ENVIRONMENTAL PRODUCT DECLARATION

Expanded Polymer Core (EPC) – Sound Core® 8 mm (C)

Pictured above: Lawrence Residential and Commercial Expanded Polymer Core (EPC) – Sound Core® 8 mm (C) for COREtec®.

Coretec

At US Floors International, we aim to create products and solutions that positively impact people and the planet. With the COREtec® brand, we strive for design excellence – from conception to production to installation. Every day, we take on creative challenges to research, design and innovate flooring solutions that transform spaces across the globe. And, when we talk about sustainability, we holistically consider both people and planet – combining social and environmental concerns. This includes a focus on four key areas: material health; circular economy; diversity, equity & inclusion; and carbon impact. To learn more about our products and our sustainability pledge visit coretecfloors.com.

EPD PROGRAM AND PROGRAM OPERATOR NAME, ADDRESS, LOGO, AND WEBSITE	UL Solutions www.ul.com 333 Pfingsten Rd, Northbrook, IL 60062 www.spot.ul.com
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	Program Operator Rules 2022, v2.7
MANUFACTURER NAME AND ADDRESS	US Floors International (a subsidiary of Shaw Industries, Inc.) Souverainestraat 27, 9770 Kruisem, Oost-Vlaanderen, Belgium 9770
DECLARATION NUMBER	4791738303.104.1
DECLARED PRODUCT & FUNCTIONAL UNIT OR DECLARED UNIT	Expanded Polymer Core (EPC) – Sound Core® 8 mm (C) Functional unit = 1 m^2 of installed flooring over RSL of 10 years
REFERENCE PCR AND VERSION NUMBER	UL Environment PCR Part A:2022, UL 10010, v3.2 UL Environment PCR Part B:2019, UL 10010-7, v2.0
DESCRIPTION OF PRODUCT APPLICATION/USE	Residential & commercial flooring
PRODUCT RSL DESCRIPTION (IF APPL.)	10 years
MARKETS OF APPLICABILITY	Europe, Middle East, and Africa (EMEA) (and potentially global)
DATE OF ISSUE	August 11th 2025
PERIOD OF VALIDITY	5 Years
EPD TYPE	Product-specific
RANGE OF DATASET VARIABILITY	N/A
EPD SCOPE	Cradle-to-grave
YEAR(S) OF REPORTED PRIMARY DATA	2023
LCA SOFTWARE & VERSION NUMBER	LCA for Experts (LCA FE) 2023 (formerly GaBi)
LCI DATABASE(S) & VERSION NUMBER	LCA for Experts (LCA FE) (GaBi) Sphera database, content update 2023
LCIA METHODOLOGY & VERSION NUMBER	TRACI v2.1, ISO 21930

This PCR review was conducted by:	UL Solutions – PCR Review Panel – epd@ul.com
This declaration was independently verified in accordance with ISO 21930:2017, ISO 14025:2006, UL Part A:2022, and UL Part B:2019. ☐ INTERNAL ☒ EXTERNAL	Cooper McCollum, UL Solutions
The life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Jack Giebig, Ecoform

LIMITATIONS:

Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – Type 1 certifications, health assessments and declarations, environmental impact assessments, etc.

Accuracy of Results: EPDs regularly rely on estimations of impacts; the level of accuracy in estimation of effect differs for any particular product line and reported impact.

Comparability: EPDs from different programs may not be comparable. Full conformance with a PCR allows EPD comparability only when all stages of a life cycle have been considered. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences in results for upstream or downstream of the life cycle stages declared. Comparison of the environmental performance of flooring products using EPD information shall be based on the product's use and impacts at the building level. Therefore, this EPD may not be used when comparing flooring categories that are not construction works energy use phase.

1. Product Definition and Information

1.1. Description of Company/Organization

Shaw Industries Group, Inc. (Shaw) is a global provider of commercial and residential flooring solutions: carpet, resilient, hardwood, tile & stone, laminate floorings, synthetic turf, pad underlayment, and sundries. Shaw is a wholly owned subsidiary of Berkshire-Hathaway, Inc. with 18,000+ associates and $6 billion in annual revenue. Shaw owns and operates manufacturing facilities across the globe as well as sources finished product from vendor partners globally. Shaw is headquartered in Dalton, Georgia, with salespeople and/or offices throughout the U.S., and globally. Shaw goes to market under many different brand names, including but not limited to, Shaw Contract®, Patcraft®, Philadelphia Commercial®, COREtec®, Shaw Floors™, Anderson Tuftex™, Shaw Sports Turf®, Southwest Greens®, and more.

1.2. Product Description, Identification and Specification

This Environmental Product Declaration (EPD) covers all products/styles of Expanded Polymer Core (EPC) – Sound Core® 8 mm (C) resilient flooring sourced by Shaw from a manufacturing facility in China and marketed/sold in Europe, Middle East, and Africa (EMEA) (and potentially global). EPC is made of calcium carbonate (limestone), poly(vinyl chloride), non-orthophthalate plasticizer, and additives (e.g., pigments, stabilizers, processing aids). EPC falls under EN 14041 and EN 16511 classification codes (CEN, 2018, 2023). A product lifetime of 10 years is asserted by the manufacturer, which is used as the reference service life (RSL) in this EPD. Nominal thickness is available in 8 mm.

EPC is a rigid engineered flooring consisting of a polymer composite core (EPC core) that is medium-dense (i.e., comfortable underfoot), waterproof, and thermally stable. It is a multi-layer flooring with a high-performance coating, transparent wear layer on top of a print layer (film or décor), and a middle (LVT) layer bonded on top of the EPC core via a polyol-based adhesive. Some EPC types have another layer of middle (LVT) and adhesive before the acoustical underlayment (pad). The print layer imitates the look of natural wood or stone. Aside from resin, the EPC core contains fillers, processing aids, stabilizers, foaming agents, lubricants, and pigments. See Figure 1 for a cross-section diagram of EPC flooring and Table 2 for EPC's raw material composition in each layer.

For this EPD, EPC flooring refers to the COREtec® brand.

