

Environmental Product Declaration



Environmental Product Declaration for various flooring products produced by Zandur Innovative Flooring at their Zandur facility in Front Royal, Virginia

ADMINISTRATIVE INFORMATION

International Certified Environmental Product Declaration

Declared Product:	This Environmental Product Declaration (EPD) covers flooring products produced by Zandur Innovative Flooring. Declared unit: 1 m2 of flooring.	
Declaration Owner:	Zandur Innovative Flooring 26 Kelley Dr. Front Royal, Virginia www.zandur.com	
Program Operator:	Labeling Sustainability 11670 W Sunset Blvd. Los Angeles, CA 90049 www.epdregistration.com	
Product Category Rule:	ISO 21930:2017 Sustainability in buildings and civil engineering works Core rules for environmental product declarations of construction products and services and Sub Product Category Rule for flooring: Carpet, Resilient, Laminate, Ceramic, Wood Version2 (Expires June 23,2020). No new PCR found. PCR Program Operator: NSF International PCR review was conducted by: Mr. Jack Geibig, Mr. Thaddeus Owen, Dr. Michael Overcash	
Independent LCA Reviewer and EPD Verifier:	This declaration was independently verified in accordance with ISO 14025:2006. Independent verification of the declaration, according to ISO 14025:2006 Internal ☐ ; External ☒ X Third Party Verifier Geoffrey Guest, Certified 3rd Party Verifier under the Labeling Sustainability Program (www.labelingsustainability.com), CSA Group (www.csaregistries.ca).	
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COMPANY DESCRIPTION

Zandur was founded in 2004 by Rob McKee, an innovator who has played a significant role in the development of sustainable commercial flooring products over his 25 years in the industry.

Rob is the sole innovator and creator of modern cork-rubber flooring as well as commercial cork flooring. Additional innovation includes the development of a totally unique cork wall covering system as well as numerous design improvements both in cork and rubber products including being the first company to offer planks in rubber flooring.

Be assured, every product that Zandur brings to market will bring a new opportunity to improve access to design oriented, sustainable and exciting commercial interior products.

STUDY GOAL

The intended application of this life cycle assessment (LCA) is to comply with the procedures for creating a Type III environmental product declaration (EPD) and publish the EPD for public review on the website, www.epdregistration.com. This level of study is in accordance with EPD Product Category Rule (PCR) for Flooring published by UL Environment entitled, 'Guidance for Building-Related Products and Services, Part B: Flooring EPD Requirements'; International Standards Organization (ISO) 14025:2006 Environmental labels and declarations, Type III environmental declarations-Principles and procedures; ISO 14044:2006 Environmental management, Life cycle assessment- Requirements and guidelines; and ISO 14040:2006 Environmental management, Life cycle assessment-Principles and framework. The performance of this study and its subsequent publishing is in alignment with the business-to-business (B2B) communication requirements for the environmental assessment of building products. The study does not intend to support comparative assertions and is intended to be disclosed to the public.

This project report was commissioned to differentiate Zandur Innovative Flooring from their competition for the following reasons: generate an advantage for the organization; offer customers information to help them make informed product decisions; improve the environmental performance of Zandur Innovative Flooring by continuously measuring, controlling and reducing the environmental impacts of their products; help project facilitators working on Leadership in Energy and Environmental Design (LEED) projects achieve their credit goal; and to strengthen Zandur Innovative Flooring's license to operate in the community. The intended audience for this LCA report is Zandur Innovative Flooring's employees, their suppliers, project specifiers of their products, architects, and engineers. The EPD report is also available for policy makers, government officials interested in sustainability, academic professors, and LCA professionals. This LCA report does not include product comparisons from other facilities.

DESCRIPTION OF PRODUCT AND SCOPE

Four product groups by Zandur Innovative Flooring are covered in this EPD. The first is Flex solid rubber flooring. Flex Solid Rubber is manufactured with a unique blend of nitrile rubber, natural fillers, and environmentally safe pigments and additives. Flex is perfect for commercial applications where ease of maintenance, durability, and long service life are required. It is a safe flooring solution



offering excellent slip resistance and meeting high indoor air quality standards. In addition, Flex meets the criteria for numerous sustainability programs and, like all Zandur products and is ILBC Declare Red List free. The second product is Sustain Cork Flooring. Sustain results from over 20 years of constant innovation resulting in one of the most sustainable, high-performance commercial floorings on the market. Re-designed in 2021, Sustain is made with Nitrile rubber and is free of Styrene Butadiene rubber. As a result, sustain meets high indoor air quality standards. Praxis solid cork flooring is the third product. Zander has re-defined cork flooring, building Praxis from the ground up to perform exceptionally in commercial applications. It is manufactured with the highest density, stabilized cork and is cut to order, assuring trouble-free, no-hassle installation and use. Praxis is finished with a unique commercial-grade finish and will withstand high traffic use in hospitality, education, and corporate applications. The fourth product is Sophros solid rubber flooring. This flooring option is designed with a subtle tone-on-tone terrazzo visual; Sophros is made with Zandur's exclusive PVC-free and Styrene Butadiene free; it meets stringent indoor air quality standards and requires significantly less maintenance than typical rubber flooring. For any application where health and well-being are a focus, Sophros achieves the highest levels of performance in terms of comfort, slip resistance, and maintenance. Specify for use in various areas, including patient rooms, emergency rooms, ORs, cafeterias, corridors, classrooms, offices, and anywhere else where durability, comfort, and safety are paramount. In addition, Sophros meets the criteria for numerous sustainability programs and is ILBC Declare Red List free.

The reference service life (RSL) for rubber and cork flooring is assumed to be 30 years, meaning that the product will meet its functional requirements for an average of 30 years before replacement. Estimated building service life is 60 years, as specified by the PCR. Additional information for the number of replacements needed over 60-years building life was calculated by dividing the building service Life (60 years) by the reference service life of flooring.

Table 1: **Replacement over 60-years building service life.**

Product Name	Replacement- RSL
Sustain	2
Flex	2
Sophros	2
Stair Treads	2
Praxis Cork	2

As specified by the PCR, the product description should include an illustrative picture or technical data in the EPD documenting the product's main characteristics and structure of the floor covering.

Table 2: **Flooring covering technical data.**

CHARACTERISTICS	AVERAGE VALUE	UNIT	MINIMUM VALUE	MAXIMUN VALUE
Product thickness	Tiles	mm	2.5	13
Product thickness	Roll	mm	2.5	3



Wear layer thickness	-	mm	2.5	3
Product weight*	7142	g/m2	2850	12060
Product form	-	-	-	-
Tiles	-	mm	102 x 914	1001 x 1001
Roll length	-	m	-	12
Roll width	-	m	-	1.12

This LCA assumes the impacts from products manufactured in accordance with the standards outlined in this report. This LCA is a cradle-to-grave study.

FLOORING DESIGN SUMMARY

The following tables provide a list of the flooring products considered in this EPD along with key performance parameters.

Rubber Flooring

Table 3: **Declared products with Rubber Flooring considered in this environmental product declaration.**

Prod#	Unique name/ID	Short description	Product type	Unit	Density, dry kg/Unit	Density, wet kg/Unit	bio-carbon content, kg C/FU dry basis	product Group
1	Sustain 2.5	Ultimate resilient flooring with uniquely rich and organic look	Rubber Flooring	m2	3.91	3.91	0.0711	Rubber Flooring
2	Sustain 6	Ultimate resilient flooring with uniquely rich and organic look	Rubber Flooring	m2	7.23	7.23	0.1315	Rubber Flooring
3	Sustain 9	Ultimate resilient flooring with uniquely rich and organic look	Rubber Flooring	m2	10.20	10.20	0.1857	Rubber Flooring
4	Sophros 2.5	Versatile flooring with highest levels of performance	Rubber Flooring	m2	4.15	4.15	0.0647	Rubber Flooring
5	Sophros 6	Versatile flooring with highest levels of performance	Rubber Flooring	m2	7.42	7.42	0.1158	Rubber Flooring
6	Sophros 9	Versatile flooring with highest levels of performance	Rubber Flooring	m2	10.20	10.20	0.1592	Rubber



								Flooring
7	Flex 3.5	High performance flexible solid rubber flooring	Rubber Flooring	m2	5.81	5.81	0.0906	Rubber Flooring
8	Flex 7	High performance flexible solid rubber flooring	Rubber Flooring	m2	9.52	9.52	0.1485	Rubber Flooring
9	Flex 10	High performance flexible solid rubber flooring	Rubber Flooring	m2	12.06	12.06	0.1881	Rubber Flooring
10	sustain stair treads	Ultimate resilient flooring with uniquely rich and organic look	Rubber Flooring	m2	6.30	6.30	0.1146	Rubber Flooring
11	flex stair treads	High performance flexible solid rubber flooring	Rubber Flooring	m2	6.30	6.30	0.0983	Rubber Flooring
12	sophoros stair treads	Versatile flooring with highest levels of performance	Rubber Flooring	m2	6.30	6.30	0.0983	Rubber Flooring

Cork Flooring

Table 4: Declared products with Cork Flooring considered in this environmental product declaration.

