Environmental Product Declaration

In accordance with ISO 14025:2006 and ISO21930:2017 for:

MedinPure®

From

ArmstrongFlooring®

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
Licensee:	EPD North America (www.epdna.com)
EPD registration number:	EPD-IES-0023171:001
Publication date:	2025-06-17
Valid until:	2030-06-17

This EPD was done in accordance with ISO 14025 and ISO 21930.
This EPD does not comply with EN15804+A2.

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

Programme and Programme Operator	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com info@environdec.com as provided by EPD North America
General Program instructions and Version Number[1]	General Programme Instructions for the International EPD® System. Version 5.0. 2024-06-19
Manufacturer Name and Address	Armstrong Flooring 3840 Hempland Road Mountville, PA 17554
Declaration Number	EPD-IES-0023171:001
Declared Product and Functional Unit	MedinPure® Homogeneous PVC-Free Sheet Flooring 1 m^2 of installed flooring with a building service life of 75 years
Reference PCR and Version Number[2]	UL Part A: Life Cycle Assessment Calculation Rules and Report Requirements, Version 4.0 UL Part B: Flooring EPD Requirements. UL 10010-7, Version 2.0, September 28, 2018
Product's intended Application and Use	Commercial Flooring Applications
Product RSL	30 years
Markets of Applicability	North America
Date of Issue	2025-06-17
Period of Validity	5 years from date of issue
EPD Type	Product Specific
Range of Dataset Variability	N/A
EPD Scope	Cradle-to-Grave
Year of reported manufacturer primary data	2023
LCA Software and Version Number	Sphera Managed LCA Content Database 2023.2 (formerly GaBi Database)
LCI Database and Version Number	Sphera LCA for Experts 10.7 (formerly GaBi)
LCIA Methodology and Version Number	TRACI 2.1 CML 2001-Jan 2016 IPCC AR5
Part A PCR review was conducted by:	Lindita Bushi, PhD, Chair Hugues Imbeault-Tétreault, Eng., M.A.Sc. Jack Geibig
The sub-category PCR review was conducted by:	Jack Geibig (Chair) Thomas Gloria, PhD Thaddeus Owen
Independent third-party verification of the declaration and data, according to ISO 14025:2008.	☒ Individual EPD Verification ☐ EPD Process Certification ☐ Pre-Verified LCA/EPD Tool
This declaration was independently verified in accordance with ISO 14025: 2006. The UL Environment "Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report," v4.0, based on CEN Norm EN 15804 (2012) and ISO 21930:2017, serves as the core PCR, with additional considerations from the USGBC/UL Environment Part A Enhancement (2017) **☐ Internal ☒ External**	James Mellentine, Thrive ESG
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	WAP Sustainability Consulting
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	James Mellentine, Thrive ESG
The procedure for follow-up of data during EPD validity, as defined by the GPI, involves third party verifier:	☐ Yes ☒ No

[1]Not all requirements in the GPI are fulfilled, particularly the requirement, for construction products, to follow EN 15804 for certain aspects of the LCA method.
[2]This EPD is based on a PCR that satisfies procurement rules at the federal, state, and municipal levels which call for EPDs based on the UL Part B PCR. The UL Part B PCR was used to meet regulatory (example: Buy Clean California Act, etc.) and market expectations (example: Building Transparency EC3 comparisons, LEED and existing vendor procurement requirements, product scoring programs, etc.). The EPD should not be used outside of this context.

Limitations:
Environmental declarations from different programs (ISO 14025) may not be comparable.
The declared environmental performance in the EPD shall not be compared with EN 15804-compliant EPDs developed under PCR 2019:14 in the International EPD System.
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, and therefore EPDs may not be used for comparability purposes when not considering the building energy use phase as instructed under this PCR.
Full conformance with the PCR for Products 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 results for upstream or downstream of the life cycle stages declared.
The EPD owner has the sole ownership, liability, and responsibility of the EPD.

