-2</sup> | 1.77                  | 3.74x10 <sup>-2</sup> | 5.39x10 <sup>-3</sup> |
|                 | %                                      | 8%                    | 0.6%                  | 0.18%                 | 2%                    | 0.062%                | 3.5%                  | 84%                   | 1.8%                  | 0.26%                 |
| EP              | kg (PO <sub>4</sub> ) <sup>3-</sup> eq | 5.51x10 <sup>-2</sup> | 2.63x10 <sup>-3</sup> | 3.66x10 <sup>-3</sup> | 8.74x10 <sup>-3</sup> | 2.94x10 <sup>-3</sup> | 1.83x10 <sup>-2</sup> | 1.41                  | 8.02x10 <sup>-3</sup> | 0.136                 |
|                 | %                                      | 3.3%                  | 0.16%                 | 0.22%                 | 0.53%                 | 0.18%                 | 1.1%                  | 86%                   | 0.49%                 | 8.3%                  |
| POCP            | kg C <sub>2</sub> H <sub>4</sub> eq    | 1.56x10 <sup>-2</sup> | 3.95x10 <sup>-4</sup> | 4.72x10 <sup>-4</sup> | 1.38x10 <sup>-3</sup> | 5.77x10 <sup>-5</sup> | 4.35x10 <sup>-3</sup> | 0.156                 | 1.23x10 <sup>-3</sup> | 4.92x10 <sup>-3</sup> |
|                 | %                                      | 8.4%                  | 0.21%                 | 0.26%                 | 0.75%                 | 0.031%                | 2.4%                  | 85%                   | 0.67%                 | 2.7%                  |
| ODP             | kg CFC-11 eq                           | 5.39x10 <sup>-6</sup> | 3.37x10 <sup>-7</sup> | 1.09x10 <sup>-7</sup> | 1.54x10 <sup>-6</sup> | 4.77x10 <sup>-8</sup> | 3.51x10 <sup>-7</sup> | 5.80x10 <sup>-5</sup> | 1.39x10 <sup>-6</sup> | 1.09x10 <sup>-7</sup> |
|                 | %                                      | 8%                    | 0.5%                  | 0.16%                 | 2.3%                  | 0.071%                | 0.52%                 | 86%                   | 2.1%                  | 0.16%                 |
| ADPF            | MJ                                     | 762                   | 31.4                  | 20.2                  | 131                   | 3.84                  | 455                   | 6,960                 | 110                   | 12.4                  |
|                 | %                                      | 9%                    | 0.37%                 | 0.24%                 | 1.5%                  | 0.045%                | 5.4%                  | 82%                   | 1.3%                  | 0.15%                 |

**Table 17.** Resource use and waste flows for the rubber flooring products over a 75-yr time horizon. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits. **(PlayTiles®)**