Prod#	Unique name/ID	Short description	Product type	Unit	Density, dry kg/Unit	Density, wet kg/Unit	bio-carbon content, kg C/FU dry basis	product Group
13	Praxis Cork 3/16"	Commercial grade flooring made with highly densed cork	Cork Flooring	m2	2.85	2.85	1.4218	Cork Flooring
14	Praxis Cork 5/16"	Commercial grade flooring made with highly densed cork	Cork Flooring	m2	4.66	4.66	2.3265	Cork Flooring
15	Praxis Cork 1/2"	Commercial grade flooring made with highly densed cork	Cork Flooring	m2	8.54	8.54	4.2653	Cork Flooring



FLOORING DESIGN COMPOSITION

The following figures provide mass breakdown (kg per functional unit) of the material composition of each flooring design considered.

Rubber Flooring

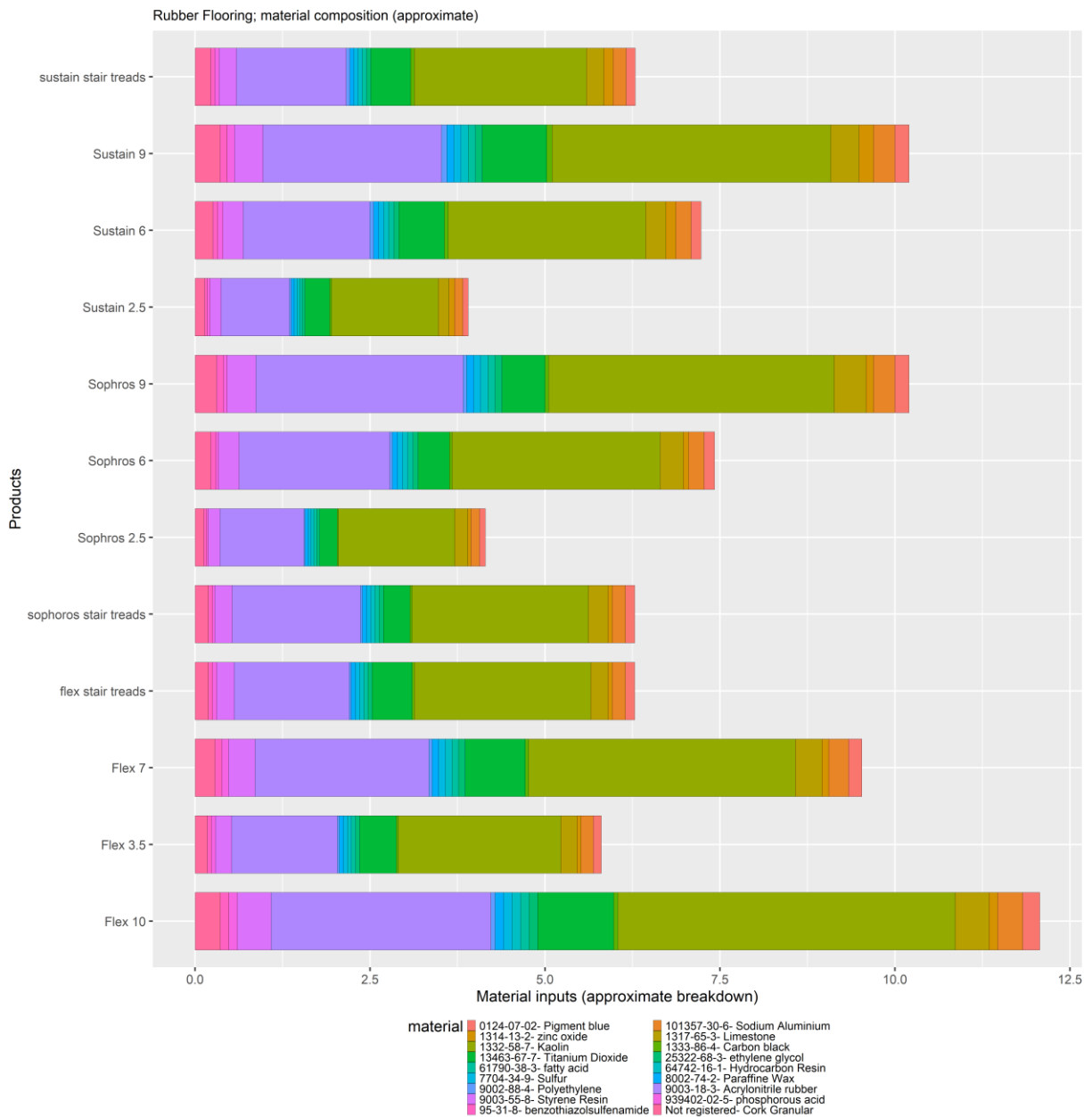


Figure 1: Material composition - Rubber Flooring per one m2 of flooring



Cork Flooring

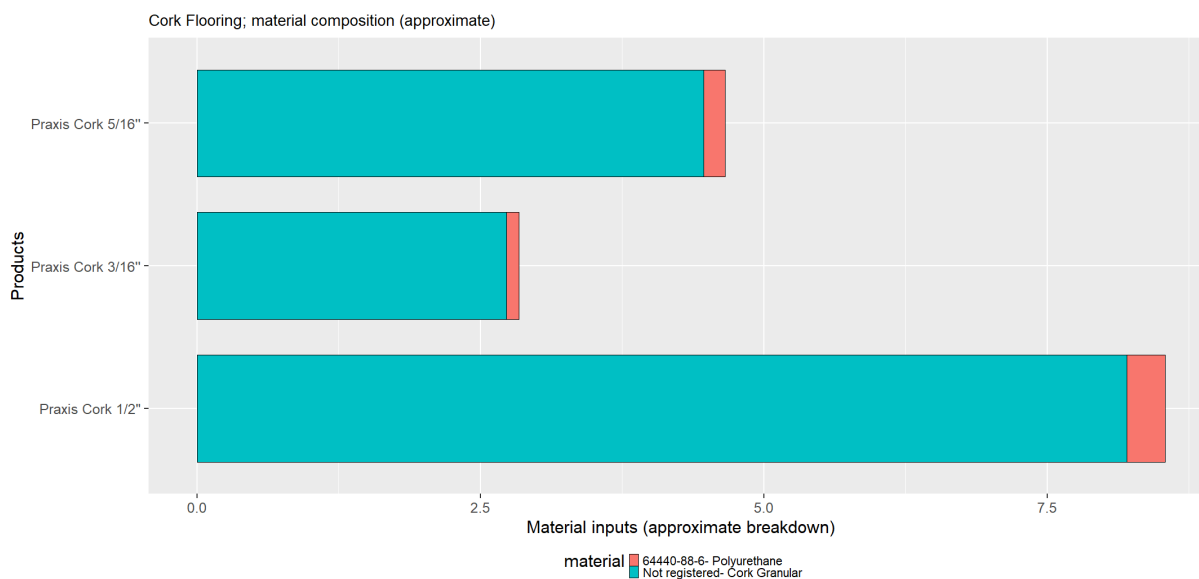


Figure 2: Material composition - Cork Flooring per one m2 of flooring

A1 RAW MATERIAL RECYCLED CONTENT AND MATERIAL LOSSES

The following table provides a list of the raw material inputs (module A1) across all products considered, their recyclability content and assumed material losses.

Table 5: Module A1 raw material inputs, the recyclability content and assumed material losses (dry basis)

product.name	mix.category	primary.content	post.industrial. content	post.consumer. content	material. losses
Acrylonitrile rubber	acrylonitrile-butadiene	100%	0%	0%	2.0%
fatty acid	tallow, unrefined	100%	0%	0%	2.0%
zinc oxide	zinc oxide	100%	0%	0%	2%
Paraffin Wax	petroleum slack wax	100%	0%	0%	2%
phosphorous acid	triphenyl phosphate	100%	0%	0%	2%
Hydrocarbon Resin	acrylonitrile copolymer	100%	0%	0%	2%
ethylene glycol	ethylene glycol	100%	0%	0%	2%
Polyethylene	polyethylene, high density, granulate	100%	0%	0%	2%
Kaolin	kaolin	100%	0%	0%	2%
Limestone	limestone, unprocessed	100%	0%	0%	2%



benzothiazolsulfenamide	benzo[thia]diazole-compound	100%	0%	0%	2%
Sulfur	sulfur	100%	0%	0%	2%
Cork Granular	cork, raw	100%	0%	0%	2%
Titanium Dioxide	titanium dioxide	100%	0%	0%	2%
Sodium Aluminium	sodium silicate, solid	100%	0%	0%	2%
Carbon black	carbon black	100%	0%	0%	2%
Pigment blue	phthalic anhydride	100%	0%	0%	2%
polycarbamate	lthiolcarbamate-compound	100%	0%	0%	2%
Electricity for production (SK)	electricity, medium voltage	100%	0%	0%	0%
Diesel (SK)	diesel	100%	0%	0%	0%
waste (SK)	process-specific burdens, residual material landfill	0%	0%	100%	0%
Dust (SK)	toner, black, powder	0%	0%	100%	0%
Electricity for production (protugal)	electricity, medium voltage	100%	0%	0%	0%
waste (portugal)	process-specific burdens, residual material landfill	0%	0%	100%	0%