Information about EPD Owner

EPD Owner	Armstrong Flooring 3840 Hempland Road Mountville, PA 17554
LCA Practitioner	WAP Sustainability Consulting 103 Powell Ct, Suite 200 Brentwood, TN 37027
An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com.	

Company Description

AHF Products is a leader in the design and manufacturing of flooring. The Armstrong Flooring® brand's innovative commercial flooring designs and our comprehensive solutions enable exceptional interior spaces that surpass clients' expectations. Choose from a breadth of designs and colors to bring a space to life. Our collections of vinyl flooring enhance any commercial spaces in healthcare, assisted living, education, corporate, hospitality, retail and more. For more information about Armstrong Flooring® and detailed product technical information, please visit the website at ArmstrongFlooring.com.

Product Information

Product Description

MedinPure® Homogeneous PVC-Free Sheet Flooring has a uniform structure and composition throughout the entire thickness of the floor, creating a true through-pattern construction. In aseptic spaces that require infection control protocols, heat welding and flash coving is recommended. Diamond 10® Technology, available on MedinPure®, provides an enhanced level of performance, standing up to commercial demands such as heavy traffic and staining to keep floors beautiful for years to come.

MedinPure® Homogeneous PVC-Free Sheet Flooring is within CSI MasterFormat section 09 65 16 and UN CPC 36910.

Application

MedinPure® Homogeneous PVC-Free Sheet Flooring is a widely used commercial resilient flooring option and is routinely used with great success in healthcare. Properly installed and maintained, homogeneous PVC-Free sheet provides decades of performance across healthcare and other applications.

Properties of Declared Product as Delivered

AHF Products MedinPure® is delivered to the building site in a roll format, packaged on a paper tube with paper. The rolls are stacked on a wooden pallet for shipment.

Table 1: Technical Data

Name		Value		Unit
Product thickness		2		mm
Wear layer thickness		2		mm
Product weight		2,700		g/m^2
Product form	Rolls	Width	2,000	mm

Manufacturing

MedinPure® Homogeneous PVC-Free Sheet Vinyl is primarily used in commercial flooring applications and is comprised mostly of limestone in a thermoplastic polyurethane binder matrix. The manufacturing process takes place in Jiangsu, China, and involves the hot mixing of the raw materials milled and calendared into a hot sheet that is then cooled and packaged for shipment. The sheets have a factory

applied coating that provides for low maintenance which can provide lower cost of ownership and lower life-cycle cost assessments. After packaging, the Homogeneous PVC-Free Sheet rolls are shipped and installed.

Reference Service Life and Estimated Building Service Life

The reference service life of the MedinPure® product is assumed to be 30 years given that the product is installed per manufacturer guidelines. This 30 year RSL is also consistent with the RFCi industry-wide EPD for Homogeneous Sheet Vinyl Flooring, which is the most representative industry-wide EPD for this product. Therefore, after initial installation in a building with an estimated service life (ESL) of 75 years, 1.5 replacements are required.

Content Declaration

The total mass of 1 m^2 of flooring product is equivalent to 2.7 kg. The installed product plus any installation adhesives and flooring installation waste is equivalent to 2.885 kg.

Table 2: Product Composition

Material	Function	Quantity (% by weight)
Thermoplastic Polyurethane	Binder	38%
Limestone	Filler	18%
Melamine	Filler	14%
Hydrogenated Styrene/Butadiene Copolymer	Binder	13%
Thermoplastic Polyester Elastomer	Binder	9%
Silicone Powder	Additive	2%
Ethylene Polymer	Binder	2%
Urethane	Coating	1%
Aluminum Trihydrate	Filler	1%
White Mineral Oil	Binder	1%
Olefin Lubricant	Binder	1%
Stabilizer	Stabilizer	<1%
Ethyl Distearate Amide	Stabilizer	<1%

Table 3: Hazardous Substances

Hazardous substances from the candidate list of SVCH	EC No.	CAS No.	Quantity (% by weight)
2-(2-Hydroxy-5-tert-octylphenyl)benzotriazole	221-573-5	3147-75-9	0.74%

Packaging

MedinPure® Homogeneous PVC-Free Sheet Flooring is rolled and wrapped in kraft paper and stored horizontally in re-usable shipping containers. All packaging is recyclable.