| Parameter         | Unit           | A1                    | A2                    | A3                    | A4                    | A5                    | B2                    | B4                    | C2                    | C4                    | Total                 |
|-------------------|----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>Resources</b>  |                |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| RPR <sub>E</sub>  | MJ             | 53.1                  | 0.446                 | 35.5                  | 1.50                  | 1.93x10 <sup>-2</sup> | 11.2                  | 596                   | 0.429                 | 0.594                 | 699                   |
|                   | %              | 7.6%                  | 0.064%                | 5.1%                  | 0.21%                 | 0.0028%               | 1.6%                  | 85%                   | 0.061%                | 0.085%                | 100%                  |
| RPR <sub>M</sub>  | MJ             | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  |
|                   | %              | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    |
| NRPR <sub>E</sub> | MJ             | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   |
| NRPR <sub>M</sub> | MJ             | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   |
| SM                | kg             | 11.3                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 73.1                  | 0.00                  | 0.00                  | 84.4                  |
|                   | %              | 13%                   | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 87%                   | 0%                    | 0%                    | 100%                  |
| RSF               | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| NRSF              | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| RE                | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| FW                | m <sup>3</sup> | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  |
|                   | %              | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    |
| <b>Waste</b>      |                |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| HWD               | kg             | 5.50x10 <sup>-4</sup> | 8.62x10 <sup>-5</sup> | 2.45x10 <sup>-5</sup> | 3.41x10 <sup>-4</sup> | 1.02x10 <sup>-5</sup> | 1.10x10 <sup>-4</sup> | 8.80x10 <sup>-3</sup> | 3.00x10 <sup>-4</sup> | 4.22x10 <sup>-5</sup> | 1.03x10 <sup>-2</sup> |
|                   | %              | 5.4%                  | 0.84%                 | 0.24%                 | 3.3%                  | 0.099%                | 1.1%                  | 86%                   | 2.9%                  | 0.41%                 | 100%                  |
| NHWD              | kg             | 4.30                  | 1.35                  | 1.16                  | 6.49                  | 1.03                  | 1.17                  | 354                   | 0.560                 | 39.5                  | 409                   |
|                   | %              | 1.1%                  | 0.33%                 | 0.28%                 | 1.6%                  | 0.25%                 | 0.29%                 | 86%                   | 0.14%                 | 9.7%                  | 100%                  |
| HLRW              | kg             | 1.20x10 <sup>-4</sup> | 1.88x10 <sup>-6</sup> | 1.91x10 <sup>-6</sup> | 6.57x10 <sup>-6</sup> | 8.17x10 <sup>-8</sup> | 3.95x10 <sup>-5</sup> | 8.82x10 <sup>-4</sup> | 1.74x10 <sup>-6</sup> | 3.15x10 <sup>-6</sup> | 1.06x10 <sup>-3</sup> |
|                   | %              | 11%                   | 0.18%                 | 0.18%                 | 0.62%                 | 0.0077%               | 3.7%                  | 83%                   | 0.16%                 | 0.3%                  | 100%                  |
| ILLRW             | kg             | 2.14x10 <sup>-3</sup> | 2.09x10 <sup>-4</sup> | 2.39x10 <sup>-5</sup> | 8.60x10 <sup>-4</sup> | 2.67x10 <sup>-5</sup> | 1.67x10 <sup>-4</sup> | 2.66x10 <sup>-2</sup> | 7.78x10 <sup>-4</sup> | 6.54x10 <sup>-5</sup> | 3.09x10 <sup>-2</sup> |
|                   | %              | 6.9%                  | 0.68%                 | 0.077%                | 2.8%                  | 0.086%                | 0.54%                 | 86%                   | 2.5%                  | 0.21%                 | 100%                  |
| CRU               | kg             | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  |
| MR                | kg             | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 1.21x10 <sup>-2</sup> | 0.00                  | 7.88x10 <sup>-2</sup> | 0.00                  | 0.00                  | 9.10x10 <sup>-2</sup> |
|                   | %              | 0%                    | 0%                    | 0%                    | 0%                    | 13%                   | 0%                    | 87%                   | 0%                    | 0%                    | 100%                  |

**Table 18.** Life Cycle Impact Assessment results for the rubber flooring products over a 75-yr time horizon. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits. (NuVista® Tiles)