SYSTEM BOUNDARIES

The following figure depicts the cradle-to-grave system boundary considered in this study:

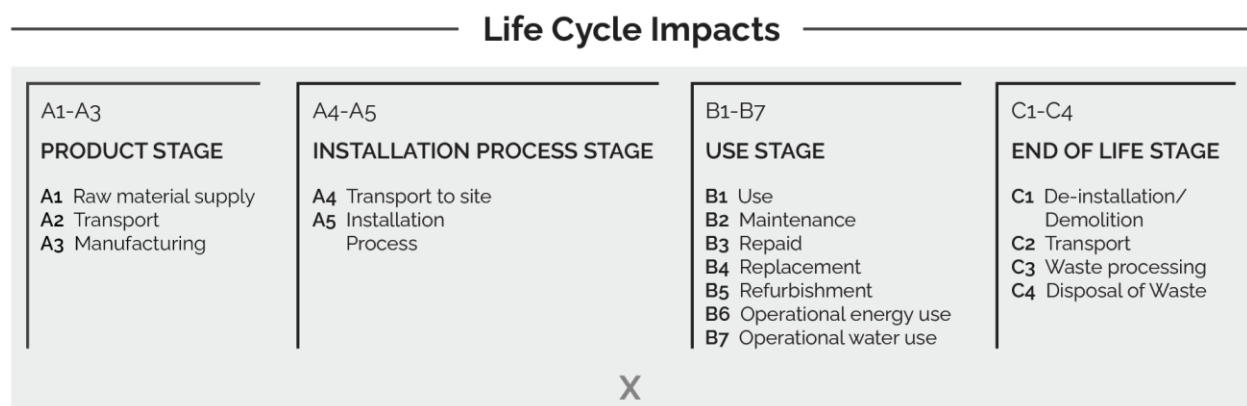


Figure 3: General life cycle phases for consideration in a construction works system

This is a Cradle-to-grave life cycle assessment and the following life cycle stages are included in the study:



- A1: Raw material supply (upstream processes) - Extraction, handling, and processing of the materials used in manufacturing the declared products in this LCA.
- A2: Transportation - Transportation of A1 materials from the supplier to the “gate” of the manufacturing facility (i.e. A3).
- A3: Manufacturing (core processes)- The energy and other utility inputs used to store, move, and manufacture the declared products and to operate the facility.
- A4: Product plant gate-to-site of use logistics
- A5: Product at-site installation requirements
- B: Product use phase requirements and direct emissions (if applicable)
- C: Product end-of-life requirements

As according to the PCR, the following figure illustrates the general activities and input requirements for producing ready mix concrete products and is not necessarily exhaustive.

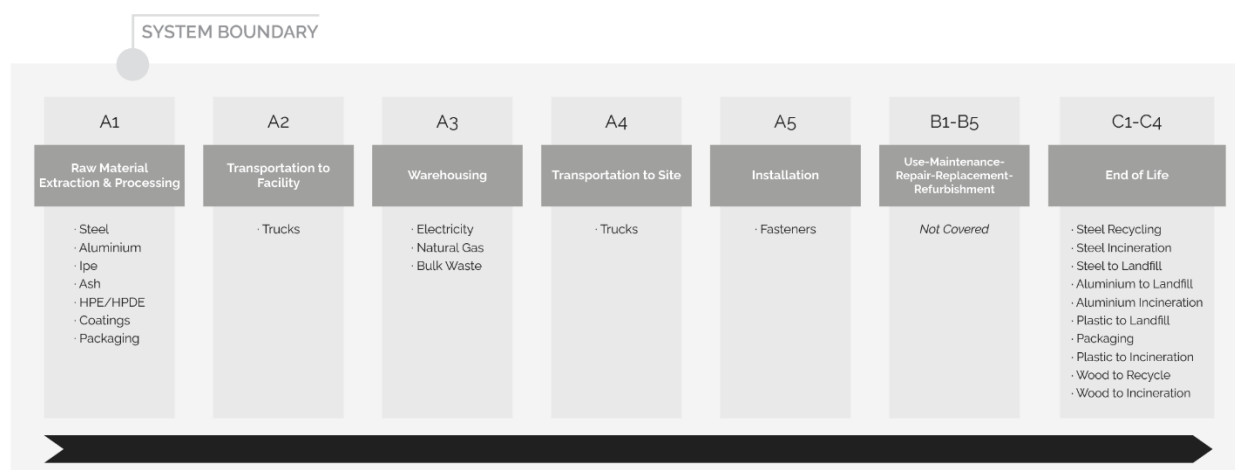


Figure 4: Zandur's flooring cradle-to-grave life cycle system boundaries

In addition, as according to the relevant PCR, the following requirements are excluded from this study:

- Production, manufacture and construction of A3 building/capital goods and infrastructure;
- Production and manufacture of steel production equipment, steel delivery vehicles, earth-moving equipment, and laboratory equipment;
- Personnel-related activities (travel, furniture, office supplies);
- Energy use related to company management and sales activities.

For this LCA the manufacturing plant, owned and operated by Zandur Innovative Flooring, is located at their Zandur facility in USA. All operating data is formulated using the actual data from Zandur Innovative Flooring's plant at the above location, including water, energy consumption and waste generation. All inputs for this system boundary are calculated for the plant.



This life cycle inventory was organized in a spreadsheet and was then input into an RStudio environment where pre-calculated LCIA results for relevant products/activities stemming from the ecoinvent v3.8 database and a local EPD database in combination with primary data from Zandur Innovative Flooring were utilized. Explanations of the contribution of each data source to this study are outlined in the section 'Data Sources and Quality'. Further LCI details for each declared product are provided in the sections 'Detailed LCI tables' and 'Transport tables' of the detailed LCA report. A parameter uncertainty analysis was also performed where key statistical results (e.g. min/mean/max etc.) are provided in the detailed LCA report.

No known flows are deliberately excluded from this EPD.

CUT-OFF CRITERIA

ISO 14044:2006 and the focus PCR requires the LCA model to contain a minimum of 95% of the total inflows (mass and energy) to the upstream and core modules be included in this study. The cut-off criteria were applied to all other processes unless otherwise noted above as follows. A 1% cut-off is considered for all renewable and non-renewable primary energy consumption and the total mass of inputs within a unit process where the total of the neglected inputs does not exceed 5%.

DATA SOURCES AND DATA QUALITY ASSESSMENT

No recovered on-site energy occurs at this facility.

The following statements explain how the above facility requirements/generation were derived:

Raw material transport: Zandur innovative flooring provided all raw material data for the reference year 2022. This includes complete product manufacturing per m2 from two different facilities in Portugal and South Korea. The transportation was reported using primary Zandur data and consisted of the distance, mode of transport, and location data in the city, state, and country.

There are two modes of transportation starting from manufacturing facilities to the port via truck with an average distance of 120 kilometers wherefrom it is shipped to the port Norfolk, USA via ship and then transported by truck to the Zandur facility with an average distance of 26937 kilometers.

Electricity: Zandur innovative flooring uses the national grid of their region. Therefore, all primary data was gathered from utility bills and reported using kWh. The products covered in this EPD consist of 99% of the overall product volume; therefore, all electricity was allocated based on that 99% figure.

Process/space heating: Zandur innovative flooring uses natural gas as supplied to their region. Therefore, all primary data was gathered from utility bills and reported using megajoules (MJ). The products covered in this EPD consist of 99% of the overall product volume; therefore, all natural gas was allocated based on that 99% figure.

Fuel required for machinery: Zandur innovative flooring uses propane to move materials in their facility. Primary data was gathered from the vendor bills for the propane tanks and reported in liters. The products covered in this EPD consist of 99% of the overall product volume; therefore, all electricity was allocated based on that 99% figure.



Waste generation: All waste for A3 was calculated using primary information from Zandur bills. Packaging waste is mainly incorporated in A3 which includes plastic film, carboards and pallets. Transportation defaults were used because the driver's route and ultimate final destination are unknown. Therefore, the exact mileage could not be confirmed by the waste hauler. Transportation for waste in the end-of-life modules also uses default distances set by the PCR.

Recovered energy: No on-site energy is recovered on site.

Recycled/reused material/components: According to the Advancing Sustainable Materials Management: 2018 Fact Sheet (US EPA), only 4% of the total plastic packaging is recycled in the USA. Similarly, 4.47% of Plastic waste from pallets was assumed to be recycled off-site at the end of their service life. These numbers are in alignment with the PCR for Resinous Floor Coverings. The PCR also states the transportation distance to the disposal point is 11 km plus the default value in the WARRM Model which is 20 miles (32 km). A total value of 43 km was used per the PCR.

Module A1 material losses: Default material losses, 2% were used.

Direct A3 emissions accounting: Direct emissions at the facility, natural gas, and propane were captured using eco-invent 3.8 unit processes. Natural gas used the region-specific process for Canada, and the propane used the global unit process, RoW. For additional information on the processes used, see the table outlining A3 processes.