Table 4: Packaging

Material	Value (kg / m^2)	Biogenic Material (kg C / m^2)
Pallets	0.0211	0.0087
Paper tube	0.0275	0.0118
Kraft paper	0.0057	0.0024

Mandatory Environmental Information

No substances required to be reported as hazardous per the EPA's Resource Conservation and Recovery Act (US EPA, 2023) were identified during the LCA associated with the production of this product.

Life Cycle Assessment Information

Declaration of Methodological Framework

The LCA follows an attributional approach.

Functional Unit

The functional unit of the flooring product is one (1) m^2 of installed flooring, with a thickness of 2mm. The installed product plus any installation adhesives and flooring installation waste is equivalent to 2.885 kg.

System Boundary

This EPD is a Cradle-to-Grave study. The system boundaries studied as part of this life cycle assessment include the following stages which are shown in the table below:

- Production stage – Modules A1 to A3 which include the extraction, manufacture, and transportation of raw materials, flooring production.
- Construction Stage – Modules A4-A5 which include the transportation to job site and installation.
- Use Stage – Includes on Modules B2 (Use) and B4 (Replacement) as the other modules B1, B3 and B5-B7 are declared as having zero impact as no repair or refurbishment is expected once the product is installed. The use stage accounts for cleaning of the floor.
- End-of-Life – Modules C1-C4 which includes disposal of the product.

Each module includes provisions of all relevant materials, products, and energy. Potential impacts and waste are considered in the module in which they occur. Per the PCR, capital goods and infrastructure flows are assumed to not significantly affect LCA results or conclusions and thus are excluded from the analysis.

Table 5: Life Cycle Stages Included in the Study

	Production			Construction		Use							End of Life				Benefits & Loads Beyond System Boundary
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
	Raw Material Supply	Transport	Manufacturing	Transport to Site	Assembly/Install	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	Deconstruction	Transport	Waste Processing	Disposal	Reuse, Recovery, Recycling Potential
Modules Declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ND
Geography	China			CN & NA	North America												ND