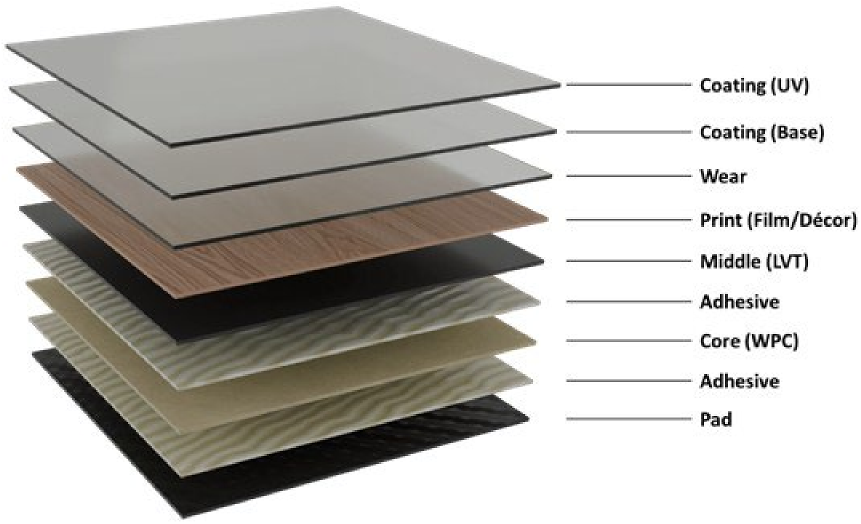

Figure 1. Cross section illustration of EPC flooring.

1.3. Product

The production data used in this EPD considers EPC produced during the 2023 calendar year. The product is manufactured in and sourced from China. EPD results are based on EPC with nominal thickness of 8 mm. Foreground data related to material and energy inputs, production, technical specification, transportation, and background data (i.e., life cycle inventory (LCI) datasets) apply exclusively to EPC with nominal thickness of 8 mm.

1.4. Application

EPC flooring can be utilized in both residential and commercial applications. Aside from being waterproof, it is also durable, resistant from impacts, strains, scratches, and wears, comfortable to walk on, and dimensionally stable. EPC is a floating floor (i.e., no adhesive needed) whose tiles or planks are joined by “clicking” or “snapping” together. In some rare cases, they need to be partially glued to the subfloor especially for those installed commercially.

This EPD is “cradle-to-grave” (C2Gr) in scope with all modules included.

1.5. Declaration of Methodological Framework

This EPD is C2Gr in scope with all modules (including D) declared. There is post-industrial (PI) recycled content in modules A1-A3. Allocation was used in the calculation of the recycled content for all applicable layers. No cut-off criteria are defined for this study, that is, all materials in the formulation are included in the analysis. There are no known flows excluded from this EPD. RSL for this flooring is 10 years.

1.6. Technical Data

Table 1 presents technical properties for EPC. The representative nominal thickness of 8 mm.

Table 1. Technical data for EPC flooring, 8 mm nominal thickness.

Name		Ave value	Unit	Min value	Max value
Product thickness (nominal)		8.00	mm	7.76	8.24
Wear layer thickness		0.56	mm	0.54	0.58
Product weight		8.394	kg/m^2	8.142	8.646
Product form (tile)	Width	180.00	mm	174.60	185.40
	Length	1,520.00	mm	1,220.00	1,830.00

1.7. Market Placement/Application Rules

Shaw's EPC meets all required performance standards to comply with building codes. A summary of these standards is provided below:

- EN 14041: Resilient, textile, laminate and modular floor coverings — Essential characteristics (CEN, 2018).
- EN 16511: Modular mechanical locked floor coverings (MMF) — Specification, requirements and test method for multilayer modular panels for floating installation (CEN, 2023).
- Regulatory/environmental requirements, other industry requirements, and Shaw-specific testing requirements.

1.8. Material Composition

Table 2. Raw material formulation for EPC flooring, 8 mm nominal thickness.

Layers	Chemical description	Function/Role	Weight (%) *
UV Coating	Polyurethane acrylate	Resin (polymer)	0.076
	Silicon dioxide	Agent	0.032
Wear layer	Poly(vinyl) chloride	Resin (polymer)	5.822
Print layer	Poly(vinyl) chloride	Resin (polymer)	0.244
Middle layer	Poly(vinyl) chloride	Resin (polymer)	5.451
	Calcium carbonate	Filler	20.118
Core layer	Poly(vinyl) chloride	Resin (polymer)	23.812
	Recycled poly(vinyl) chloride	Recycled material	1.934
	Calcium carbonate	Filler	23.812
	Recycled calcium carbonate	Recycled material	1.934
	Calcium stearate	Stabilizer	1.812
	Polyethylene (chlorinated)	Stabilizer	1.069

Pad	Cork	Backing	2.502
Others	Proprietary ingredients	Multiple functions	11.383
Total (including proprietary ingredients from each layer)			**100.000**

* Weight (%) is percent component weight against total product weight per unit area.

1.9. Manufacturing

EPC is produced by a series of unit processes depicted in Figure 2. The manufacturing facility is located in Danyang, Jiangsu, China. Manufacturing begins with mixing of raw materials. Once thoroughly blended, the materials are fed into an extruder to form into a sheet. Each layer of the EPC product is made and formed in a similar manner. The separate layers are laminated together under heat and pressure via hot press and annealing. The sheets are then cut into tiles, inspected, glued, balanced, profiled, painted beveled, and placed in a cardboard box packaging. The formed finished product, from top to bottom, has a UV-cured coating, clear wear layer, a printed decorative layer, a middle LVT-based layer, a core EPC layer, and a reinforcement pad. Post-industrial poly(vinyl) chloride and calcium carbonate wastes are recycled back into the EPC-based layer.

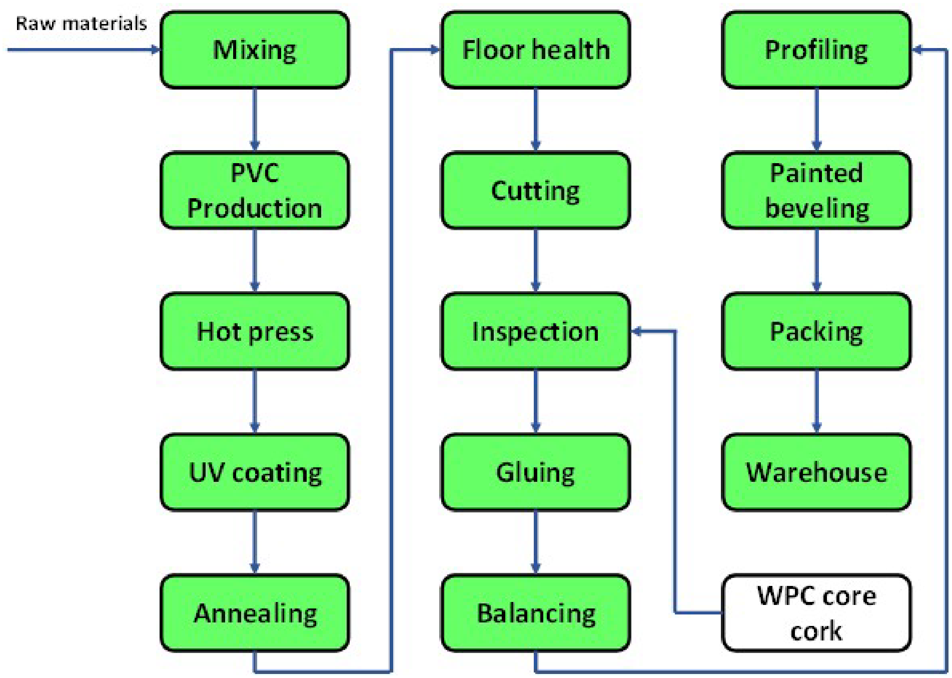

Figure 1. Process flow diagram for the manufacture of EPC flooring, 8 mm nominal thickness. Manufacturing facility is located in Danyang, Jiangsu, China.