A4 Product transport requirements: Zandur's product arrives at the job site in two ways. The first is by the customer's truck. Large commercial installers pick up the product directly from Zandur via truck with an average distance to the job site of 100 km.

A5 product installation: Regarding PCR three things are in consideration which include 4.5% of material loss is considered at the time of installation of flooring, 0.3 kg/m² of adhesive has been used for pasting the flooring and lastly 0.1 kg/m² of kraft paper has been used to secure the surface of newly installed flooring.

B product use phase: The Reference Service Life (RSL) of the building is 60 years; during which flooring is maintained 156 times by the mixture of water and detergent approximately in the proportion of 1:10

C product end-of-life: At the end of the Service Life of the building, it is assumed that only manual labor is involved to remove the flooring. To align with the PCR, the removed flooring (waste) is assumed to be transported 48 km to the disposal site.

The following tables depict a list of assumed life cycle inventory utilized in the LCA modeling to generate the impact results across the life cycle modules in scope. An assessment of the quality of each LCI activities utilized from various sources is also provided.

DATA QUALITY ASSESSMENT

Data quality/variability requirements, as specified in the PCR, are applied. Data Quality assessments were conducted for every process used as defined in Table 5. All data met the requirements of the PCR, ISO 14040/14044 and ISO 14025.



Data quality is judged based on its precision (measured, calculated, or estimated), completeness (e.g., unreported emissions), consistency (degree of uniformity of the methodology applied within a study serving as a data source) and representativeness (geographical, temporal, and technological).

ENVIRONMENTAL INDICATORS AND INVENTORY METRICS

Per the PCR, this EPD supports the life cycle impact assessment indicators and inventory metrics as listed in the tables below. As specified in the PCR, the most recent US EPA Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI), impact categories were utilized as they provide a North American context for the mandatory category indicators to be included in the EPD. Additionally, the PCR requires a set of inventory metrics to be reported with the LCIA indicators (see tables below).

Table 6: Life cycle impact categories and life cycle inventory metrics

ID	LCIA indicators	Abbreviations	Units
1	environmental impact: acidification	AP	moles of H ⁺ -Eq
2	environmental impact: eutrophication	EP	kg N
3	environmental impact: global warming	GWP	kg CO ₂ -Eq
4	environmental impact: ozone depletion	ODP	kg CFC-11-Eq
5	environmental impact: photochemical oxidation	PCOP	kg NO _x -Eq
6	material resources: metals/minerals: abiotic depletion potential (ADP): elements (ultimate reserves)	ADPe	kg Sb-Eq
7	energy resources: non-renewable: abiotic depletion potential (ADP): fossil fuels	ADPf	MJ, net calorific value
Inventory metrics			
8	Total primary energy	TPE	MJ-Eq
9	Renewable energy	RE	MJ-Eq
10	Non-renewable energy	NRE	MJ-Eq
11	Non-Renewable Resources	NRR	kg
12	Renewable Resources	RR	m ³
13	Water depletion: WDP	WDP	m ³
14	Land filling: bulk waste	LFW	kg waste
15	Land filling: hazardous waste	LFHW	kg waste

A summary description of each of the impact categories and inventory metrics is provided in the following table:

It should be noted that emerging LCA impact categories and inventory items are still under development and can have high levels of uncertainty that preclude international acceptance pending further development. Use caution when interpreting data in any of the following categories.

- Renewable primary energy resources as energy (fuel);
- Renewable primary resources as material;
- Non-renewable primary resources as energy (fuel);
- Non-renewable primary resources as material;
- Secondary Materials;



- Renewable secondary fuels;
- Non-renewable secondary fuels;
- Recovered energy;
- Abiotic depletion potential for non-fossil mineral resources.
- Land use related impacts, for example on biodiversity and/or soil fertility;
- Toxicological aspects;
- Emissions from land use change [GWP 100 (land-use change)];
- Hazardous waste disposed;
- Non-hazardous waste disposed;
- High-level radioactive waste;
- Intermediate and low-level radioactive waste;
- Components for reuse;
- Materials for recycling;
- Materials for energy recovery;
- Recovered energy exported from the product system.

TOTAL IMPACT SUMMARY

The following table reports the total LCA results for each product produced at the given flooring facility on a per one m2 of flooring basis.

Rubber Flooring

Table 7: **Total life cycle (across modules in scope) impact results for Urethane Concrete assuming the geometric mean point values on a per 1 m2 of covered and protected flooring surface for a period of 60 years basis.**

a) Midpoint Impact Categories:

Indicator/LCI Metric	AP	EP	GWP	ODP	PCOP	ADPe	ADPf
Unit	moles of H ⁺ -Eq	kg N	kg CO ₂ -Eq	kg CFC-11-Eq	kg NO _x -Eq	kg Sb-Eq	MJ, net calorific value
Minimum	32.4	0.0655	149	1.59e-05	0.38	0.000929	2290
Maximum	67.6	0.144	307	3.9e-05	0.827	0.00186	4870
Mean	47.8	0.0966	222	2.68e-05	0.576	0.00135	3440
Median	44.4	0.0906	212	2.46e-05	0.562	0.00126	3200
Sustain 2.5	32.4	0.0655	149	1.59e-05	0.38	0.000929	2290
Sustain 6	45.4	0.0922	212	2.56e-05	0.563	0.00128	3350
Sustain 9	58.1	0.123	269	3.43e-05	0.703	0.00162	4280
Sophros 2.5	34.7	0.0668	152	1.78e-05	0.403	0.000975	2410
Sophros 6	48.2	0.0939	233	2.75e-05	0.612	0.00137	3610
Sophros 9	61.9	0.117	290	3.61e-05	0.749	0.00171	4360
Flex 3.5	40.3	0.0843	186	2.12e-05	0.477	0.00115	3000
Flex 7	57.1	0.115	263	3.45e-05	0.653	0.00162	3990
Flex 10	67.6	0.144	307	3.9e-05	0.827	0.00186	4870
Sustain stair treads	42.1	0.089	200	2.35e-05	0.497	0.00124	3060
Flex stair treads	42.9	0.0839	191	2.21e-05	0.488	0.00119	3040
Sophros stair treads	43.4	0.0852	213	2.37e-05	0.56	0.00125	3030



b) Inventory Metrics:

Indicator/LCI Metric	TPE	RE	NRE	NRR	RR	WDP	LFW	LFHW
Unit	MJ-Eq	MJ-Eq	MJ-Eq	kg	m3	m3	kg waste	kg waste
Minimum	1550	421	1120	31.7	0.00329	3.04	41.5	0.00272
Maximum	2780	474	2300	63.6	0.00544	3.51	105	0.00702
Mean	2100	446	1640	45.8	0.00425	3.25	68.9	0.00477
Median	2000	444	1540	43.2	0.00414	3.22	63	0.00442
Sustain 2.5	1550	421	1120	31.7	0.00335	3.09	41.5	0.00272
Sustain 6	2030	449	1570	44.2	0.00435	3.27	64.9	0.0044
Sustain 9	2470	471	2000	55.5	0.00523	3.43	88.8	0.00602
Sophros 2.5	1630	426	1190	33.6	0.00329	3.04	43.3	0.00305
Sophros 6	2150	443	1680	46.7	0.00417	3.18	70.7	0.00512
Sophros 9	2580	463	2110	57.6	0.00493	3.31	93.9	0.0066
Flex 3.5	1850	430	1400	39.3	0.00376	3.18	55.3	0.0038
Flex 7	2410	460	1940	53.7	0.00473	3.44	83.5	0.006
Flex 10	2780	474	2300	63.6	0.00544	3.51	105	0.00702
Sustain stair treads	1900	445	1460	40.9	0.0041	3.25	60.3	0.00407
Flex stair treads	1870	432	1450	40.5	0.00381	3.17	59	0.00401
Sophros stair treads	1960	438	1520	42.1	0.00389	3.18	61.1	0.00443

Cork Flooring

Table 8: Total life cycle (across modules in scope) impact results for Cork Flooring, assuming the geometric mean point values on a per one m2 of flooring basis.

a) Midpoint Impact Categories:

Indicator/LCI Metric	AP	EP	GWP	ODP	PCOP	ADPe	ADPf
Unit	moles of H ⁺ -Eq	kg N	kg CO ₂ -Eq	kg CFC-11-Eq	kg NO _x -Eq	kg Sb-Eq	MJ, net calorific value
Minimum	12.9	0.0429	47.6	4.24e-06	0.132	0.00051	748
Maximum	17.1	0.0746	59.8	5.91e-06	0.201	0.000703	949
Mean	14.8	0.0569	52.5	4.98e-06	0.163	0.000594	842
Median	14.3	0.0531	50.2	4.8e-06	0.155	0.00057	830
Praxis Cork 3/16"	12.9	0.0429	47.6	4.24e-06	0.132	0.00051	748
Praxis Cork 5/16"	14.3	0.0531	50.2	4.8e-06	0.155	0.00057	830
Praxis Cork 1/2"	17.1	0.0746	59.8	5.91e-06	0.201	0.000703	949



b) Inventory Metrics:

Indicator/LCI Metric	TPE	RE	NRE	NRR	RR	WDP	LFW	LFHW
Unit	MJ-Eq	MJ-Eq	MJ-Eq	kg	m3	m3	kg waste	kg waste
Minimum	1130	723	386	11.1	0.0183	2.71	13.9	0.000625
Maximum	1850	1360	468	13.5	0.051	2.74	28.3	0.000958
Mean	1440	1010	422	12.1	0.0326	2.73	20.2	0.000774
Median	1350	938	412	11.8	0.0285	2.73	18.4	0.000738
Praxis Cork 3/16"	1130	723	386	11.1	0.0183	2.71	13.9	0.000625
Praxis Cork 5/16"	1350	938	412	11.8	0.0285	2.73	18.4	0.000738
Praxis Cork 1/2"	1850	1360	468	13.5	0.051	2.74	28.3	0.000958

The following pie charts provide aggregated life cycle module breakdowns across all life cycle indicators considered for each product. First click on a desired impact category, and then a specific product range or type for specific product comparisons across each category/indicator for a given product range or type.