X = Module Included in LCA, ND = Module not Declared

Flow Diagram

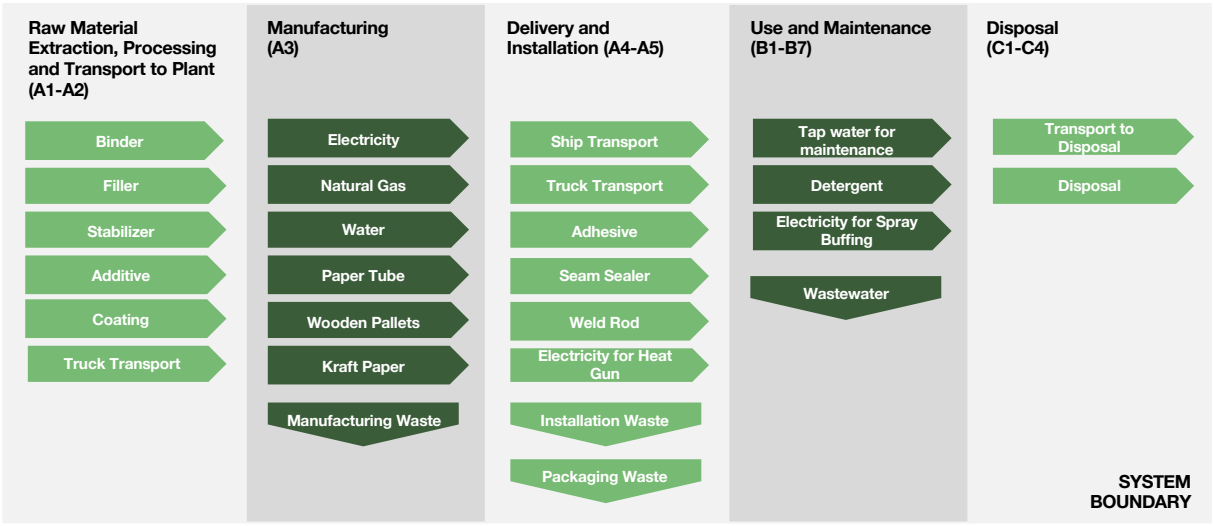

Figure 1: Process Flow Diagram

Estimates and Assumptions

All estimates and assumptions are within the requirements of ISO 14040/44. Per the PCR, a distance of 800 km (497 miles) by diesel-powered truck is used to represent the distribution of product from the port of entry into the United States to the installation site. Inbound transportation from overseas by cargo ship is also included. Additionally, transportation is assumed to be 161 km (100 miles) by diesel-powered truck for installation waste and product at end-of-life to disposal.

Cut-Off Criteria

All known material inputs (based on total mass of the final product) were included within the scope of analysis. No known flows were deliberately excluded. Cut-off rules are consistent with the PCR.

Software

Sphera LCA for Experts 2023.2.

Data Sources

Primary data were collected by facility personnel and was used for all manufacturing processes. Secondary data for material production, energy generation, transport, and waste disposal were sourced from the Sphera Managed LCA Content Database 2023.2.

Table 6: Declaration of sources and share of primary data

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3[1]
Production of TPU	Database	Sphera LCA for experts 2023.2	2023	Secondary Data	0%
Production of Elastomers	Database	Sphera LCA for experts 2023.2	2023	Secondary Data	0%
Generation of electricity used in manufacturing product	Database	Sphera LCA for experts 2023.2	2023	Primary Data	6%

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3[1]
Generation and use of natural gas in manufacturing	Database	Sphera LCA for experts 2023.2	2023	Primary Data	1%
Transportation	Database	Sphera LCA for experts 2023.2	2023	Primary Data	2%
Total share of primary data, of GWP-GHG results for A1-A3					9%

[1]The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that do not capture all relevant aspects of data quality. The indicator is not comparable across product categories.

Period Under Review

The period under review is calendar year 2023.

Allocation

General principles of allocation were based on ISO 14040/44. There are no products other than the products under study that are produced as part of the manufacturing processes. Since there are no co-products, no allocation based on co-products is required. To derive a per-unit value for manufacturing inputs and outputs such as energy, packaging, and waste, allocation based on total production by mass was utilized.

Of relevance to the defined system boundary is the method in which recycled materials were handled. Throughout the study recycled materials were accounted for via the cut-off method. Under this method, impacts and benefits associated with the previous life of a raw material from recycled stock are excluded from the system boundary. Impacts and benefits associated with secondary functions of materials at end of life are also excluded (i.e., production into a third life or energy generation from the incineration plant).

Comparability and Benchmarking

The user of the EPD should take care when comparing EPDs from different companies. Assumptions, data sources, and assessment tools may all impact the uncertainty of the final results and make comparisons misleading. Without understanding the specific variability, the user is therefore, not encouraged to compare EPDs. Even for similar products, differences in use and end-of-life stage assumptions, and data quality may produce incomparable results. 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, and therefore EPDs may not be used for comparability purposes when not considering the building energy use phase as instructed under this PCR. Full conformance with the PCR for flooring products 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 results for upstream or downstream of the life cycle stages declared.

Comparison of the environmental performance of construction works and construction products using EPD information shall be based on the product's use and impacts at the construction works level. In general, EPDs may not be used for comparability purposes when not considered in a construction works context. Given this PCR ensures products meet the same functional requirements, comparability is permissible provided the information given for such comparison is transparent and the limitations of comparability explained.

Installation

MedinPure® Homogeneous PVC-Free Sheet Flooring must be installed in strict accordance with the Armstrong Flooring® installation instructions. This comprehensive guide to installation provides all the information needed to properly install MedinPure® flooring to ensure it will look great and perform exactly as it should. Visit Armstrong Flooring.com for more information.