1.10. Packaging

Polyethylene shrink wraps, corrugated cardboard boxes/sleeves, wood pallets, polyester strappings, and packaging adhesives are used to package EPC. These materials may contain recycled content and are provided by local packaging suppliers. Disposal of packaging is modeled to follow packaging waste disposal scenarios for installation in the U.S. in conformance with ULE PCR Part A (ULE, 2022). Recycling, incineration, and landfill emissions from paper and plastic packaging are allocated to installation.

1.11. Product Installation

This study includes transportation to various installation sites around the world via global truck. Installation of EPC primarily involves hand tools for measuring and cutting floor materials. Approximately, five percent (5%) of the total material is assumed to be trimmed and discarded as waste. While some of this waste could be recycled, this scrap is modeled as being disposed of in a landfill. EPC utilizes adhesive for installation. Some EPC flooring systems do not require the use of adhesives. Normal procedure after installation is to let rooms with installed flooring ventilate well for a minimum of 72 hours prior to occupancy.

1.12. Use Conditions

The service life of EPC will vary depending on the amount of floor traffic and the type and frequency of maintenance. The level of maintenance is also dependent on the actual use and desired appearance of the floor. The recommended cleaning regime is highly dependent on the use of the premises where the floor covering is installed and can vary based on manufacturer warranty. 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 involves three cleaning processes within the use phase: dust mop, damp mop, and spot removal.

1.13. Product Reference Service Life and Building Estimated Service Life

The RSL for EPC is 10 years, based on the manufacturer's warranty, meaning that the product will meet its functional requirements for an average of 10 years before replacement. Estimated service life (ESL) of the building is 75 years, as specified by ULE's PCR Part A and Part B (ULE, 2019, 2022).

1.14. Re-use Phase

EPC is typically not reused or recycled following its removal from a building. Thus, reuse, recycling, and energy recovery are not applicable for this product currently. Through our own research and development, industry partnerships, academic research, and other innovation efforts, we are continually looking for new recycling solutions for our products.

1.15. Disposal

At the end-of-life (EoL), it is assumed that 100% of EPC is landfilled for inert disposal following requirements of ULE PCR (ULE, 2019, 2022). Waste classification of EPC is based on the Resource Conservation and Recovery Act (RCRA) (US EPA, 2025).

1.16. Further Information

For additional product information, visit https://coretecfloors.com/.

2. Life Cycle Assessment Calculation Rules

2.1. Functional Unit

Per the PCR, the functional unit is 1 m² of floor covering. EPC is assumed to have a reference service life of 10 years and installation losses of 5%. Therefore, over the 75-year ESL of the building, 7 replacements take place. The mass per 1 m² of installed EPC is 8,394.074 g/m^2.

2.2. System Boundary

The EPD is C2Gr in scope. See Table 3 below for included life cycle stages and modules. Although include in the system boundary, note that modules B1, B3, B5, B6, B7, C1, and C3 have zero environmental impacts. Module C3 has zero environmental impacts because a 100% landfilling scenario is assumed at EoL. Module D, the benefits/loads beyond the system boundary, is included in this analysis as per EN 15804+A2. It is assumed that landfilling of plastics does not produce methane gas that can be burned to produce electricity and heat.

Table 3. Inclusive modules, stages, module descriptions, and unit process descriptions for the manufacture of EPC as prescribed by ULE PCR. X = declared module.

Module	Life Cycle Stage	ULE	Module Description	Unit Process Description
A1	Production	X	Raw materials supply (extraction, processing, recycled material)	Extraction and processing of raw materials for each flooring layer; processing of recycled materials (PI and post-consumer (PC)); generation of electricity and other energy used for extraction (including upstream unit processes) from primary energy sources; recovery of energy used for extraction from secondary fuels.
A2		X	Transport to manufacturing	Transport of raw materials to manufacturing facility.
A3		X	Manufacturing	Manufacturing of all SHSF categories including packaging; generation of electricity and other energy used for manufacturing (including upstream unit processes).
A4	Installation	X	Transport to building site	Transport of flooring and packaging to building site.
A5		X	Installation into building	Installation of flooring in the building; generation, transport, and disposal of flooring wastes (losses) and packaging wastes.
B1	Use	X	Use	Use of flooring in commercial or residential buildings; no emissions associated with use.
B2		X	Maintenance	Cleaning of flooring over RSL.
B3		X	Repair	No repair of flooring expected over RSL.
B4		X	Replacement	Materials and energy needed to replace flooring over 75-year ESL.
B5		X	Refurbishment	No refurbishment of flooring expected over RSL.
B6		X	Operational energy use	No operational energy associated with use of flooring expected over RSL.
B7		X	Operational water use	No operational water associated with use of flooring expected over RSL.

C1	End-of-Life	X	Deconstruction/Demolition	Manual deconstruction/demolition of flooring at EoL; no impacts expected.
C2		X	Transport to EoL	Transport of spent flooring to waste treatment at EoL.
C3		X	Waste processing for reuse, recovery, or recycling	No waste processing of spent flooring required given that they will be disposed of by recycling, incineration, or landfilling.
C4		X	Disposal	Disposal of spent flooring to landfill.
D	Next product system	X	Benefits and loads to system boundary	No credits required to be declared associated with reuse, recovery, or recycling.

A1-A3 Product Stage

All production-related raw materials and emissions are included from “cradle-to-gate” (C2Ga), including energy supply and production, raw material extraction and processing, transport of materials to manufacturing site, water use and treatment, and waste processing or recycling of manufacturing waste.

A4 Transport

Transportation of the finished flooring from the manufacturing site to the installation site is included.

A5 Installation

Impacts from the installation of the flooring were calculated, including the production and transport of installation materials (e.g., adhesive) and disposal and/or recycling of installation and packaging wastes.

B1 Use

Indoor Air Quality (IAQ) test for a generic resilient/vinyl flooring (no cove welding) was conducted. IAQ results for the resilient floor was used to represent IAQ results for EPC due to similarity in formulation and construction. The resulting total VOC (TVOC) emission for the generic flooring was used as TVOC input to module B1. The test was conducted using ULE’s GREENGUARD test method following the requirements of GREENGUARD Certification program (ULS, 2025). The product was monitored over a 168-hour exposure period and the resultant TVOC and other pollutant concentrations were determined. The flooring passed the requirements of GREENGUARD based on predicted air concentrations modeled using the GREENGUARD program room loading. No health-related concerns are present during the normal use of the flooring, and module B1 has been declared with zero (or insignificantly minimal) environmental impacts.