| Impact Category | Unit                                   | A1                    | A2                    | A3                    | A4                    | A5                    | B2                    | B4                    | C2                    | C4                    |
|-----------------|----------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>TRACI</b>    |                                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| GWP             | kg CO <sub>2</sub> eq                  | 18.9                  | 0.311                 | 1.93                  | 7.37                  | 0.335                 | 17.2                  | 142                   | 6.64                  | 15.2                  |
|                 | %                                      | 9%                    | 0.15%                 | 0.92%                 | 3.5%                  | 0.16%                 | 8.2%                  | 68%                   | 3.2%                  | 7.2%                  |
| AP              | kg SO <sub>2</sub> eq                  | 9.28x10 <sup>-2</sup> | 1.42x10 <sup>-3</sup> | 4.76x10 <sup>-3</sup> | 4.08x10 <sup>-2</sup> | 1.62x10 <sup>-3</sup> | 7.43x10 <sup>-2</sup> | 0.519                 | 3.83x10 <sup>-2</sup> | 5.55x10 <sup>-3</sup> |
|                 | %                                      | 12%                   | 0.18%                 | 0.61%                 | 5.2%                  | 0.21%                 | 9.5%                  | 67%                   | 4.9%                  | 0.71%                 |
| EP              | kg N eq                                | 6.73x10 <sup>-2</sup> | 3.39x10 <sup>-4</sup> | 9.42x10 <sup>-3</sup> | 8.17x10 <sup>-3</sup> | 7.62x10 <sup>-3</sup> | 3.39x10 <sup>-2</sup> | 1.12                  | 4.87x10 <sup>-3</sup> | 0.302                 |
|                 | %                                      | 4.3%                  | 0.022%                | 0.61%                 | 0.53%                 | 0.49%                 | 2.2%                  | 72%                   | 0.31%                 | 19%                   |
| SFP             | kg O <sub>3</sub> eq                   | 1.31                  | 3.40x10 <sup>-2</sup> | 7.98x10 <sup>-2</sup> | 0.932                 | 4.56x10 <sup>-2</sup> | 0.895                 | 10.0                  | 1.08                  | 8.66x10 <sup>-2</sup> |
|                 | %                                      | 9.1%                  | 0.23%                 | 0.55%                 | 6.4%                  | 0.31%                 | 6.2%                  | 69%                   | 7.5%                  | 0.6%                  |
| ODP             | kg CFC-11 eq                           | 2.55x10 <sup>-6</sup> | 7.21x10 <sup>-8</sup> | 1.55x10 <sup>-7</sup> | 1.70x10 <sup>-6</sup> | 6.36x10 <sup>-8</sup> | 4.61x10 <sup>-7</sup> | 1.74x10 <sup>-5</sup> | 1.53x10 <sup>-6</sup> | 1.20x10 <sup>-7</sup> |
|                 | %                                      | 11%                   | 0.3%                  | 0.64%                 | 7.1%                  | 0.26%                 | 1.9%                  | 72%                   | 6.4%                  | 0.5%                  |
| FFD             | MJ surplus                             | 42.0                  | 0.659                 | 3.01                  | 15.6                  | 0.575                 | 62.9                  | 215                   | 13.7                  | 1.28                  |
|                 | %                                      | 12%                   | 0.19%                 | 0.85%                 | 4.4%                  | 0.16%                 | 18%                   | 61%                   | 3.9%                  | 0.36%                 |
| <b>CML</b>      |                                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| GWP             | kg CO <sub>2</sub> eq                  | 19.0                  | 0.311                 | 2.04                  | 7.38                  | 0.348                 | 17.4                  | 153                   | 6.64                  | 18.8                  |
|                 | %                                      | 8.5%                  | 0.14%                 | 0.91%                 | 3.3%                  | 0.16%                 | 7.8%                  | 68%                   | 3%                    | 8.4%                  |
| AP              | kg SO <sub>2</sub> eq                  | 9.35x10 <sup>-2</sup> | 1.21x10 <sup>-3</sup> | 4.45x10 <sup>-3</sup> | 3.57x10 <sup>-2</sup> | 1.31x10 <sup>-3</sup> | 7.30x10 <sup>-2</sup> | 0.480                 | 3.10x10 <sup>-2</sup> | 4.44x10 <sup>-3</sup> |
|                 | %                                      | 13%                   | 0.17%                 | 0.61%                 | 4.9%                  | 0.18%                 | 10%                   | 66%                   | 4.3%                  | 0.61%                 |
| EP              | kg (PO <sub>4</sub> ) <sup>3-</sup> eq | 3.39x10 <sup>-2</sup> | 2.80x10 <sup>-4</sup> | 4.07x10 <sup>-3</sup> | 7.28x10 <sup>-3</sup> | 2.94x10 <sup>-3</sup> | 1.83x10 <sup>-2</sup> | 0.481                 | 6.63x10 <sup>-3</sup> | 0.117                 |
|                 | %                                      | 5%                    | 0.042%                | 0.61%                 | 1.1%                  | 0.44%                 | 2.7%                  | 72%                   | 0.99%                 | 17%                   |
| POCP            | kg C <sub>2</sub> H <sub>4</sub> eq    | 1.17x10 <sup>-2</sup> | 4.13x10 <sup>-5</sup> | 4.84x10 <sup>-4</sup> | 1.15x10 <sup>-3</sup> | 5.77x10 <sup>-5</sup> | 4.35x10 <sup>-3</sup> | 5.17x10 <sup>-2</sup> | 1.02x10 <sup>-3</sup> | 4.02x10 <sup>-3</sup> |
|                 | %                                      | 16%                   | 0.055%                | 0.65%                 | 1.5%                  | 0.077%                | 5.8%                  | 69%                   | 1.4%                  | 5.4%                  |
| ODP             | kg CFC-11 eq                           | 2.30x10 <sup>-6</sup> | 5.41x10 <sup>-8</sup> | 1.19x10 <sup>-7</sup> | 1.28x10 <sup>-6</sup> | 4.77x10 <sup>-8</sup> | 3.51x10 <sup>-7</sup> | 1.41x10 <sup>-5</sup> | 1.15x10 <sup>-6</sup> | 9.00x10 <sup>-8</sup> |
|                 | %                                      | 12%                   | 0.28%                 | 0.61%                 | 6.6%                  | 0.24%                 | 1.8%                  | 72%                   | 5.9%                  | 0.46%                 |
| ADPF            | MJ                                     | 326                   | 4.61                  | 22.1                  | 109                   | 3.84                  | 455                   | 1,590                 | 91.0                  | 10.3                  |
|                 | %                                      | 12%                   | 0.18%                 | 0.85%                 | 4.2%                  | 0.15%                 | 17%                   | 61%                   | 3.5%                  | 0.39%                 |