MedinPure® flooring is installed using a spread adhesive. Sheet seams can be sealed using a heat welding method or a seam sealer product, depending on the setting of product use. Adhesive and seam sealer are applied manually, while the welding method requires use of an electrically-powered heat gun. Electricity use for the heat gun is included in the LCA, and manufacturing of the heat gun is excluded as this is a multi-use tool and the impacts per functional unit are considered negligible. Packaging and installation waste disposal have been modeled as per guidelines in section 2.8.5 of the PCR Part A.

Use

Maintenance is required for the MedinPure® product. Actual maintenance schedules and procedures may vary based on the product installation type and location. As such, average cleaning and maintenance procedures from the Resilient Floor Covering Institute (RFCI) Homogenous Sheet Vinyl Flooring Industry Wide EPD (RFCI, 2024) are used in this LCA. Per RFCI, it is assumed that a typical maintenance procedure consists of weekly sweeping and damp mopping with a neutral cleaner.

Table 7: Maintenance Procedure

Level of Use	Cleaning Process	Cleaning Frequency	Consumption of energy and resources
Commercial	Sweeping	Weekly	None
	Damp mop/ neutral cleaner	Weekly	Hot water, neutral detergent

Reuse, Recycling and Energy Recovery

MedinPure® Homogeneous Sheet Flooring can be recycled thermally through waste to energy conversion or through limited recycling facilities that process thermoplastic polyurethanes (TPUs).

Disposal

At the end of life, this product is assumed to be disposed per PCR requirements. 100% of the product is assumed to be landfilled at end-of-life. Waste classification is based on the Resource Conservation and Recovery Act). Disposal in municipal landfill or commercial incineration facilities is permissible and should be done in accordance with local, state, and federal regulations.

Table 8: Transport to Building Site (A4)

Name	Container Ship	Truck	Unit
Vehicle Type	Container Ship	Truck-trailer	-
Fuel Efficiency	22,200*	43	L/100km
Fuel Type	Heavy fuel oil	Diesel	-
Distance	10,600	800	km
Capacity Utilization	53%	78%	%
Weight of products transported**	3.00	3.00	kg
Capacity utilization volume factor	1	1	-
Gross density of product transported	1,350		m^3

* Fuel efficiency is for a full payload
** Includes installation packaging and installation waste

Table 9: Installation Scenario Details (A5)

Name	Value	Unit
Adhesive	0.185	kg
Seam Sealer	0.00388	kg
Weld Rod	0.00615	kg
Net Freshwater Consumption	-	m^3
Electricity Usage	0.00273	kWh
Product loss per functional unit [%]	5%	%
Waste materials at the construction site before waste processing, generated by product installation	0.300	kg
Installation waste to Landfill	0.142	kg
Packaging Waste to Landfill	0.0423	kg
Packaging Waste to Incineration	0.0104	kg
Packaging Waste to Recycling	0.0102	kg
VOC Emissions	-	µg/m3

Table 10: Reference Service Life

Name	Value	Unit
Reference Service Life	30	Years
Declared product properties (at the gate) and finishes, etc.	See Table 1 for technical details	
Assumed quality of work, when installed in accordance with manufacturer's instructions	Per industry standards	
Indoor environment	Can be installed in any typical indoor environment, assuming manufacturer's installation instructions and recommendations are followed	
Maintenance	See Use section for maintenance instructions	

Table 11: Maintenance Details (B2)

Activity	Name	Value	Unit
Sweeping and Damp Mopping	Maintenance Cycles	30	Cycles/RSL
		75	Cycles/ESL
	Water use (source: tap water; fate: WWTP)	0.00580	m^3/m^2-yr
	Detergent	0.0119	kg/m^2-yr
	Other resources	0	kg/m^2-yr
	Electricity	0.0220	kWh/m^2-yr
	Direct emissions	0	kg/m^2-yr

Table 12: End-of-Life Scenario Details (C1-C4)

Name	Value	Unit
Collected as mixed construction waste	2.885	kg
Waste to Landfill	2.885	kg
Distance to Landfill	161	km

Environmental Performance

All results are given per functional unit, which is 1 m2 of installed flooring over an estimated building life of 75 years. Environmental Impacts were calculated using the Sphera LCA for Experts software platform. Impact results have been calculated using IPCC AR5, TRACI 2.1, and CML 2001-Jan 2016 characterization factors. LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks. The Impact Category Key tables give definitions of relevant acronyms.