IMPACT BREAKDOWN TABLES BY MODULE

Environmental Impact: acidification

Table g: Percentage impact breakdown by modules across all declared products: environmental impact: acidification(AP), moles of H⁺-Eq note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	13	0.583	1.92	1.71	0.961	7.38	32	0.114	0.0393
Maximum	20.8	25.8	9.6	6.89	4.79	36.8	43.4	0.46	0.158
Mean	18.2	17.8	3.98	2.69	1.99	15.3	39.8	0.179	0.0617
Median	18.7	20.7	3.02	2.28	1.51	11.6	40.1	0.152	0.0524
Sustain 2.5	20.8	16.6	3.99	1.71	1.99	15.3	39.5	0.114	0.0393
Sustain 6	20.1	22	2.87	2.28	1.43	11	40	0.152	0.0524
Sustain 9	19.2	24.2	2.23	2.5	1.11	8.56	41.9	0.167	0.0575
Sophros 2.5	19.4	18.8	3.76	1.71	1.88	14.4	39.9	0.115	0.0394
Sophros 6	18.1	23.9	2.68	2.18	1.34	10.3	41.4	0.146	0.0502
Sophros 9	17.1	25.8	2.1	2.36	1.05	8.06	43.4	0.157	0.0541
Flex 3.5	20.1	20.5	3.21	2.05	1.6	12.3	40.1	0.137	0.047
Flex 7	18.7	23.6	2.26	2.36	1.13	8.67	43	0.158	0.0543



Flex 10	18.6	25.5	1.92	2.55	0.961	7.38	42.9	0.171	0.0585
sustain stair treads	20.1	20.7	3.09	2.14	1.54	11.8	40.4	0.142	0.0491
flex stair treads	19.5	20.6	2.98	2.07	1.49	11.4	41.8	0.137	0.0474
sophoros stair treads	18.7	22.9	3.02	2.09	1.51	11.6	40.1	0.139	0.0479
Praxis Cork 3/16"	13	0.583	9.6	3.01	4.79	36.8	32	0.2	0.069
Praxis Cork 5/16"	13.9	0.798	8.67	4.43	4.33	33.2	34.2	0.296	0.102
Praxis Cork 1/2"	15.8	1.17	7.34	6.89	3.67	28.2	36.3	0.46	0.158

Environmental Impact: eutrophication

Table 10: **Percentage impact breakdown by modules across all declared products: environmental impact: eutrophication(EP), kg N note: neg.= negligible**

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	14	0.39	0.635	1.17	2.5	12.2	30.1	0.0719	0.0278
Maximum	30.8	25.8	2.05	2.21	8.1	39.4	40.8	0.136	0.0524
Mean	18.8	16.7	1.12	1.53	4.4	21.4	36	0.0937	0.0362
Median	18.6	19.8	1.06	1.51	4.17	20.2	36.4	0.0929	0.0359
Sustain 2.5	16.9	15.6	1.38	1.17	5.45	26.5	32.9	0.0719	0.0278
Sustain 6	18.9	20.1	0.965	1.51	3.81	18.5	36.1	0.0929	0.0359
Sustain 9	19.5	21.8	0.743	1.65	2.93	14.2	38.9	0.101	0.039
Sophros 2.5	14	18.4	1.36	1.22	5.34	26	33.7	0.075	0.0289
Sophros 6	15.1	23.2	0.961	1.55	3.79	18.4	36.8	0.0949	0.0367
Sophros 9	15.8	25.8	0.776	1.72	3.06	14.9	37.9	0.105	0.0407
Flex 3.5	17.7	18.6	1.07	1.35	4.23	20.6	36.4	0.083	0.0321
Flex 7	19.3	22	0.779	1.61	3.07	14.9	38.1	0.0988	0.0382
Flex 10	19.4	22.7	0.635	1.66	2.5	12.2	40.8	0.102	0.0394
sustain stair treads	18.1	18.7	1.03	1.41	4.07	19.8	36.8	0.0865	0.0334
flex stair treads	18.6	19.8	1.06	1.45	4.17	20.2	34.5	0.0885	0.0342
sophoros stair treads	14.8	22	1.07	1.46	4.22	20.5	35.9	0.0897	0.0347
Praxis Cork 3/16"	18.6	0.39	2.05	1.27	8.1	39.4	30.1	0.0779	0.0301
Praxis Cork 5/16"	23.9	0.48	1.66	1.68	6.56	31.9	33.6	0.103	0.0399
Praxis Cork 1/2"	30.8	0.593	1.19	2.21	4.7	22.9	37.5	0.136	0.0524

Environmental Impact: global warming



Table 12: Percentage impact breakdown by modules across all declared products: environmental impact: global warming(GWP), kg CO₂-Eq note: neg.= negligible.

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	11	1.04	3.04	0.729	0.817	3.19	41.7	0.0627	0.0164
Maximum	20.4	27.4	19.1	3.79	5.13	20	50.2	0.326	0.0855
Mean	17.2	18.8	6.95	1.26	1.87	7.29	46.5	0.108	0.0283
Median	18.1	22.1	4.63	0.95	1.25	4.87	46.8	0.0817	0.0214
Sustain 2.5	20.4	17.6	6.22	0.729	1.67	6.53	46.8	0.0627	0.0164
Sustain 6	19	23	4.38	0.95	1.18	4.6	46.9	0.0817	0.0214
Sustain 9	18.2	25.5	3.46	1.06	0.93	3.63	47	0.0911	0.0239
Sophros 2.5	19.9	20.6	6.03	0.75	1.62	6.33	44.8	0.0647	0.0169
Sophros 6	17	24.1	3.96	0.882	1.07	4.16	48.8	0.0759	0.0199
Sophros 9	16.2	26.5	3.17	0.971	0.853	3.33	48.8	0.0836	0.0219
Flex 3.5	19.5	21.7	4.99	0.871	1.34	5.24	46.3	0.0749	0.0196
Flex 7	18.1	25.3	3.55	1.02	0.957	3.73	47.2	0.0874	0.0229
Flex 10	17.9	27.4	3.04	1.1	0.817	3.19	46.4	0.0949	0.0248
sustain stair treads	18.7	21.2	4.63	0.876	1.25	4.87	48.4	0.0753	0.0198
flex stair treads	19.2	22.3	4.72	0.895	1.27	4.96	46.6	0.0768	0.0201
sophros stair treads	16.9	22.1	4.28	0.809	1.15	4.49	50.2	0.0696	0.0183
Praxis Cork 3/16"	11	1.04	19.1	1.63	5.13	20	41.9	0.14	0.0368
Praxis Cork 5/16"	12.5	1.48	17.9	2.51	4.82	18.8	41.7	0.216	0.0566
Praxis Cork 1/2"	14.2	2.11	14.8	3.79	3.98	15.5	45.2	0.326	0.0855

Environmental Impact: ozone depletion

Table 13: Percentage impact breakdown by modules across all declared products: environmental impact: ozone depletion(ODP), kg CFC-11-Eq note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	12.1	2.48	1.64	1.17	0.912	4.02	24.4	0.0902	0.0305
Maximum	21.7	43.9	14.4	6.73	7.98	35.2	29.9	0.52	0.176
Mean	19.5	32.9	4.58	2.06	2.54	11.2	27	0.159	0.0538
Median	20.3	39.5	2.78	1.39	1.55	6.82	27.3	0.107	0.0364
Sustain 2.5	21.7	34.7	4.13	1.24	2.29	10.1	25.6	0.0958	0.0325
Sustain 6	21.4	39.5	2.54	1.42	1.41	6.23	27.3	0.109	0.037
Sustain 9	21.4	41.7	1.9	1.5	1.06	4.66	27.6	0.115	0.0391
Sophros 2.5	19.1	36.9	3.65	1.17	2.03	8.95	28	0.0902	0.0305
Sophros 6	19.2	42.5	2.36	1.35	1.31	5.78	27.3	0.104	0.0353
Sophros 9	18.8	43.9	1.77	1.39	0.985	4.34	28.7	0.107	0.0364