**Table 19.** Resource use and waste flows for the rubber flooring products over a 75-yr time horizon. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits. **(NuVista® Tiles)**

| Parameter         | Unit           | A1                    | A2                    | A3                    | A4                    | A5                    | B2                    | B4                    | C2                    | C4                    |
|-------------------|----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>Resources</b>  |                |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| RPR <sub>E</sub>  | MJ             | 21.2                  | 5.38x10 <sup>-2</sup> | 45.4                  | 1.25                  | 1.93x10 <sup>-2</sup> | 11.2                  | 193                   | 0.355                 | 0.490                 |
|                   | %              | 7.8%                  | 0.02%                 | 17%                   | 0.46%                 | 0.0071%               | 4.1%                  | 71%                   | 0.13%                 | 0.18%                 |
| RPR <sub>M</sub>  | MJ             | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  |
|                   | %              | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    |
| NRPR <sub>E</sub> | MJ             | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   |
| NRPR <sub>M</sub> | MJ             | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   |
| SM                | kg             | 10.8                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 29.6                  | 0.00                  | 0.00                  |
|                   | %              | 27%                   | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 73%                   | 0%                    | 0%                    |
| RSF               | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| NRSF              | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| RE                | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| FW                | m <sup>3</sup> | 1.44                  | 3.22x10 <sup>-3</sup> | 5.71x10 <sup>-2</sup> | 7.46x10 <sup>-2</sup> | 1.55x10 <sup>-3</sup> | 0.992                 | 4.57                  | 2.87x10 <sup>-2</sup> | 2.53x10 <sup>-2</sup> |
|                   | %              | 20%                   | 0.045%                | 0.79%                 | 1%                    | 0.022%                | 14%                   | 64%                   | 0.4%                  | 0.35%                 |
| <b>Waste</b>      |                |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| HWD               | kg             | 2.65x10 <sup>-4</sup> | 1.23x10 <sup>-5</sup> | 2.48x10 <sup>-5</sup> | 2.84x10 <sup>-4</sup> | 1.02x10 <sup>-5</sup> | 1.10x10 <sup>-4</sup> | 2.46x10 <sup>-3</sup> | 2.48x10 <sup>-4</sup> | 3.46x10 <sup>-5</sup> |
|                   | %              | 7.7%                  | 0.36%                 | 0.72%                 | 8.2%                  | 0.29%                 | 3.2%                  | 71%                   | 7.2%                  | 1%                    |
| NHWD              | kg             | 2.38                  | 0.237                 | 1.05                  | 5.40                  | 1.03                  | 1.17                  | 121                   | 0.463                 | 32.7                  |
|                   | %              | 1.4%                  | 0.14%                 | 0.64%                 | 3.3%                  | 0.62%                 | 0.71%                 | 73%                   | 0.28%                 | 20%                   |
| HLRW              | kg             | 5.63x10 <sup>-5</sup> | 2.36x10 <sup>-7</sup> | 3.61x10 <sup>-6</sup> | 5.47x10 <sup>-6</sup> | 8.17x10 <sup>-8</sup> | 3.95x10 <sup>-5</sup> | 1.95x10 <sup>-4</sup> | 1.44x10 <sup>-6</sup> | 2.60x10 <sup>-6</sup> |
|                   | %              | 18%                   | 0.078%                | 1.2%                  | 1.8%                  | 0.027%                | 13%                   | 64%                   | 0.47%                 | 0.85%                 |
| ILLRW             | kg             | 4.49x10 <sup>-4</sup> | 3.03x10 <sup>-5</sup> | 3.18x10 <sup>-5</sup> | 7.16x10 <sup>-4</sup> | 2.67x10 <sup>-5</sup> | 1.67x10 <sup>-4</sup> | 5.46x10 <sup>-3</sup> | 6.43x10 <sup>-4</sup> | 5.41x10 <sup>-5</sup> |
|                   | %              | 5.9%                  | 0.4%                  | 0.42%                 | 9.4%                  | 0.35%                 | 2.2%                  | 72%                   | 8.5%                  | 0.71%                 |
| CRU               | kg             | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  |
| MR                | kg             | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 1.21x10 <sup>-2</sup> | 0.00                  | 3.40x10 <sup>-2</sup> | 0.00                  | 0.00                  |
|                   | %              | 0%                    | 0%                    | 0%                    | 0%                    | 26%                   | 0%                    | 74%                   | 0%                    | 0%                    |
| MER               | kg             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| EE                | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |

**Table 20.** Life Cycle Impact Assessment results for the rubber flooring products over a 75-yr time horizon. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits. **(Stride Fitness Tiles)**

| Impact Category | Unit                                   | A1                    | A2                    | A3                    | A4                    | A5                    | B2                    | B4                    | C2                    | C4                    |
|-----------------|----------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>TRACI</b>    |                                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| GWP             | kg CO <sub>2</sub> eq                  | 14.9                  | 1.13                  | 1.32                  | 5.54                  | 0.335                 | 17.2                  | 257                   | 4.93                  | 11.3                  |
|                 | %                                      | 4.8%                  | 0.36%                 | 0.42%                 | 1.8%                  | 0.11%                 | 5.5%                  | 82%                   | 1.6%                  | 3.6%                  |
| AP              | kg SO <sub>2</sub> eq                  | 7.02x10 <sup>-2</sup> | 5.65x10 <sup>-3</sup> | 3.69x10 <sup>-3</sup> | 3.07x10 <sup>-2</sup> | 1.62x10 <sup>-3</sup> | 7.43x10 <sup>-2</sup> | 0.938                 | 2.84x10 <sup>-2</sup> | 4.13x10 <sup>-3</sup> |
|                 | %                                      | 6.1%                  | 0.49%                 | 0.32%                 | 2.7%                  | 0.14%                 | 6.4%                  | 81%                   | 2.5%                  | 0.36%                 |
| EP              | kg N eq                                | 4.92x10 <sup>-2</sup> | 1.26x10 <sup>-3</sup> | 5.98x10 <sup>-3</sup> | 6.14x10 <sup>-3</sup> | 7.62x10 <sup>-3</sup> | 3.39x10 <sup>-2</sup> | 1.90                  | 3.62x10 <sup>-3</sup> | 0.219                 |
|                 | %                                      | 2.2%                  | 0.057%                | 0.27%                 | 0.28%                 | 0.34%                 | 1.5%                  | 85%                   | 0.16%                 | 9.8%                  |
| SFP             | kg O <sub>3</sub> eq                   | 1.05                  | 0.136                 | 6.47x10 <sup>-2</sup> | 0.701                 | 4.56x10 <sup>-2</sup> | 0.895                 | 18.6                  | 0.805                 | 6.43x10 <sup>-2</sup> |
|                 | %                                      | 4.7%                  | 0.61%                 | 0.29%                 | 3.1%                  | 0.2%                  | 4%                    | 83%                   | 3.6%                  | 0.29%                 |
| ODP             | kg CFC-11 eq                           | 2.28x10 <sup>-6</sup> | 2.57x10 <sup>-7</sup> | 1.09x10 <sup>-7</sup> | 1.28x10 <sup>-6</sup> | 6.36x10 <sup>-8</sup> | 4.61x10 <sup>-7</sup> | 3.39x10 <sup>-5</sup> | 1.14x10 <sup>-6</sup> | 8.92x10 <sup>-8</sup> |
|                 | %                                      | 5.8%                  | 0.65%                 | 0.28%                 | 3.2%                  | 0.16%                 | 1.2%                  | 86%                   | 2.9%                  | 0.23%                 |
| FFD             | MJ surplus                             | 35.8                  | 2.38                  | 2.15                  | 11.7                  | 0.575                 | 62.9                  | 414                   | 10.2                  | 0.951                 |
|                 | %                                      | 6.6%                  | 0.44%                 | 0.4%                  | 2.2%                  | 0.11%                 | 12%                   | 77%                   | 1.9%                  | 0.18%                 |
| <b>CML</b>      |                                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| GWP             | kg CO <sub>2</sub> eq                  | 15.0                  | 1.14                  | 1.40                  | 5.55                  | 0.348                 | 17.4                  | 276                   | 4.93                  | 14.0                  |
|                 | %                                      | 4.5%                  | 0.34%                 | 0.42%                 | 1.7%                  | 0.1%                  | 5.2%                  | 82%                   | 1.5%                  | 4.2%                  |
| AP              | kg SO <sub>2</sub> eq                  | 6.98x10 <sup>-2</sup> | 4.84x10 <sup>-3</sup> | 3.42x10 <sup>-3</sup> | 2.68x10 <sup>-2</sup> | 1.31x10 <sup>-3</sup> | 7.30x10 <sup>-2</sup> | 0.861                 | 2.30x10 <sup>-2</sup> | 3.31x10 <sup>-3</sup> |
|                 | %                                      | 6.5%                  | 0.45%                 | 0.32%                 | 2.5%                  | 0.12%                 | 6.8%                  | 81%                   | 2.2%                  | 0.31%                 |
| EP              | kg (PO <sub>4</sub> ) <sup>3-</sup> eq | 2.52x10 <sup>-2</sup> | 1.09x10 <sup>-3</sup> | 2.61x10 <sup>-3</sup> | 5.47x10 <sup>-3</sup> | 2.94x10 <sup>-3</sup> | 1.83x10 <sup>-2</sup> | 0.824                 | 4.92x10 <sup>-3</sup> | 8.45x10 <sup>-2</sup> |
|                 | %                                      | 2.6%                  | 0.11%                 | 0.27%                 | 0.56%                 | 0.3%                  | 1.9%                  | 85%                   | 0.51%                 | 8.7%                  |
| POCP            | kg C <sub>2</sub> H <sub>4</sub> eq    | 7.98x10 <sup>-3</sup> | 1.61x10 <sup>-4</sup> | 3.92x10 <sup>-4</sup> | 8.64x10 <sup>-4</sup> | 5.77x10 <sup>-5</sup> | 4.35x10 <sup>-3</sup> | 8.59x10 <sup>-2</sup> | 7.58x10 <sup>-4</sup> | 3.01x10 <sup>-3</sup> |
|                 | %                                      | 7.7%                  | 0.16%                 | 0.38%                 | 0.83%                 | 0.056%                | 4.2%                  | 83%                   | 0.73%                 | 2.9%                  |
| ODP             | kg CFC-11 eq                           | 1.97x10 <sup>-6</sup> | 1.93x10 <sup>-7</sup> | 8.42x10 <sup>-8</sup> | 9.61x10 <sup>-7</sup> | 4.77x10 <sup>-8</sup> | 3.51x10 <sup>-7</sup> | 2.72x10 <sup>-5</sup> | 8.53x10 <sup>-7</sup> | 6.68x10 <sup>-8</sup> |
|                 | %                                      | 6.2%                  | 0.61%                 | 0.27%                 | 3%                    | 0.15%                 | 1.1%                  | 86%                   | 2.7%                  | 0.21%                 |
| ADPF            | MJ                                     | 273                   | 16.7                  | 15.5                  | 81.8                  | 3.84                  | 455                   | 3,030                 | 67.5                  | 7.63                  |
|                 | %                                      | 6.9%                  | 0.42%                 | 0.39%                 | 2.1%                  | 0.097%                | 12%                   | 77%                   | 1.7%                  | 0.19%                 |

**Table 21.** Resource use and waste flows for the rubber flooring products over a 75-yr time horizon. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits. **(Stride Fitness Tiles)**

| Parameter         | Unit           | A1                    | A2                    | A3                    | A4                    | A5                    | B2                    | B4                    | C2                    | C4                    |
|-------------------|----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>Resources</b>  |                |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| RPR <sub>E</sub>  | MJ             | 26.6                  | 0.203                 | 35.5                  | 0.939                 | 1.93x10 <sup>-2</sup> | 11.2                  | 415                   | 0.263                 | 0.364                 |
|                   | %              | 5.4%                  | 0.041%                | 7.2%                  | 0.19%                 | 0.0039%               | 2.3%                  | 85%                   | 0.054%                | 0.074%                |
| RPR <sub>M</sub>  | MJ             | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  |
|                   | %              | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    |
| NRPR <sub>E</sub> | MJ             | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   |
| NRPR <sub>M</sub> | MJ             | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   | INA                   |
| SM                | kg             | 7.88                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 51.2                  | 0.00                  | 0.00                  |
|                   | %              | 13%                   | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 87%                   | 0%                    | 0%                    |
| RSF               | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| NRSF              | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| RE                | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| FW                | m <sup>3</sup> | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  |
|                   | %              | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    | 0%                    |
| <b>Waste</b>      |                |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| HWD               | kg             | 2.30x10 <sup>-4</sup> | 4.49x10 <sup>-5</sup> | 2.06x10 <sup>-5</sup> | 2.14x10 <sup>-4</sup> | 1.02x10 <sup>-5</sup> | 1.10x10 <sup>-4</sup> | 4.74x10 <sup>-3</sup> | 1.84x10 <sup>-4</sup> | 2.58x10 <sup>-5</sup> |
|                   | %              | 4.1%                  | 0.81%                 | 0.37%                 | 3.8%                  | 0.18%                 | 2%                    | 85%                   | 3.3%                  | 0.46%                 |
| NHWD              | kg             | 2.18                  | 0.834                 | 0.764                 | 4.06                  | 1.03                  | 1.17                  | 218                   | 0.344                 | 24.3                  |
|                   | %              | 0.87%                 | 0.33%                 | 0.3%                  | 1.6%                  | 0.41%                 | 0.46%                 | 86%                   | 0.14%                 | 9.6%                  |
| HLRW              | kg             | 4.50x10 <sup>-5</sup> | 8.84x10 <sup>-7</sup> | 1.79x10 <sup>-6</sup> | 4.11x10 <sup>-6</sup> | 8.17x10 <sup>-8</sup> | 3.95x10 <sup>-5</sup> | 3.56x10 <sup>-4</sup> | 1.07x10 <sup>-6</sup> | 1.93x10 <sup>-6</sup> |
|                   | %              | 10%                   | 0.2%                  | 0.4%                  | 0.91%                 | 0.018%                | 8.8%                  | 79%                   | 0.24%                 | 0.43%                 |
| ILLRW             | kg             | 5.41x10 <sup>-4</sup> | 1.10x10 <sup>-4</sup> | 2.25x10 <sup>-5</sup> | 5.38x10 <sup>-4</sup> | 2.67x10 <sup>-5</sup> | 1.67x10 <sup>-4</sup> | 1.14x10 <sup>-2</sup> | 4.78x10 <sup>-4</sup> | 4.02x10 <sup>-5</sup> |
|                   | %              | 4.1%                  | 0.83%                 | 0.17%                 | 4%                    | 0.2%                  | 1.3%                  | 86%                   | 3.6%                  | 0.3%                  |
| CRU               | kg             | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 0.00                  |
| MR                | kg             | 0.00                  | 0.00                  | 0.00                  | 0.00                  | 1.21x10 <sup>-2</sup> | 0.00                  | 7.88x10 <sup>-2</sup> | 0.00                  | 0.00                  |
|                   | %              | 0%                    | 0%                    | 0%                    | 0%                    | 13%                   | 0%                    | 87%                   | 0%                    | 0%                    |
| MER               | kg             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |
| EE                | MJ             | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  | Neg.                  |

## 6. LCA: Interpretation

The contributions to total impact indicator results are dominated by the product replacement phase (B4) of the assessment. Of the remaining life cycle phases, the product maintenance (B2) and raw material extraction and processing (A1) phases are the largest contributors to indicator impact results followed by product disposal (C4) and product distribution (A4).

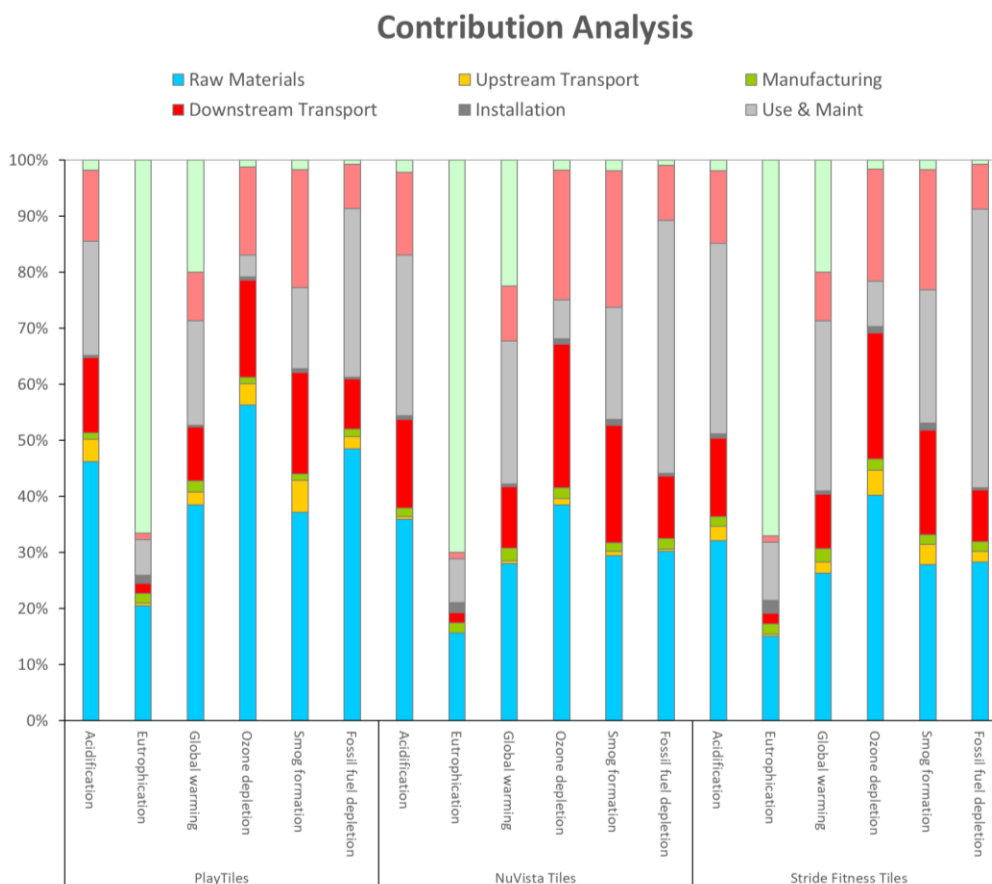


**Figure 2.** Contribution analysis for the Dinoflex rubber tile flooring products –TRACI 2.1. (excluding product replacements)

## 7. Additional Environmental Information

### 7.1 ENVIRONMENT AND HEALTH DURING INSTALLATION

The Dinoflex rubber flooring products meet the requirements of the following:

- FloorScore® (VOC certification)
- CDPH/EHLB Standard Method v1.2-2017 (California Section 01350)

## 8. References

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- ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations – Principles and Procedures.
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