The LCIA impact categories referenced below 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 the end-of-life stage (module C) should be considered when using the results of the production stage (modules A1-A3).

Table 13: LCIA Indicators

Abbreviation	Parameter	Unit
	IPCC AR5	
GWPe	Global warming potential (100 years, excluding biogenic CO_2)	kg CO_2 eq
GWPi	Global warming potential (100 years, including biogenic CO_2)	kg CO_2 eq
	TRACI 2.1	
AP	Acidification potential of soil and water	kg SO_2 eq
EP	Eutrophication potential	kg N eq
ODP	Depletion of stratospheric ozone layer	kg CFC 11 eq
SFP	Smog formation potential	kg O_3 eq
	CML 2001	
ADP_f	Abiotic depletion potential, fossil resources	MJ

Table 14: Biogenic Carbon Indicators

Abbreviation	Parameter	Unit
BCRP	Biogenic Carbon Removal from Product	kg CO_2
BCEP	Biogenic Carbon Emission from Product	kg CO_2
BCRK	Biogenic Carbon Removal from Packaging	kg CO_2
BCEK	Biogenic Carbon Emission from Packaging	kg CO_2
BCEW	Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	kg CO_2
CCE	Calcination Carbon Emissions	kg CO_2
CCR	Carbonation Carbon Removals	kg CO_2
CWNR	Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes	kg CO_2

Table 15: Resource Use, Waste, and Output Flow Indicators

Abbreviation	Parameter	Unit
	Resource Use Parameters	
RPR_E	Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value (LHV)
RPR_M	Use of renewable primary energy resources used as raw materials	MJ, net calorific value
$NRPR_E$	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value

Abbreviation	Parameter	Unit
$NRPR_M$	Use of non-renewable primary energy resources used as raw materials	MJ, net calorific value
SM	Use of secondary materials	kg
RSF	Use of renewable secondary fuels	MJ, net calorific value
NRSF	Use of non-renewable secondary fuels	MJ, net calorific value
RE	Recovered energy	MJ, net calorific value
FW	Net use of fresh water	m^3
Waste Parameters and Output Flows		
HWD	Disposed-of-hazardous waste	kg
NHWD	Disposed-of non-hazardous waste	kg
HLRW	High-level radioactive waste, conditioned, to final repository	kg
ILLRW	Intermediate- and low-level radioactive waste, conditioned, to final repository	kg
CRU	Components for reuse	kg
MR	Materials for recycling	kg
MER	Materials for energy recovery	kg
EE	Recovered energy exported from the product system	MJ

All results are presented per functional unit, which is 1 m^2 of flooring over a 75-year building ESL. Results for life cycle stages B1, B3, B5, B6, B7, C1, and C3 are zero and are excluded from the following tables for readability.

Table 16: LCIA Results

Category	Unit	A1-A3	A4	A5	B2	B4	C2	C4	Total
GWPe	kg CO_2 eq	1.20E+01	3.24E-01	8.76E-01	1.28E+00	2.00E+01	3.29E-02	5.83E-02	3.46E+01
GWPi	kg CO_2 eq	1.19E+01	3.24E-01	8.63E-01	1.39E+00	1.97E+01	3.30E-02	5.81E-02	3.42E+01
AP	kg SO_2 eq	2.52E-02	3.50E-03	2.17E-03	2.83E-03	4.69E-02	9.78E-05	3.00E-04	8.09E-02
EP	kg N eq	2.84E-03	2.15E-04	2.87E-04	4.98E-03	5.75E-03	9.97E-06	4.80E-04	1.46E-02
ODP	kg CFC 11 eq	1.71E-08	6.58E-16	8.95E-10	1.09E-14	2.69E-08	8.45E-17	2.78E-15	4.49E-08
SFP	kg O_3 eq	4.18E-01	9.85E-02	3.76E-02	2.68E-02	8.43E-01	2.23E-03	5.46E-03	1.43E+00
ADP_f	MJ	2.33E+02	4.22E+00	1.67E+01	1.56E+01	3.83E+02	4.57E-01	8.76E-01	6.54E+02