Flex 3.5	21.5	39.4	3.05	1.37	1.7	7.49	25.3	0.106	0.0358
Flex 7	20.3	40.6	1.92	1.41	1.07	4.71	29.9	0.109	0.0369
Flex 10	21.2	43.8	1.64	1.52	0.912	4.02	26.7	0.118	0.0398
sustain stair treads	21	37.7	2.78	1.35	1.55	6.82	28.7	0.104	0.0353
flex stair treads	21.6	40.1	2.86	1.39	1.59	7.02	25.3	0.107	0.0363
sophoros stair treads	19.6	41.9	2.73	1.33	1.52	6.7	26.2	0.102	0.0347
Praxis Cork 3/16"	12.1	2.48	14.4	3.16	7.98	35.2	24.4	0.243	0.0824
Praxis Cork 5/16"	14.8	3.33	12.7	4.55	7.06	31.1	25.9	0.352	0.119
Praxis Cork 1/2"	19	4.63	10.2	6.73	5.69	25.1	27.9	0.52	0.176

Environmental Impact: photochemical oxidation

Table 14: Percentage impact breakdown by modules across all declared products: environmental impact: photochemical oxidation(PCOP), kg NOx-Eq note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	11.6	0.658	1.44	3.25	1.03	6.55	28.1	0.174	0.0728
Maximum	20.2	31.4	8.44	12.9	6	38.3	41.2	0.691	0.289
Mean	16.3	21.9	3.15	5.08	2.24	14.3	36.6	0.272	0.114
Median	16.9	26	2.36	4.1	1.68	10.7	36.3	0.22	0.0919
Sustain 2.5	20.2	21	3.12	3.25	2.22	14.1	35.8	0.174	0.0728
Sustain 6	17.7	26.5	2.13	4.1	1.51	9.66	38.1	0.22	0.0919
Sustain 9	16.9	29.9	1.7	4.63	1.21	7.73	37.5	0.249	0.104
Sophros 2.5	18.7	23.8	2.94	3.25	2.09	13.3	35.6	0.175	0.0729
Sophros 6	15.3	27.8	1.92	3.79	1.36	8.7	40.9	0.203	0.0851
Sophros 9	14.8	31.4	1.58	4.3	1.13	7.17	39.3	0.231	0.0964
Flex 3.5	18.7	25.6	2.48	3.84	1.76	11.2	36.1	0.206	0.086
Flex 7	17.2	30.4	1.79	4.55	1.28	8.14	36.3	0.244	0.102
Flex 10	15.9	31	1.44	4.65	1.03	6.55	39.1	0.25	0.104
sustain stair treads	18.6	25.9	2.39	4.01	1.7	10.8	36.2	0.215	0.0899
flex stair treads	18.5	26.5	2.36	3.98	1.68	10.7	36	0.213	0.0889
sophoros stair treads	15.7	26	2.12	3.55	1.51	9.6	41.2	0.19	0.0797
Praxis Cork 3/16"	11.6	0.658	8.44	6.42	6	38.3	28.1	0.343	0.144
Praxis Cork 5/16"	12.2	0.854	7.22	8.97	5.14	32.8	32.2	0.481	0.201
Praxis Cork 1/2"	13.2	1.15	5.65	12.9	4.03	25.7	36.4	0.691	0.289



Material Resources: metal/minerals: abiotic depletion potential (ADP): elements (ultimate reserves)

Table 15: Percentage impact breakdown by modules across all declared products: material resources: metals/minerals: abiotic depletion potential (ADP): elements (ultimate reserves)(ADPe), kg Sb-Eq note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	10.7	0.551	1.04	0.303	3.34	16.5	18.7	0.0721	0.00207
Maximum	21.1	40	3.44	0.832	11.1	55	25.1	0.198	0.00569
Mean	14.6	26.8	1.79	0.43	5.77	28.6	22	0.103	0.00294
Median	14.6	31.4	1.55	0.398	4.99	24.7	21.7	0.0949	0.00272
Sustain 2.5	14.1	24.5	2.04	0.303	6.57	32.5	19.9	0.0721	0.00207
Sustain 6	15.5	32.9	1.48	0.408	4.79	23.7	21.1	0.0971	0.00279
Sustain 9	16.1	37.2	1.19	0.461	3.83	19	22.2	0.11	0.00315
Sophros 2.5	12.5	28.2	1.95	0.308	6.29	31.2	19.5	0.0735	0.00211
Sophros 6	13	36.4	1.41	0.398	4.55	22.5	21.6	0.0949	0.00272
Sophros 9	13.1	40	1.13	0.437	3.63	18	23.6	0.104	0.00299
Flex 3.5	14.5	30.2	1.64	0.363	5.29	26.2	21.7	0.0864	0.00248
Flex 7	15.1	35.9	1.19	0.431	3.84	19	24.4	0.103	0.00295
Flex 10	15.9	39.6	1.04	0.475	3.34	16.5	23.1	0.114	0.00325
sustain stair treads	14.6	29.9	1.55	0.371	4.99	24.7	23.8	0.0882	0.00253
flex stair treads	14.7	31.4	1.57	0.377	5.07	25.1	21.6	0.0897	0.00257
sophros stair treads	12.7	33.5	1.53	0.367	4.94	24.4	22.4	0.0873	0.00251
Praxis Cork 3/16"	10.7	0.551	3.44	0.374	11.1	55	18.7	0.0889	0.00255
Praxis Cork 5/16"	14.8	0.757	3.12	0.552	10.1	49.8	20.8	0.132	0.00378
Praxis Cork 1/2"	21.1	1.07	2.56	0.832	8.27	40.9	25.1	0.198	0.00569

Energy Resources: non-renewable: abiotic depletion potential (ADP): fossil fuels

Table 16: Percentage impact breakdown by modules across all declared products: energy resources: non-renewable: abiotic depletion potential (ADP): fossil fuels(ADPf), MJ, net calorific value note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	9.73	0.956	3.53	0.6	0.909	2.15	45.8	0.0583	0.0142
Maximum	22.3	25.1	22.1	2.98	5.68	13.4	49.6	0.29	0.0705



Mean	18.6	17.3	8.13	1	2.09	4.95	47.8	0.0974	0.0237
Median	20.5	19.9	5.61	0.759	1.44	3.42	48.3	0.0738	0.018
Sustain 2.5	22.3	16.4	7.54	0.6	1.94	4.59	46.5	0.0583	0.0142
Sustain 6	20.5	20.7	5.16	0.759	1.33	3.14	48.3	0.0738	0.018
Sustain 9	19.9	23.1	4.07	0.847	1.05	2.48	48.4	0.0823	0.02
Sophros 2.5	21.6	18.6	7.11	0.602	1.83	4.34	45.9	0.0586	0.0142
Sophros 6	19.2	22.3	4.77	0.722	1.23	2.91	48.8	0.0702	0.0171
Sophros 9	19.1	25.1	3.92	0.815	1.01	2.39	47.5	0.0793	0.0193
Flex 3.5	20.5	19.2	5.74	0.681	1.48	3.5	48.9	0.0661	0.0161
Flex 7	20.5	23.7	4.34	0.843	1.12	2.64	46.8	0.0819	0.0199
Flex 10	19.5	24.4	3.53	0.869	0.909	2.15	48.6	0.0847	0.0205
sustain stair treads	20.7	19.7	5.61	0.72	1.44	3.42	48.3	0.0699	0.017
flex stair treads	20.5	19.9	5.5	0.708	1.42	3.35	48.6	0.0686	0.0167
sophros stair treads	20.7	22.2	5.61	0.721	1.45	3.42	45.8	0.07	0.017
Praxis Cork 3/16"	9.73	0.956	22.1	1.28	5.68	13.4	46.7	0.124	0.0303
Praxis Cork 5/16"	10.8	1.31	19.9	1.89	5.12	12.1	48.6	0.184	0.0447
Praxis Cork 1/2"	13.1	1.94	17.1	2.98	4.41	10.4	49.6	0.29	0.0705

Total Primary Energy

Table 17: Percentage impact breakdown by modules across all declared products: Total primary energy(TPE), MJ-Eq note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	30.7	0.602	5.8	0.829	1.65	17.6	0	0.0799	0.0178
Maximum	60	39.8	14.2	1.52	4.11	43.6	0	0.146	0.0326
Mean	35.4	26.1	8.63	1.14	2.47	26.2	0	0.11	0.0246
Median	32.7	30.2	8.36	1.13	2.41	25.3	0	0.109	0.0243
Sustain 2.5	31.8	22.5	10.6	0.829	2.95	31.2	0	0.0802	0.0179
Sustain 6	33	31.6	7.9	1.18	2.25	24	0	0.113	0.0252
Sustain 9	33.7	36.7	6.49	1.36	1.86	19.7	0	0.131	0.0289
Sophros 2.5	30.7	25.7	9.77	0.839	2.82	30	0	0.0799	0.0178
Sophros 6	31.3	35.1	7.54	1.13	2.13	22.7	0	0.109	0.0244
Sophros 9	31.9	39.8	6.2	1.3	1.76	18.9	0	0.125	0.0281
Flex 3.5	32.3	28.9	8.73	1.04	2.5	26.5	0	0.0993	0.0222
Flex 7	33.1	36.7	6.66	1.31	1.92	20.2	0	0.125	0.0288
Flex 10	33.5	39.8	5.8	1.43	1.65	17.6	0	0.139	0.0309
sustain stair treads	32.7	29.7	8.44	1.1	2.41	25.6	0	0.105	0.0237



flex stair treads	32.4	30.2	8.36	1.09	2.42	25.3	0	0.105	0.0232
sophoros stair treads	31.4	32.3	8.12	1.06	2.32	24.7	0	0.101	0.0228
Praxis Cork 3/16"	36.6	0.602	14.2	0.835	4.11	43.6	0	0.0806	0.0179
Praxis Cork 5/16"	46.5	0.76	11.9	1.15	3.41	36.2	0	0.109	0.0243
Praxis Cork 1/2"	60	0.957	8.67	1.52	2.47	26.2	0	0.146	0.0326