B2 Maintenance

This includes cleaning of the flooring over its lifetime, according to the RSL and manufacturer’s guidelines for vacuuming and hot water extraction.

B4 Replacement

This phase represents the impact of replacing the flooring over the ESL of the building (75 years). Based on the product RSL (10 years), the number of replacements can be calculated. This value is the sum of all impacts, across all lifecycle stages, multiplied by the number of replacements (7).

C1 Deconstruction/Demolition

This phase includes the tearing of the product from the building at the end of its RSL.

C2 Transport to End-of-Life

This phase includes the transportation of the flooring product to an EoL facility.

C3 Waste Processing

This phase includes any additional waste processing necessary before material recovery. This is only required for used products undergoing recycling and/or incineration. In this case, none is required.

C4 Disposal

The disposal phase includes any impacts associated with the landfilling of the product at EoL.

2.3. Estimates and Assumptions

Assumptions have been used where adequate primary or secondary data were unavailable. Notable assumptions and limitations are described below.

- Module A3:
  - The manufacturing facilities under review is located in eastern China.
  - Electricity use at the manufacturing facilities was allocated to the flooring sourced by Shaw based on area as a fraction of the total facility production.
  - Managed Life Cycle (MLC) inventory dataset for China energy grid used was national average grid, not residual grid. It was utilized to model resource use and emissions from electricity use at the manufacturing facilities.
  - Packaging materials were purchased locally. Transport distance for sourced packaging was not included in this analysis. The contribution of those transport processes to the environmental impact of the flooring system is negligible.
  - The packaging of raw materials and its disposal was not considered in this study.
  - Wooden pallets were reused multiple times, and the burden of the manufacturing and disposal of the pallets was shared across the reuse. It was assumed that the pallets were reused 10 times.

- Module A4:
  - Transport distances from the manufacturing facilities to installation sites were modeled to represent distribution to consumer markets within EMEA (and potentially globally).

- Module A5:
  - U.S. packaging waste disposal scenarios for paper and plastic wastes were used (Table 4).
  - Disposal of installation wastes and/or packaging wastes were modeled using a transportation distance of 32.2 km by global diesel truck to a waste incineration plant or landfill. Datasets representing disposal in a waste incineration plant or landfill were obtained from MLC database.

- Module B2:
  - The maintenance phase was modeled based on information provided by the manufacturers including recommended installation and cleaning methods, as well as cleaning frequency.

- Module B4:
  - RSL was used for 10 years, as per manufacturer's suggestions, following their recommended installation and maintenance regimes.

- Module C3 and C4:
  - Recycling or disposal were modeled using a transportation distance of 161 km by global diesel truck to either a material reclamation facility (for recycling), waste incineration plant, or landfill. Datasets representing disposal in a waste incineration plant or landfill were obtained from MLC database.

Table 4. Packaging waste disposal scenarios for installation in the U.S. (ULE, 2022).

Component	Recycled	Landfilled	Incinerated
Paper packaging waste	75%	20%	5%
Plastic packaging waste	15%	68%	17%
Wood pallets packaging waste	39.8%	34.5%	25.7%

2.4. Cut-off Rules

All available and reported data from the production process were considered (i.e. all raw materials used, thermal energy utilized, and electric power consumed) using best available LCI datasets from MLC database. Thus, material and energy flows contributing to less than 1% of mass or energy were considered. As per EN 15804+A2 maximum exclusion guideline, if an induvial flow contributes to less than "1% of renewable primary energy resource, 1% of non-renewable primary energy resource, 1% of total mass input to the unit process, 1% of environmental impacts, and 5% of energy use, mass, and environmental impacts per module", that flow maybe excluded. In this EPD, no known flows were deliberately excluded.

2.5. Data Sources

As a rule, foreground (primary) data derived from specific production processes (product-specific and facility-specific data) or average data derived from multiple but site-specific production processes (product-average and facility-specific data) were the first choice as a basis for calculating LCA results. All foreground data sources for material/energy inputs, emissions, and wastes are high quality because they were directly collected from the manufacturers and they represent one full year (2023) instead of quarters or months, which are fluctuating. Supplier locations and transport modes for the component materials were also provided to Shaw. Background (secondary) data sources were sourced from MLC databases.

2.6. Data Quality

Data quality assessment was performed according to the requirements of ULE's PCR Part A (ULE, 2022) and considers all the following data quality requirements as noted in ISO 14044 Section 4.2.3.6 (ISO, 2006c). The various data quality parameters and their corresponding discussions are summarized below.

1. **Data Quality Parameter #1: Precision**
   Precision describes the variability of the inventory data. As most of the relevant foreground data are measured or calculated based on primary information sources of the owner of the technology, precision is considered **high**. Seasonal variations were balanced out by using yearly averages. All background data were sourced from MLC databases with documented precision.

2. **Data Quality Parameter #2: Completeness**
   Completeness is the percent of the flows (i.e., mass, energy, emissions) that are included in the study relative to the total flows covered in the stated scope of the product life cycle. Shaw developed data collection forms given to individual manufacturers in China. Shaw worked extensively with the individual participants to obtain a comprehensive set of primary data associated with the manufacturing processes.

   Each foreground process was checked for mass balance and completeness of the emission inventory. No data were knowingly omitted. Completeness of foreground unit process data is **high**. All background data were sourced from MLC databases with documented completeness.

3. **Data Quality Parameter #3: Consistency**
   Consistency is the qualitative assessment of whether the study methodology is applied uniformly to the various components of the analysis. To ensure consistency, all foreground data were collected with the same level of detail, while all background data were sourced from MLC databases. Allocation and other methodological choices were consistently made throughout the model. Consistency is **high**.

4. **Data Quality Parameter #4: Reproducibility**
   Reproducibility is the qualitative assessment of the extent to which information about the methodology and data would allow an independent LCA practitioner to reproduce the results reported in this EPD. Reproducibility is possible for internal uses, made possible via the LCA model in Life Cycle Assessment for Experts (LCA FE) v10.9 software and the corresponding LCA model in Excel spreadsheet with Oracle Crystal Ball® financial modeling suite add-in. For external audiences such as the reviewers, they will be given access to the raw Gate-to-Gate (G2G) data, but this information will not be published broadly to maintain confidentiality. Reproducibility is **high**.

5. **Data Quality Parameter #5: Representativeness**
   Representativeness is the qualitative assessment of the degree to which the selected dataset reflects the system in question. Often, dataset used in the assessment represent typical, average, or representative processes and technologies to produce G2G raw materials. A limited number of materials are site-specific; they are produced differently from a typical material within its class. Representativeness is **adequate**.

6. **Data Quality Parameter #6. Technological coverage**
   Technological coverage refers to specific technologies or technology mixes that should be used. All foreground and background data were modeled to be specific to the technologies or technology mixes under study. Data on material composition and manufacturing were provided as foreground data to Shaw. The raw material inputs in the calculation were based on annual total production and purchases. Waste, emissions, and energy use were based on measured data during the 2023 reference year. In terms of background data, where some data were not available, appropriate technological proxies were used. Technological representativeness is **adequate.**

7. **Data Quality Parameter #7: Temporal coverage**
   Temporal coverage describes the age of the inventory data and the period of time over which data is collected. All manufacturers' provided foreground data covered a period from January 2023 – December 2023. Background data for upstream and downstream processes (i.e., raw materials, energy resources, transportation, and ancillary materials) were obtained from the MLC database. The reference year for these background data is 2023. Temporal representativeness is **high.**

8. **Data Quality Parameter #8: Geographical coverage**
   Geographical coverage assesses the applicability of selected dataset to the region/location modeled. In this EPD, EPC were manufactured in China and were sold within EMEA. All data collected are representative of the various manufacturing sites in China. Background datasets applicable to China, U.S. and E.U. were utilized. Whenever geographically relevant background datasets were not readily available, global (GLO) or U.S. (US) datasets were used as proxies. Following production, EPC were shipped to, sold to, and used within EMEA. Installation, use, and EoL impacts were modeled using background data that represent E.U. (Global, RER, or DE) average conditions. Geographical representativeness is **high.**

9. **Data Quality Parameter #9: Data sources**
   Foreground data sources for material/energy inputs, emissions, and wastes are **high** quality because they were directly collected from the manufacturers and they represent one full year instead of quarters or months, which are fluctuating. Supplier locations and transport modes for the component materials were also provided to Shaw. Background data sources were sourced from MLC databases.

10. **Data Quality Parameter #10: Data uncertainty**
    Uncertainty for foreground data sources is **low** due to high specificity in data supplied by manufacturers. Uncertainty on secondary data sources is **medium** due to generic nature of datasets.

2.7. Period Under Review

Primary data collected represent production during the 2023 calendar year.

2.8. Allocation

Multi-output allocation generally follows the requirements of ISO 14044, section 4.3.4.2 (ISO, 2006c). When allocation becomes necessary during the data collection phase, the allocation rule most suitable for the respective process step was applied.

- **Allocation of background data:**
  Allocation of background data (energy and materials) taken from MLC databases including allocation principles and procedures, documentation and justification of allocation procedures, and uniform application of allocation procedures of individual datasets is documented online at Sphera's website (Sphera, 2025).

- **Allocation of foreground data:**
  Foreground data on energy consumption and waste generation during manufacturing of EPC was obtained directly from the manufacturers. The overall production from each China facility comprises further products beyond EPC. However, production data (e.g., energy consumption, water consumption) obtained by Shaw refer only to the declared product. Annual facility wide energy and water consumption, as well as production of waste and wastewater, were physically allocated to EPC based on area (per m² or per yard). The conversion of flows and impacts to each thickness is then conducted. No co-product or by-product allocation was necessary during use or EoL.

The cut-off allocation approach is adopted in the case of any post-consumer (PC) and post-industrial (PI) recycled content, which is assumed to enter the system burden-free. Only environmental impacts from the point-of-recovery and forward (e.g., inbound transports, grinding, processing, etc.) are considered. The primary production of recycled materials was outside the system boundary (i.e., processes that prepares secondary materials for utilization such as grinding, pelletizing, etc.).

Given that raw materials are key contributors to environmental impacts, mass-based allocation was applied to facilities that produced more than one flooring product. No allocation is required to products at EoL: plastic is assumed to be inert in landfills, so no fugitive landfill gas is produced from product waste. Bio-based packaging waste may decompose and produce landfill gas. However, potential benefits from generation of methane gas during landfilling and/or incineration of packaging wastes are excluded from this study due to the use of cut-off approach. Under the polluter-pays principle, the product system carries the burden of landfilling and/or incineration.

2.9. Comparability and Benchmarking

No comparisons or benchmarking is included in this EPD. LCA results across EPDs can be calculated with different background databases, modeling assumptions, geographic scope, and time periods, all of which are valid and acceptable according to the PCR (CEN, 2012; ULE, 2019, 2022) and ISO standards (ISO, 2006a, 2006b, 2017). Caution should be used when attempting to compare EPD results.

3. Life Cycle Assessment Scenarios and Additional Technical Information

Foreground parameters for modules B3, B5, B6, B7, and C1 are not shown although they were considered in the analysis. Their results were deemed not to be relevant and all values for those modules are 0.

Table 5. Foreground distribution parameters (module A4) in the LCI analysis of EPC flooring.

Parameter (per vehicle basis)	CN truck	EU/GLO truck	GLO Ship
Fuel type	Diesel, filing station, CN	Diesel, filing station, RER	HFO, refinery, US
Fuel use (kg fuel/kg-100 km)	0.00335	0.00335	0.000277 (as 2.5 wt% S HFO)
Liters of fuel (L/m^2-100 km)	0.037	0.037	0.003
Vehicle type	Euro 3, 20-26t gwt, 17.3t payload truck	Euro 3, 20-26t gwt, 17.3t payload truck	5,000-200,000 dwt, deep sea ship
Capacity utilization mass factor (including empty runs, mass based) (f)	0.55	0.55	0.70
Capacity utilization volume factor (f)	1	1	1
Transport distance (km)	330	735	20,000
Weight transported (kg/m^2) (8 mm)	8.394	8.394	8.394

It should be noted that the Liters of fuel consumed is reported in the units of L/m^2-100 km as opposed to L/100 km as required by the PCR. This is based on the truck mileage data obtained from datasets in MLC, which restrict the calculation of fuel consumption on functional unit basis.

Table 6. Foreground installation parameters (module A5) in the LCI analysis of EPC flooring.

Parameter	8 mm	Unit
Ancillary material (Adhesive)	0.268	kg/m^2
Installation loss	5	%
Product loss per m^2 (at 5%)	0.441	kg/m^2
Packaging waste	0.400	kg/m^2
Packaging waste – paper (50 wt% split)	0.200	kg/m^2
Packaging waste – plastic (50 wt% split)	0.200	kg/m^2
Packaging waste – for recycling	0.180	kg/m^2
Packaging waste – for energy recovery	0.044	kg/m^2
Packaging waste – for landfill	0.176	kg/m^2
Biogenic carbon in packaging	1.08E-01	kg CO_2-eq./m^2
Freshwater use	2.32E-03	m^3/m^2

Table 7. Reference service life of EPC flooring.