Table 17: Carbon Uptake and Emissions

Category	Unit	A1-A3	A4	A5	B2	B4	C2	C4	Total
BCRP	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEP	kg CO2	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 CO2	8.41E-02	0.00E+00	2.25E-02	0.00E+00	1.60E-01	0.00E+00	0.00E+00	0.00E+00
BCEK	kg CO2	0.00E+00	0.00E+00	1.07E-01	0.00E+00	1.60E-01	0.00E+00	0.00E+00	0.00E+00
BCEW	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 18: Resource Use Indicators

Category	Unit	A1-A3	A4	A5	B2	B4	C2	C4	Total
RPR_E	MJ	1.42E+01	1.04E-01	1.62E+00	4.27E+00	2.41E+01	1.83E-02	1.06E-01	4.44E+01
RPR_M	MJ	2.60E+00	0.00E+00	1.37E-01	0.00E+00	4.11E+00	0.00E+00	0.00E+00	6.85E+00
$NRPR_E$	MJ	1.31E+02	4.24E+00	1.15E+01	2.00E+01	2.22E+02	4.61E-01	9.04E-01	3.91E+02
$NRPR_M$	MJ	5.63E+01	0.00E+00	2.96E+00	0.00E+00	8.89E+01	0.00E+00	0.00E+00	1.48E+02
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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
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
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
FW	m^3	5.81E-02	3.40E-04	3.98E-03	8.80E-03	9.39E-02	6.29E-05	1.12E-04	1.65E-01

Table 19: Waste Indicators and Output Flows

Category	Unit	A1-A3	A4	A5	B2	B4	C2	C4	Total
HWD	kg	9.77E-06	1.27E-11	1.63E-06	0.00E+00	1.71E-05	1.32E-12	2.25E-11	2.85E-05
NHWD	kg	1.59E+00	3.77E-04	2.59E-01	4.67E-01	6.81E+00	4.01E-05	2.69E+00	1.18E+01
HLRW	kg	4.40E-06	1.01E-08	2.87E-07	1.85E-06	7.07E-06	1.57E-09	1.12E-08	1.36E-05
ILLRW	kg	3.78E-03	9.06E-06	2.61E-04	1.55E-03	6.09E-03	1.32E-06	1.00E-05	1.17E-02
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
MR	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
MER	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
EEE	MJ	2.45E-02	0.00E+00	3.72E-02	0.00E+00	9.26E-02	0.00E+00	0.00E+00	1.54E-01
EET	MJ	9.88E-03	0.00E+00	1.13E-02	0.00E+00	3.17E-02	0.00E+00	0.00E+00	5.29E-02

Life Cycle Assessment Interpretation

Over the 75-year life of a building, the greatest contributors to GWP for MedinPure® flooring is raw materials (A1) and replacements (B4). The replacement phase accounts for 49%-59% of impacts, while raw materials account for 19%-27% of impacts across impact categories. Eutrophication impacts are also driven by wastewater treatment of the water used for mopping during regular maintenance (B2).

Across all impact categories, the TPU used as a raw material is the largest contributor to cradle-to-gate impacts. Energy and water use at the manufacturing facility is a modest contributor to cradle-to-gate results.

Additional Environmental Information

Environment and Health During Manufacturing

Armstrong Flooring® has a robust internal Quality Assurance process that is based on industry-accepted best practices and is led by a team of quality professionals who have been certified by the American Society for Quality. The process involves several hundred different measures made throughout the manufacturing processes.

Environment and Health During Installation and Use.

All Armstrong Flooring® products are tested and certified by FloorScore® to comply with the requirements of the California Department of Public Health Standard for the Testing and Evaluation of VOC emissions (CDPH v1.2).

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