Renewable Energy

Table 18: Percentage impact breakdown by modules across all declared products: Renewable energy(RE), MJ-Eq note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	7.21	0.0145	0.562	0.0327	0.41	27.4	0	0.00269	0.000272
Maximum	71.6	4.04	1.81	0.208	1.31	87.9	0	0.0175	0.00178
Mean	20.3	2.15	1.52	0.116	1.12	74.8	0	0.00977	0.000993
Median	11.2	2.29	1.69	0.117	1.23	83.3	0	0.00981	0.000999
Sustain 2.5	7.78	1.44	1.81	0.0752	1.31	87.6	0	0.00639	0.000648
Sustain 6	11.2	2.48	1.7	0.132	1.23	83.3	0	0.0111	0.00112
Sustain 9	13.9	3.33	1.62	0.176	1.19	79.7	0	0.0149	0.00152
Sophros 2.5	7.21	1.71	1.78	0.08	1.31	87.9	0	0.0067	0.000683
Sophros 6	10.3	2.94	1.72	0.138	1.26	83.7	0	0.0114	0.00117
Sophros 9	12.4	3.88	1.62	0.18	1.2	80.7	0	0.0153	0.00152
Flex 3.5	9.15	2.14	1.76	0.111	1.29	85.5	0	0.00926	0.00094
Flex 7	12.4	3.29	1.65	0.17	1.21	81.3	0	0.0141	0.00145
Flex 10	14.5	4.04	1.61	0.208	1.17	78.5	0	0.0175	0.00178
sustain stair treads	10.1	2.19	1.69	0.115	1.25	84.6	0	0.00971	0.000999
flex stair treads	9.39	2.29	1.71	0.117	1.26	85.2	0	0.00981	0.000991
sophoros stair treads	9.2	2.52	1.74	0.118	1.27	85.1	0	0.00984	0.00101
Praxis Cork 3/16"	46.5	0.0145	1.06	0.0327	0.772	51.6	0	0.00269	0.000272
Praxis Cork 5/16"	59.1	0.0169	0.811	0.0407	0.596	39.5	0	0.0034	0.000353
Praxis Cork 1/2"	71.6	0.0199	0.562	0.0514	0.41	27.4	0	0.00439	0.000441

Non-renewable Energy

Table 19: Percentage impact breakdown by modules across all declared products: Non-renewable energy(NRE), MJ-Eq note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
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Minimum	17.3	1.75	6.62	1.12	1.75	4.74	0	0.108	0.0241
Maximum	41	47.8	39.5	5.86	10.4	28.4	0	0.57	0.129
Mean	35	33	15	1.93	3.97	10.8	0	0.186	0.0424
Median	38.2	38.7	10.3	1.48	2.72	7.41	0	0.142	0.032
Sustain 2.5	41	30.7	13.8	1.12	3.58	9.73	0	0.108	0.0241
Sustain 6	39.4	39.8	9.69	1.48	2.55	6.9	0	0.142	0.032
Sustain 9	38.3	44.7	7.66	1.64	2.01	5.48	0	0.158	0.0352
Sophros 2.5	39	34.3	12.8	1.13	3.44	9.17	0	0.108	0.0247
Sophros 6	37.2	43.3	9.13	1.42	2.38	6.45	0	0.136	0.0305
Sophros 9	36.1	47.8	7.29	1.56	1.9	5.19	0	0.15	0.0336
Flex 3.5	39.6	37.4	10.9	1.34	2.88	7.75	0	0.13	0.0295
Flex 7	38.2	44.3	7.97	1.59	2.07	5.63	0	0.153	0.0348
Flex 10	37.6	47.4	6.62	1.69	1.75	4.74	0	0.162	0.0377
sustain stair treads	39.5	38	10.5	1.41	2.78	7.57	0	0.135	0.0306
flex stair treads	39.2	38.7	10.3	1.38	2.72	7.41	0	0.133	0.0307
sophros stair treads	37.8	40.9	10	1.32	2.67	7.15	0	0.129	0.0297
Praxis Cork 3/16"	17.3	1.75	39.5	2.38	10.4	28.4	0	0.229	0.0533
Praxis Cork 5/16"	20.2	2.46	37	3.65	9.75	26.6	0	0.354	0.0802
Praxis Cork 1/2"	25.1	3.79	32.4	5.86	8.66	23.5	0	0.57	0.129

Non-renewable Resources

Table 20: Percentage impact breakdown by modules across all declared products: Non-Renewable Resources(NRR), kg
note: neg.= negligble

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	19.9	1.62	6.31	1.09	1.71	5.19	0	0.124	0.0227
Maximum	43.8	45.9	36.2	5.55	9.88	29.8	0	0.635	0.118
Mean	37.4	31.2	13.9	1.88	3.79	11.5	0	0.214	0.0394
Median	40.6	36.3	9.8	1.44	2.64	7.93	0	0.165	0.0301
Sustain 2.5	43.8	28.6	12.6	1.09	3.44	10.4	0	0.124	0.0228
Sustain 6	41.8	37.6	9.04	1.44	2.45	7.49	0	0.165	0.0301
Sustain 9	40.8	42.3	7.17	1.62	1.96	5.96	0	0.184	0.0336
Sophros 2.5	41.6	32.2	11.9	1.09	3.25	9.81	0	0.125	0.0227
Sophros 6	38.8	41.6	8.52	1.42	2.33	7.12	0	0.159	0.0298
Sophros 9	37.8	45.9	6.91	1.56	1.88	5.74	0	0.177	0.0327
Flex 3.5	42	35	10.3	1.31	2.77	8.37	0	0.149	0.0269
Flex 7	40.6	41.9	7.52	1.57	2.03	6.17	0	0.178	0.0334
Flex 10	39.7	45.3	6.31	1.66	1.71	5.19	0	0.191	0.0352



sustain stair treads	42.2	35.6	9.87	1.37	2.67	8.07	0	0.156	0.0286
flex stair treads	41.8	36.3	9.8	1.36	2.64	7.93	0	0.153	0.0279
sophoros stair treads	39.6	39	9.54	1.32	2.57	7.78	0	0.151	0.0279
Praxis Cork 3/16"	19.9	1.62	36.2	2.28	9.88	29.8	0	0.259	0.0483
Praxis Cork 5/16"	22.9	2.29	33.5	3.51	9.21	28.1	0	0.398	0.0728
Praxis Cork 1/2"	28	3.47	29.8	5.55	8.03	24.4	0	0.635	0.118

Renewable Resources

Table 21: Percentage impact breakdown by modules across all declared products: Renewable Resources(RR), m3 note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	38.1	0.014	0.933	0.0258	0.804	1.73	0	0.00285	0.000404
Maximum	96.5	10.3	14.9	0.38	13	27.4	0	0.042	0.00602
Mean	57	6.4	9.81	0.238	8.48	18.1	0	0.0259	0.00385
Median	50.6	7.36	11.3	0.276	9.74	20.8	0	0.0303	0.00447
Sustain 2.5	40.6	5.14	14.7	0.2	12.7	26.7	0	0.0215	0.00323
Sustain 6	50.6	7.36	11.3	0.285	9.74	20.8	0	0.0312	0.00452
Sustain 9	56	8.63	9.51	0.325	8.12	17.4	0	0.0356	0.00557
Sophros 2.5	38.1	6.41	14.9	0.212	13	27.4	0	0.0238	0.0035
Sophros 6	47.3	8.82	11.6	0.302	10.2	21.8	0	0.0329	0.0049
Sophros 9	52.4	10.3	9.94	0.358	8.58	18.4	0	0.038	0.00568
Flex 3.5	44.1	7.23	13.1	0.269	11.3	24	0	0.0285	0.00426
Flex 7	52	9.31	10.6	0.34	8.95	18.8	0	0.0371	0.00558
Flex 10	56.1	10.3	8.96	0.38	7.85	16.4	0	0.042	0.00602
sustain stair treads	48.1	6.83	12	0.267	10.4	22.4	0	0.029	0.0042
flex stair treads	45.3	7.42	12.6	0.276	10.8	23.6	0	0.0304	0.00449
sophoros stair treads	44.2	8.14	12.8	0.281	11	23.5	0	0.0303	0.00447
Praxis Cork 3/16"	90.3	0.0156	2.6	0.0258	2.26	4.79	0	0.00285	0.000404
Praxis Cork 5/16"	93.8	0.015	1.68	0.0267	1.44	3.07	0	0.00296	0.000426
Praxis Cork 1/2"	96.5	0.014	0.933	0.0279	0.804	1.73	0	0.00298	0.000444