Parameter	Value
Reference service life	10 years
Declared product properties	Regulatory/environmental requirements, EN 14041 requirements, industry requirements
Installation method	Glue-down (pressure-sensitive)
Subfloor type	Levelled concrete or wood
Traffic level	Light to moderate commercial
Environment	Indoor, climate-controlled
Maintenance cycle	120 cycle/RSL (1/month)

Table 8. Foreground maintenance parameters (module B2) in the LCI analysis of EPC flooring.

Parameter	Value	Unit
Maintenance process information	Cleaning the surface of SHSF according to manufacturer's instructions	
Maintenance cycle	120	cycle/RSL (1/month)
Detergent use	1.864	kg/m^2
Detergent use	223.68	kg/m^2/RSL
Detergent use rate	11.1	mL/ft^2-yr
Detergent density	0.00104	kg/mL
Water use – city water disposed to sewer	0.087	m^3/m^2

Water use	10.443	m^3/m^2/RSL
Water use rate	0.539	L/ft^2-yr
Energy use – polisher/cleaner/vacuum	0.323	kWh/m^2
Energy use	38.760	kWh/m^2/RSL
Energy use rate	0.002	kWh/ft^2-yr

Table 9. Foreground replacement parameters (module B4) in the LCI analysis of EPC flooring.

Parameter	8 mm	Unit
Reference service life	10	years
Number of replacements	7	(ESL/RSL)-1
Ancillary material (Adhesive)	0.268	kg/m^2
Replacement of worn parts – used EPC	8.394	kg/m^2

Table 10. End-of-life (EoL) parameters (module C1-C4) in the LCI analysis of EPC flooring.

Parameter	8 mm	Unit
Collected as mixed construction waste	8.394	kg/m^2
Recycling	0	kg/m^2
Incineration (Energy recovery)	0	kg/m^2
Landfilling	8.394	kg/m^2
Removals of biogenic carbon (excluding packaging)	0	kg/m^2

4. Life Cycle Assessment Results

The results in this EPD are for 1 m^2 of EPC flooring over the 75-year ESL of the building. The core environmental impacts follow the EN 15804+A2 method. The thirteen impact categories within the method 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. Caution should be used when comparing the results presented in this EPD to the environmental performance of other sourced hard surface (SHSF) flooring as the overall weight of floors and other physical, chemical, and technological factors will influence the environmental impacts. Although the environmental impacts should be reduced for the lighter weight (or thinner) floors due to less raw materials, a heavier floor can have raw materials whose C2Ga impacts are lower compared to a lighter floor. Further, although not a general rule, a heavier floor sometimes lasts longer than a lighter floor, counteracting the advantage gained by a lighter floor.

The results in the succeeding tables reflect the environmental impacts of flooring for modules A1-A3, A4, A5, B1, B2, B4, C2, and C4 over its 10-year RSL. Note that modules B3, B5, B6, B7, C1, and C3 have zero environmental impacts. Module C3 has zero environmental impacts because a 100% landfilling scenario is assumed at EoL. Module B4 (replacement) shows the environmental impacts of replacements over the next 65 years of the product (1^{st}, 2^{ND}, 3^{RD}, 4^{TH}, 5^{th}, and 6^{th} replacements) following the initial manufacture. When B4 is added to A1-A3, A4, A5, B2, C2, C3, and C4, the calculated value represents the environmental impact for 1 m^2 of EPC flooring over the 75-year ESL of the building (C2Gr). It is important to stress that that LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks.

4.1. Results of the LCA – Core Environmental Impacts: 1 m^2 of installed flooring over RSL of product

Table 11. Results of LCA for EPC – Sound Core® 8 mm (C) – Core Environmental Impacts for 1 m^2 of installed EPC – Sound Core® 8 mm (C) over RSL of the product using EN 15804+A2 method. Module B4 is calculated over ESL of the building at 7 replacement cycles. Modules B1, B3, B5, B6, B7, C1, and C3 are not shown although they were considered in the analysis. Their results were deemed not to be relevant and all values for those modules are 0. Module D is included.

EPC – Sound Core® 8 mm (C)												
Core Environmental Impacts, EN 15804+A2												
Module	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**B2**	**B4**	**C2**	**C4**	**D**
GWP_{total}	**kg CO_2-eq.**	**1.11E+01**	**4.00E-01**	**3.73E+00**	**1.52E+01**	**3.07E+00**	**6.47E-01**	**1.44E+00**	**1.45E+02**	**1.56E-01**	**1.78E-01**	**0.00E+00**
GWP_{fossil}	kg CO_2-eq.	1.19E+01	4.00E-01	4.21E+00	1.66E+01	3.06E+00	4.86E-01	1.43E+00	1.53E+02	1.54E-01	1.78E-01	0.00E+00
GWP_{bio}	kg CO_2-eq.	-9.00E-01	1.23E-04	-4.78E-01	-1.38E+00	2.23E-03	1.60E-01	7.43E-03	-8.45E+00	3.57E-04	-3.30E-04	0.00E+00
GWP_{luluc}	kg CO_2-eq.	2.46E-02	1.07E-05	2.37E-03	2.70E-02	7.42E-03	1.67E-04	8.50E-04	2.59E-01	1.46E-03	6.65E-05	0.00E+00
ODP	kg CFC11-eq.	4.98E-11	2.34E-14	7.43E-10	7.93E-10	3.15E-13	4.65E-13	2.00E-12	5.57E-09	2.06E-14	4.10E-13	0.00E+00
AP	mole H^+-eq.	2.30E-02	3.32E-03	1.45E-02	4.08E-02	7.17E-02	1.23E-03	6.50E-03	8.59E-01	1.34E-03	1.08E-03	0.00E+00
EP_{fresh}	kg P-eq.	1.22E-04	4.99E-08	1.21E-05	1.34E-04	3.44E-06	1.66E-05	5.23E-06	2.65E-03	5.77E-07	2.19E-04	0.00E+00
EP_{marine}	kg N-eq.	7.58E-03	1.66E-03	3.35E-03	1.26E-02	2.01E-02	3.87E-04	1.09E-03	2.46E-01	6.69E-04	2.72E-04	0.00E+00
EP_{terre}	mole N-eq.	9.04E-02	1.82E-02	3.64E-02	1.45E-01	2.21E-01	5.28E-03	1.19E-02	2.75E+00	7.39E-03	2.97E-03	0.00E+00
POCP	kg NMVOC-eq.	2.60E-02	3.14E-03	1.00E-02	3.91E-02	5.23E-02	1.41E-03	3.84E-03	6.91E-01	1.26E-03	8.23E-04	0.00E+00
RMM	kg Sb-eq.	1.97E-06	2.59E-09	2.13E-07	2.18E-06	1.59E-07	5.24E-08	2.79E-06	3.64E-05	1.05E-08	1.02E-08	0.00E+00
RFF	MJ	2.83E+02	5.57E+00	5.23E+01	3.41E+02	3.84E+01	1.10E+01	4.05E+01	3.05E+03	2.15E+00	2.76E+00	0.00E+00
WU	m^3 world-eq.	2.06E+00	1.75E-03	5.26E+00	7.32E+00	2.02E-02	7.60E-02	4.30E+00	8.21E+01	1.91E-03	9.38E-03	0.00E+00

GWP_{total} = global warming potential, total; GWP_{fossil} = global warming potential, fossil; GWP_{bio} = global warming potential, biogenic carbon; GWP_{luluc} = global warming potential, land use and land use change; ODP = ozone depletion potential; EP_{fresh} = eutrophication potential, freshwater; EP_{marine} = eutrophication potential, marine water; EP_{terre} = eutrophication potential, terrestrial; POCP = photochemical ozone creation potential; RMM = resource use, minerals and metals; RFF = resource use, fossil fuels; WU = water use

4.2. Results of the LCA – Resource Use: 1 m^2 of installed flooring over RSL of product

Table 12. Results of LCA for EPC – Sound Core® 8 mm (C) – Resource Use for 1 m^2 of installed EPC – Sound Core® 8 mm (C) over RSL of the product using EN 15804+A2 method. Module B4 is calculated over ESL of the building at 7 replacement cycles. Modules B1, B3, B5, B6, B7, C1, and C3 are not shown although they were considered in the analysis. Their results were deemed not to be relevant and all values for those modules are 0. Module D is included.

EPC – Sound Core® 8 mm (C)												
Resource Use, EN 15804+A2												
Module	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**B2**	**B4**	**C2**	**C4**	**D**
PERE	MJ	2.81E+01	3.07E-02	2.32E+01	5.14E+01	1.00E+00	4.17E+00	2.54E+00	4.17E+02	1.57E-01	3.29E-01	0.00E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.81E+01	3.07E-02	2.32E+01	5.14E+01	1.00E+00	4.17E+00	2.54E+00	4.17E+02	1.57E-01	3.29E-01	0.00E+00
PENRE	MJ	2.87E+02	5.58E+00	5.24E+01	3.45E+02	4.02E+01	1.13E+01	4.05E+01	3.09E+03	2.16E+00	2.81E+00	0.00E+00
PENRM	MJ	-9.52E-05	0.00E+00	-7.08E-02	-7.09E-02	0.00E+00	0.00E+00	0.00E+00	-4.96E-01	0.00E+00	-1.02E-14	0.00E+00
PENRT	MJ	2.87E+02	5.58E+00	5.23E+01	3.45E+02	4.02E+01	1.13E+01	4.05E+01	3.09E+03	2.16E+00	2.81E+00	0.00E+00
SM	kg	3.10E-01	0.00E+00	3.60E-03	3.13E-01	0.00E+00	0.00E+00	0.00E+00	2.19E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	6.54E-02	4.68E-05	1.25E-01	1.91E-01	1.28E-03	2.32E-03	1.01E-01	2.07E+00	1.72E-04	3.48E-04	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

PERE = primary energy resource use as renewable energy; PERM = primary energy resource use as renewable materials; PERT = total renewable primary energy resource use; PENRE = primary energy resource use as non-renewable energy; PENRM = primary energy resource use as non-renewable materials; PENRT = total non-renewable primary energy resource use; SM = use of secondary materials; FW = use of net fresh water; RSF = use of renewable secondary fuels; NRSF = use of non-renewable secondary fuels; RE = use of recovered energy

4.3. Results of the LCA – Output Flows & Waste Categories: 1 m² of installed flooring over RSL of product

Table 13. Results of LCA for EPC – Sound Core® 8 mm (C) – Output Flows & Waste Categories for 1 m² of installed EPC – Sound Core® 8 mm (C) over RSL of the product using EN 15804+A2 method. Module B4 is calculated over ESL of the building at 7 replacement cycles. Modules B1, B3, B5, B6, B7, C1, and C3 are not shown although they were considered in the analysis. Their results were deemed not to be relevant and all values for those modules are 0. Module D is included.

EPC – Sound Core® 8 mm (C)												
Output Flows & Waste Categories, EN 15804+A2												
Module	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**B2**	**B4**	**C2**	**C4**	**D**
HWD	kg	2.04E-05	1.39E-12	1.06E-06	2.15E-05	1.01E-10	1.35E-08	1.29E-04	1.05E-03	6.69E-12	7.01E-11	0.00E+00
NHWD	kg	1.77E-01	2.12E-04	6.41E-02	2.42E-01	3.03E-03	6.37E-01	3.88E-02	6.49E+01	3.29E-04	8.35E+00	0.00E+00
RWD	kg	5.23E-03	2.02E-06	1.08E-03	6.32E-03	8.65E-05	1.30E-04	8.93E-04	5.22E-02	4.04E-06	3.11E-05	0.00E+00
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.26E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-02	0.00E+00	3.08E-01	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-01	0.00E+00	1.30E+00	0.00E+00	0.00E+00	3.11E-02
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.47E-02	0.00E+00	5.23E-01	0.00E+00	0.00E+00	9.78E-03

HWD = hazardous waste disposed; NHWD = non-hazardous waste disposed; RWD = radioactive waste disposed; CRU = components for re-use; MR = materials for recycling; MER = materials for energy recovery; EEE = exported electrical energy; EET = exported thermal energy

4.4. Results of the LCA – Carbon Emissions & Removals: 1 m^2 of installed flooring over RSL of product

Table 14. Results of LCA for EPC – Sound Core® 8 mm (C) – Carbon Emissions & Removals for 1 m^2 of installed EPC – Sound Core® 8 mm (C) over RSL of the product using ISO 21930 method. Module B4 is calculated over ESL of the building at 7 replacement cycles. Modules B1, B3, B5, B6, B7, C1, and C3 are not shown although they were considered in the analysis. Their results were deemed not to be relevant and all values for those modules are 0. Module D is included.

EPC – Sound Core® 8 mm (C)												
Carbon Emissions & Removals, ISO 21930												
Module	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**B2**	**B4**	**C2**	**C4**	**D**
BCRP	kg	9.54E-02	0.00E+00	0.00E+00	9.54E-02	0.00E+00	0.00E+00	0.00E+00	6.67E-01	0.00E+00	0.00E+00	0.00E+00
BCEP	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg	0.00E+00	0.00E+00	1.08E-01	1.08E-01	0.00E+00	0.00E+00	0.00E+00	7.53E-01	0.00E+00	0.00E+00	0.00E+00
BCEK	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-01	0.00E+00	7.53E-01	0.00E+00	0.00E+00	0.00E+00

BCRP = biogenic carbon removal from product; BCEP = biogenic carbon emission from product; BCRK = biogenic carbon removal from packaging; BCEK = biogenic carbon emission from packaging

4.4. LCA Interpretation

Cradle-to-Grave Results

The flooring manufacturing stage (C2Ga, module A1-A3) core environmental impacts account to 33%-78% of the C2Gr (module A1-C4) core impacts. A1-A3 dominates C2Gr GWP, at around 73%-76%, except for GWP from biogenic sources. The core impacts for replacement (module B4) are 7 times the sum of core impacts from all other stages, for the full lifespan of the building (75 years). Therefore, when discussing the total life cycle burden over the RSL, B4 values are excluded.

For resource use, A1-A3 represents 64%-86% of C2Gr resource impacts, except PENRM and SM, where 100% of consumption impacts are attributed to A1-A3. For output flows and waste categories, A1-A3 contributes to 3%-85% of wastes, except for those indicators that have no associated waste flows. The fact that flooring manufacturing stage is the primary contributor in all core impacts, as well as across most inventory indicators considered, this study offers an opportunity for Shaw to **1) reduce the material used in the product, 2) include recycled content, or 3) use/replace a portion of its energy base with renewables.** Further, footprints can be lowered through **targeted raw material optimization.** Material footprints are based on industry averages as supplier data is not available and therefore may not perfectly represent specific materials used. It is recommended that **supply-chain Product Carbon Footprints (PCF) be used** as foreground inputs for the LCA model underpinning this EPD.

EPC does not have significant organic content in its formulation. Biogenic carbon removal is wholly associated with paper and wood in packaging.

Hotspot analysis reveals that the use of virgin PVC and virgin DOTP, including the purchase and use of electricity from China grid constitute a major influence on GWP for EPC. Moreover, packaging (including adhesive in packaging) contributes the most to ODP in EPC.

EPC is a PVC-based flooring. As such, uncertainty/sensitivity analysis reveals that changes in the amount of virgin PVC drives GWP (excluding biogenic carbon) variability. Other key sensitivity drivers include global shipping and the purchase and use of electricity from China grid. Results of the sensitivity analysis is shown in Figure 3.

The thirteen core environmental 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 results of this study could be significantly influenced by assumptions regarding the frequency of cleaning and replacement, as well as the source of electricity used for cleaning. The level of use, site conditions, and location of installation could significantly affect these variables and therefore significantly affect the actual environmental impact of the product over its life cycle.

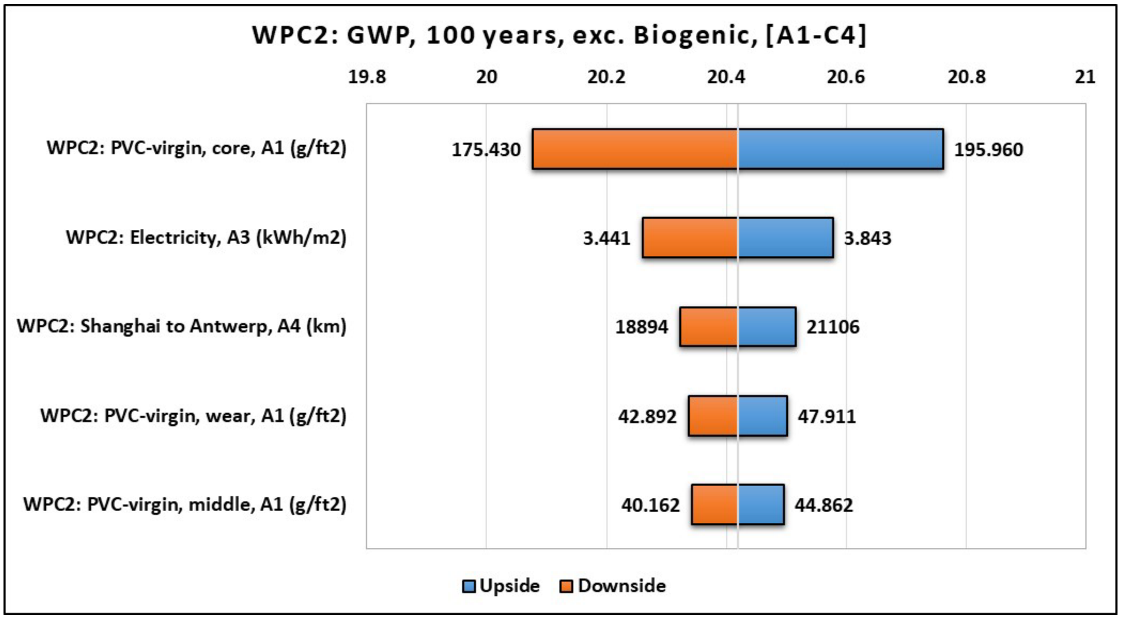

Figure 3. Tornado plot for assessing the sensitivity of GWP, 100 years, excluding biogenic carbon across modules A1-C4 to inputs in representative EPC flooring, 8 mm (WPC = EPC – Sound Core® 8 mm (C)). Bar widths represent percent change in GWP arising from ±10% variation in each input. The top five most impactful parameters are shown for each model. Blue and orange bars indicate direct and indirect correlations between each input and GWP, respectively. The GWP values reported in this figure are actual forecast values derived from "base case" input values.

5. Additional Information

5.1. Mandatory Environmental Information

Shaw's products do not contain any hazardous substances according to RCRA, Subtitle 3 (US EPA, 2025). The product does not release dangerous substances to the environment, including gamma or ionizing radiation, chemicals released to air or leached to water and soil.

More information on this product can be found at https://coretecfloors.com/.

5.2. Environmental Activities and Certifications

The flooring products in this EPD comply with the VOC emissions requirements in the California Department of Public Health (CDPH) Standard Method v1.2 (CDPH, 2017).

5.3. Further Information

Shaw adheres to all applicable laws regarding labor, discrimination and harassment, wages and benefits, health and safety, and equal opportunity. Through associate engagement, structured safety processes, and a commitment to responsible materials sourcing, Shaw works to improve standards for personal and organizational safety every day. Our programs include:

- Shaw Behavior Based Safety Program to ensure continuous training, awareness, education and safety of all Shaw associates and visitors to Shaw facilities.
- Supply chain, raw materials, and waste management programs.
- Shaw Management System (SMS) – Based on ISO 9001 (ISO, 2015a), 14001 (ISO, 2015b), and ISO 45001 (ISO, 2018) standards. SMS brings together Shaw's Quality, Total Productive Manufacturing (TPM), and Environmental, Health and Safety systems under one umbrella. SMS provides associates with a single repository to find information, which helps ensure all job steps are followed the same way every time.

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7. Contact Information

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