Water Depletion

Table 22: Percentage impact breakdown by modules across all declared products: water depletion: WDP(WDP), m3 note: neg.= negligible



Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	0.565	0.0194	1.35	0.0556	0.449	85.1	1.08	0.00415	0.000232
Maximum	8.19	3.06	1.52	0.21	0.503	95.4	2.37	0.0157	0.000875
Mean	5.01	1.6	1.43	0.128	0.474	89.8	1.53	0.00955	0.000534
Median	5.67	1.68	1.42	0.115	0.471	89.1	1.35	0.00862	0.000481
Sustain 2.5	4.86	1.03	1.45	0.0726	0.48	91	1.08	0.00543	0.000303
Sustain 6	6.27	1.85	1.41	0.131	0.467	88.5	1.32	0.00977	0.000546
Sustain 9	7.45	2.54	1.37	0.18	0.455	86.2	1.82	0.0134	0.00075
Sophros 2.5	4.48	1.24	1.45	0.0773	0.481	91.2	1.08	0.00579	0.000323
Sophros 6	5.52	2.16	1.42	0.135	0.47	89.1	1.22	0.0101	0.000564
Sophros 9	6.35	2.9	1.39	0.182	0.46	87.2	1.49	0.0136	0.000759
Flex 3.5	5.67	1.55	1.42	0.106	0.472	89.5	1.31	0.00795	0.000443
Flex 7	7.19	2.46	1.38	0.169	0.458	86.8	1.58	0.0126	0.000704
Flex 10	8.19	3.06	1.35	0.21	0.449	85.1	1.58	0.0157	0.000875
sustain stair treads	5.88	1.62	1.42	0.115	0.47	89.1	1.35	0.00857	0.000479
flex stair treads	5.88	1.68	1.42	0.115	0.471	89.1	1.31	0.00857	0.000479
sophros stair treads	5.16	1.85	1.43	0.115	0.473	89.6	1.35	0.00862	0.000481
Praxis Cork 3/16"	0.565	0.0194	1.52	0.0556	0.503	95.4	1.98	0.00415	0.000232
Praxis Cork 5/16"	0.698	0.0292	1.51	0.0904	0.502	95	2.12	0.00677	0.000378
Praxis Cork 1/2"	0.982	0.0502	1.5	0.165	0.498	94.4	2.37	0.0123	0.000688

Land Filling: bulk waste

Table 23: Percentage impact breakdown by modules across all declared products: land filling: bulk waste(LFW), kg waste
note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	4.41	2.12	0.797	0.258	0.375	4.73	5.26	0.286	25.1
Maximum	13.4	41.4	5.21	0.695	2.45	30.9	14.6	0.77	67.7
Mean	9.24	30.6	1.82	0.349	0.857	10.8	11.9	0.387	34
Median	9.64	36.6	1.4	0.296	0.658	8.28	13.5	0.328	28.9
Sustain 2.5	13.4	32.5	2.06	0.262	0.969	12.2	12.8	0.29	25.5
Sustain 6	10.8	37.1	1.28	0.3	0.6	7.56	12.8	0.332	29.2
Sustain 9	9.64	38.7	0.943	0.313	0.444	5.59	13.6	0.347	30.5
Sophros 2.5	11.6	36.1	1.91	0.258	0.898	11.3	12.5	0.286	25.1
Sophros 6	8.91	39.8	1.18	0.285	0.555	6.99	14.2	0.315	27.7
Sophros 9	7.88	41.4	0.893	0.296	0.42	5.29	14.6	0.328	28.9
Flex 3.5	11.3	35.9	1.49	0.281	0.699	8.81	13.8	0.311	27.4
Flex 7	9.8	39.4	0.998	0.309	0.469	5.92	12.6	0.342	30.1



Flex 10	9.02	39.9	0.797	0.313	0.375	4.73	14.1	0.348	30.5
sustain stair treads	11.1	35.7	1.41	0.289	0.661	8.35	14	0.319	28.1
flex stair treads	11.1	36.6	1.4	0.287	0.658	8.28	13.5	0.317	27.9
sophoros stair treads	9.6	39.1	1.36	0.279	0.64	8.08	13.5	0.309	27.2
Praxis Cork 3/16"	5.17	2.12	5.21	0.484	2.45	30.9	6.17	0.534	47
Praxis Cork 5/16"	4.81	2.39	3.89	0.589	1.83	23	5.39	0.653	57.4
Praxis Cork 1/2"	4.41	2.66	2.5	0.695	1.18	14.8	5.26	0.77	67.7

Land Filling: hazardous waste

Table 24: Percentage impact breakdown by modules across all declared products: land filling: hazardous waste(LFWH), kg waste note: neg.= negligible

Module	A1	A2	A3	A4	A5	B2	B4	C2	C3
Minimum	5.18	3.16	0.334	1.36	0.696	4.2	26.3	0.0951	0.033
Maximum	16	51.5	3.48	8.35	7.26	43.8	38.5	0.585	0.203
Mean	8.03	38.7	1.01	2.44	2.12	12.8	34.7	0.171	0.0594
Median	7.07	46.6	0.575	1.54	1.2	7.26	35.5	0.108	0.0375
Sustain 2.5	8.6	41.8	0.861	1.41	1.79	10.8	34.5	0.0988	0.0343
Sustain 6	7.02	47.7	0.533	1.62	1.11	6.7	35.1	0.113	0.0393
Sustain 9	6.3	49.8	0.394	1.69	0.821	4.95	35.9	0.118	0.041
Sophros 2.5	7.51	45.4	0.779	1.36	1.62	9.8	33.4	0.0951	0.033
Sophros 6	5.68	48	0.461	1.44	0.963	5.81	37.5	0.101	0.035
Sophros 9	5.18	50.8	0.355	1.52	0.741	4.47	36.8	0.107	0.037
Flex 3.5	7.29	46.1	0.619	1.51	1.29	7.78	35.3	0.106	0.0367
Flex 7	5.99	47.7	0.392	1.57	0.817	4.93	38.5	0.11	0.038
Flex 10	5.91	51.5	0.334	1.69	0.696	4.2	35.5	0.119	0.0411
sustain stair treads	7.16	45.6	0.582	1.54	1.21	7.33	36.5	0.108	0.0375
flex stair treads	7.07	46.6	0.575	1.53	1.2	7.26	35.7	0.107	0.0371
sophoros stair treads	6.01	46.6	0.527	1.4	1.1	6.64	37.6	0.0976	0.0339
Praxis Cork 3/16"	11.4	3.16	3.48	4.17	7.26	43.8	26.3	0.291	0.101
Praxis Cork 5/16"	13.3	4.14	3	5.87	6.26	37.8	29.2	0.411	0.143
Praxis Cork 1/2"	16	5.54	2.33	8.35	4.86	29.3	32.8	0.585	0.203

ADDITIONAL ENVIRONMENTAL INFO



No regulated substances of very high concern are utilized on site.

APPENDIX: OTHER KEY INFORMATION





Figure 5: **Sustain Cork flooring**





Figure 6: **Sophros Solid Rubber flooring**



Figure 7: **Flex Solid Rubber flooring**





Figure 8: Praxis Soild flooring

REFERENCES

ISO Standards:

- ISO 6707-1: 2014 Buildings and Civil Engineering Works - Vocabulary - Part 1: General Terms
- ISO 14021:1999 Environmental Labels and Declarations - Self-declared Environmental Claims (Type II Environmental Labeling)
- ISO 14025:2006 Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures
- ISO 14040:2006 Environmental Management - Life Cycle Assessment - Principles and Framework
- ISO 14044:2006 Environmental Management - Life Cycle Assessment - Requirements and Guidelines
- ISO 14067:2018 Greenhouse Gases – Carbon Footprint of Products – Requirements and Guidelines for Quantification
- ISO 14050:2009 Environmental Management - Vocabulary
- ISO 21930:2017 Sustainability in Building Construction - Environmental Declaration of Building Products



EN Standards:

- EN 16757 Sustainability of construction works - Environmental product declarations – Product Category Rules for concrete and concrete elements
- EN 15804 Sustainability of construction works - Environmental product declarations -Core rules for the product category of construction products

Other References:

- NSF International (2018). Product Category Rule for Environmental Product Declarations PCR for Resinous Floor Coatings
- USGBC LEED v4 for Building Design and Construction, 11 Jan 2019 available at <https://www.usgbc.org/resources/pcr-committee-process-resources-part-b>
- USGBC PCR Committee Process & Resources: Part B, USGBC, 7 July 2017 available at <https://www.usgbc.org/resources/pcr-committee-process-resources-part-b>.
- US EPA (2020) Advancing Sustainable Materials Management: 2018 Fact Sheet, https://www.epa.gov/sites/production/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf

