





# Declaration Owner Versa Designed Surfaces

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#### Product

Circon Vinyl Wallcovering (CSI Code 09 72 16.16; UNSPSC Class Code 72151400)

#### **Declared Unit**

The declared unit is one square meter of wallcovering

### **EPD Number and Period of Validity**

SCS-EPD-10243

EPD Valid August 23, 2024 through August 22, 2029

# **Product Category Rule**

PCR for Building-Related Products and Services - Part A: LCA Calculation Rules and Report Requirements, UL 10010, UL v.4.0, March 2022,

UL Part B PCR Guidance for Building-Related Products and Services - Part B: Wall and Door Protection EPD Requirements, UL 10010-10, First Edition, Dated May 22, 2019.

### **Program Operator**

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Declaration Owner:	Versa Designed Surfaces		
Address:	2073 McDonald Ave. New Albany, IN 47150		
Declaration Number:	SCS-EPD-10243		
Declaration Validity Period:	EPD Valid August 23, 2024 through August 22, 2029		
Program Operator:	SCS Global Services		
Declaration URL Link:	https://www.scsglobalservices.com/certified-green-products-guide		
LCA Practitioner:	Gerard Mansell, Ph.D., SCS Global Services		
LCA Software and LCI database:	OpenLCA v2.1 software and the Ecoinvent v3.10 database		
Product RSL:	n/a		
Markets of Applicability:	North America		
EPD Type:	Product-Specific		
EPD Scope:	Cradle-to-Gate		
LCIA Method and Version:	TRACI 2.1		
Independent critical review of the LCA and data, according to ISO 14044 and ISO 14071	□ internal 🖾 external		
LCA Reviewer:	Lindita Bushij		
	Lindita Bushi, Ph.D., Athena Sustainable Materials Institute		
Part A Product Category Rule:	PCR for Building-Related Products and Services - Part A. LCA Calculation Rules and Report Requirements, UL 10010, UL v.4.0, March 2022,		
Part A PCR Review conducted by:	Lindita Bushi, PhD (Chair); Hugues Imbeault-Tétreault, ing., M.Sc.A.; Jack Geibig		
Part B Product Category Rule:	UL Part B PCR Guidance for Building-Related Products and Services - Part B: Wall and Door Protection EPD Requirements, UL 10010-10, First Edition, Dated May 22, 2019.		
Part B PCR Review conducted by:	Lindita Bushi, PhD (Chair); Lise Lauren; Jim Mellentine		
Independent verification of the declaration and data, according to ISO 14025 and the PCR	□ internal 🖾 external		
EPD Verifier:	Lindita Bushi, Ph.D., Athena Sustainable Materials Institute		
Declaration Contents:	Lindita Bushi, Ph.D., Athena Sustainable Materials Institute   1. Versa Designed Surfaces		

**Disclaimers:** This EPD conforms to ISO 14025, 14040, 14044, and 21930.

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

**Accuracy of Results:** Due to PCR constraints, this EPD provides estimations of potential impacts that are inherently limited in terms of accuracy. **Comparability:** Environmental declarations from different programs (ISO 14025) may not be comparable.

Comparison of the environmental performance of Wall and Door Protection 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 use phase as instructed under this PCR.

Full conformance with the PCR for Wall and Door Protection 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.

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

# 1. Versa Designed Surfaces

Versa Designed Surfaces is one of the world's largest manufacturers of commercial wallcovering and an industry leader in sustainability. Based in New Albany, IN, the company has a strong international presence with a distribution network spanning 70 countries and world-class manufacturing facilities not only in the U.S. but also in China, the Middle East, and The Netherlands.

From its early beginnings in 1955, the company had a vision for technological advancements and meaningful innovations for our partners around the globe. Our collaborative culture is not only committed to making superior products but also to how we can make a positive impact on our customers and the environment. We pride ourselves on our forward-thinking and inspirational sustainable solutions, including closed-loop recycled water-based inks and careful selection of recycled packaging, that take us from our roots to the future of design.

# 2. Product

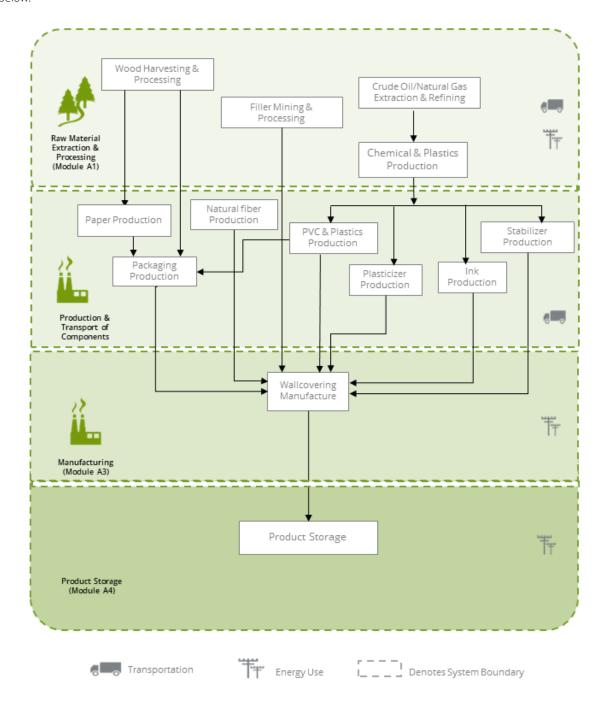
#### 2.1 PRODUCT DESCRIPTION

Circon™ is a 20 oz. Type II vinyl wallcovering comprised of sustainable materials by Versa Designed Surfaces.



### 2.2 PRODUCT FLOW DIAGRAM

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



**Figure 1.** Flow diagram for the life cycle of the wallcovering products.

#### 2.3 APPLICATION

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

# 2.4 DECLARATION OF METHODOLOGICAL FRAMEWORK

The scope of the EPD is cradle-to-gate with storage, including raw material extraction and processing, transportation, product manufacture, including packaging, and product storage. The life cycle phases included in the product system boundary are shown below. Cut-off and allocation procedures are described below and conform to the PCR and ISO standards. The study is conducted following an attributional LCA approach.

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

Pr	oduct			ruction cess				Use					End-o	f-life		Benefits and loads beyond the system boundary
A1	A2	A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
Raw material extraction and processing	Transport to manufacturer	Manufacturing	Transport	Construction - installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse, recovery and/or recycling potential
Х	х	х	x	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	N N N

X = included | MND = Module Not Declared



#### 2.5 TECHNICAL DATA

Technical specifications of the wallcovering products are summarized below. Detailed product performance results can be found on the manufacturer's website <a href="https://www.versadesignedsurfaces.com">www.versadesignedsurfaces.com</a>.

**Table 2.** Technical specifications for Versa wallcovering products.

Property	Test Method	Test Results	
VOC Emissions	CDPH 01350	Low Emitting	
Fire performance	ASTM E84	Class A	

#### 2.6 MARKET PLACEMENT/APPLICATION RULES

The products are marketed to consumers in North America and used in various residential and commercial applications.

#### 2.7 PROPERTIES OF DECLARED PRODUCT AS DELIVERED

The wallcovering products are delivered for installation in the form of rolls of various dimensions.

#### 2.8 MATERIAL COMPOSITION

The vinyl wallcovering products are made primarily of virgin polyvinyl chloride (PVC), natural fiber, plasticizer, stabilizers, various fillers and pigments. Scrap material from the manufacturing process is also reground and used in the product.

**Table 3.** Material content for the wallcovering products in kg per square meter and percent of total mass.

Material	Circon Wallcovering				
Waterial	kg/m²	Percent			
PVC	0.204	45%			
Plasticizer	4.75x10 <sup>-2</sup>	10%			
Stabilizer	6.43x10 <sup>-3</sup>	1.4%			
Filler	0.104	23%			
Additive	1.96x10 <sup>-2</sup>	4.3%			
Natural Fiber	6.78×10 <sup>-2</sup>	15%			
Pigment	3.16x10 <sup>-3</sup>	0.7%			
Total Product	0.452	100%			

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

#### 2.9 MANUFACTURING

The products are manufactured at the Versa production facility in Indiana. The manufacturer provided primary data for their annual production, resource use and electricity consumption and waste generation at the facility. Electricity consumption is modeled using Ecoinvent datasets for the regional electricity grid resource mix.

#### 2.10 PACKAGING

The products are packaged for shipment using plastic wrap, corrugated board and wooden pallets.

**Table 4.** Material content for the product packaging in kg per square meter of wallcovering.

Material	Circon Wallcovering			
iviateriai	kg/m²	Percent		
Corrugate/Paper	1.81x10 <sup>-2</sup>	85%		
Plastic	2.49x10 <sup>-3</sup>	12%		
Wood	6.78×10 <sup>-4</sup>	3.2%		
Total Packaging	2.12x10 <sup>-2</sup>	100%		

#### 2.11 FURTHER INFORMATION

Further information on the product can be found on the manufacturer's website www.versadesignedsurfaces.com.

# 3. LCA: Calculation Rules

#### 3.1 DECLARED UNIT

The Versa wallcovering products are suitable for both commercial and residential interiors and provide the primary function of wall protection and decoration. According to ISO 14044, the functional unit is "the quantified performance of a product system, for use as a reference unit." In accordance with the PCR for cradle-to-gate LCAs, a declared unit of one square meter of wallcovering at the factory gate is used in the assessment.

**Table 5.** Declared unit and reference flow for the Versa wallcovering product under study.

Name	Unit	Circon Wallcovering
Declared Unit	-	1 m <sup>2</sup> of product
Mass	kg	0.452
Thickness to achieve declared unit	mm	0.25
Conversion factor to 1 kg	m <sup>2</sup>	2.21

#### 3.2 SYSTEM BOUNDARY

The scope of the EPD is cradle-to-gate with product storage, including raw material extraction and processing, transportation, product manufacture and product storage. The life cycle phases included in the EPD scope are described in Table 6 and illustrated in Figure 1.

Table 6. The modules and unit processes included in the scope for the Versa Circon wallcovering product system.

Module	Module Description	Unit Processes Included in Scope
A1	Extraction and processing of raw materials; any reuse of products or materials from previous product systems; processing of secondary materials; generation of electricity from primary energy resources; energy, or other, recovery processes from secondary fuels	Extraction and processing of raw materials for the product components.
A2	Transport (to the manufacturer)	Transport of component materials to the manufacturing facilities
A3	Manufacturing, including ancillary material production	Manufacturing of the wallcovering products and packaging (including upstream unit processes*)
A4	Product storage	Storage of products, including heating, cooling, humidity control, etc.

#### 3.3 UNITS

All data and results are presented using SI units.

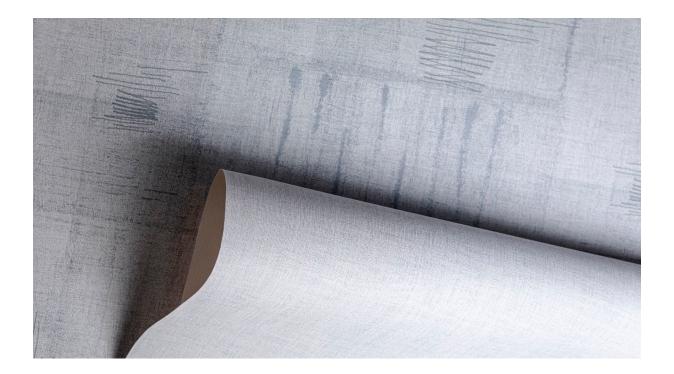
#### 3.4 ESTIMATES AND ASSUMPTIONS

- Electricity use at the manufacturing facility was allocated to the products based on the product area as a fraction of the total production.
- The Versa production facility is located in the RFCW eGRID EPA NERC subregion. An Ecoinvent inventory dataset was modified to reflect the eGRID energy mix for RFCW to estimate resource use and emissions from electricity use at the manufacturing facility.
- Inventory data for some material components were unavailable and modeled using proxy datasets from the Ecoinvent LCI databases.
- Product storage prior to shipment to the installation site was modeled based on information provided by the manufacturer. Electricity and natural gas used at the warehousing facility were allocated to the products based on the product area as a fraction of the total facility storage.

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

#### 3.5 CUT-OFF RULES

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



# 3.6 DATA SOURCES

Primary data were provided for the manufacturing facility. The sources of secondary LCI data are the Ecoinvent database.

**Table 7.** Data sources for the wallcovering products.

Component	Dataset	Data Source	Publication Date
PRODUCT			20.00
PVC			
Polyvinyl Chloride	polyvinylchloride production, bulk polymerisation   polyvinylchloride, bulk polymerised   Cutoff, S/RoW;	EI v3.10	2023
Filler			
Filler	Proprietary	Supplier EPD	2024
Plasticizer			
PVC Plasticizer	dioctyl terephthalate production   dioctyl terephthalate   Cutoff, S/GLO	EI v3.10	2023
Stabilizer			
	market for chemical, organic   chemical, organic   Cutoff, S/GLO	EI v3.10	2023
Stabilizer	limestone production, crushed, washed   limestone, crushed, washed   Cutoff, S/RoW	El v3.10	2023
	market for solvent, organic   solvent, organic   Cutoff, S/GLO	EI v3.10	2023
	market for zinc oxide   zinc oxide   Cutoff, S/GLO	EI v3.10	2023
Textile			
Natural fiber	Proprietary	El v3.10	2023
Other			
Additives	market for chemical, inorganic   chemical, inorganic   Cutoff, S/GLO	El v3.10	2023
	market for chemical, organic   chemical, organic   Cutoff, S/GLO	EI v3.10	2023
Ink	printing ink production, offset, product in 47.5% solution state   printing ink, offset, without solvent, in 47.5% solution state   Cutoff, S/RoW	EI v3.10	2023
PACKAGING			
Cardboard/Paper	corrugated board box production   corrugated board box   Cutoff, S/RoW; containerboard production, linerboard, testliner   containerboard, linerboard   Cutoff, S/RoW	EI v3.10	2023
Wrapping film	packaging film production, low density polyethylene   packaging film, low density polyethylene   Cutoff, S/RoW	El v3.10	2023
Wood	EUR-flat pallet production   EUR-flat pallet   Cutoff, S/RoW	EI v3.10	2023
TRANSPORT			
Road transport	market for transport, freight, lorry 16-32 metric ton, EURO4   transport, freight, lorry 16-32 metric ton, EURO4   Cutoff, S/RoW	EI v3.10	2023
Rail transport	transport, freight train, diesel   transport, freight train   Cutoff, S/RoW	EI v3.10	2023
Ship transport	transport, freight, sea, container ship   transport, freight, sea, container ship   Cutoff, S/GLO	El v3.10	2023
RESOURCES			
Grid electricity	market for electricity, medium voltage   electricity, medium voltage   Cutoff, U - RFCW/US-RFC	El v3.10	2023
Heat – natural gas	market for heat, central or small-scale, natural gas   heat, central or small-scale, natural gas   Cutoff, S/RoW	El v3.10	2023
Heat – propane	heat production, propane, at industrial furnace >100kW   heat, district or industrial, other than natural gas   Cutoff, S/RoW	EI v3.10	2023

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# 3.7 DATA QUALITY

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

**Table 8.** Data quality assessment for the wallcovering product system.

Data Quality Parameter	Data Quality Discussion
Time-Related Coverage: Age of data and the minimum length of time over which data is collected	The most recent available data are used, based on other considerations such as data quality and similarity to the actual operations. Typically, these data are less than 5 years old. All of the data used represented an average of at least one year's worth of data collection, and up to three years in some cases. Manufacturer-supplied data (primary data) are based on annual production for 2023.
Geographical Coverage: Geographical area from which data for unit processes is collected to satisfy the goal of the study	The data used in the analysis provide the best possible representation available with current data. Electricity use for product manufacture is modeled using representative data for the applicable NERC eGRID subregion. Surrogate data used in the assessment are representative of global or European operations. Data representative of European operations is considered sufficiently similar to actual processes.
<b>Technology Coverage:</b> Specific technology or technology mix	For the most part, data are representative of the actual technologies used for processing, transportation, and manufacturing operations. Representative fabrication datasets, specific to the type of material, are used to represent the actual processes, as appropriate.
<b>Precision:</b> Measure of the variability of the data values for each data expressed	Precision of results are not quantified due to a lack of data. Data collected for operations were typically averaged for one or more years and over multiple operations, which is expected to reduce the variability of results.
Completeness: Percentage of flow that is measured or estimated	The LCA model included all known mass and energy flows for production of the products. In some instances, surrogate data used to represent upstream operations may be missing some data which is propagated in the model. No known processes or activities contributing to more than 1% of the total environmental impact for each indicator are excluded.
Representativeness: Qualitative assessment of the degree to which the data set reflects the true population of interest	Data used in the assessment represent typical or average processes as currently reported from multiple data sources and are therefore generally representative of the range of actual processes and technologies for production of these materials. Considerable deviation may exist among actual processes on a site-specific basis; however, such a determination would require detailed data collection throughout the supply chain back to resource extraction.
Consistency: Qualitative assessment of whether the study methodology is applied uniformly to the various components of the analysis	The consistency of the assessment is considered to be high. Data sources of similar quality and age are used; with a bias towards Ecoinvent v3.10 data where available. Different portions of the product life cycle are equally considered.
Reproducibility: Qualitative assessment of the extent to which information about the methodology and data values would allow an independent practitioner to reproduce the results reported in the study	Based on the description of data and assumptions used, this assessment would be reproducible by other practitioners. All assumptions, models, and data sources are documented.
Sources of the Data: Description of all primary and secondary data sources	Data representing energy use at the manufacturing facility represents an annual average and are considered of high quality due to the length of time over which these data are collected, as compared to a snapshot that may not accurately reflect fluctuations in production. For secondary LCI data, Ecoinvent v3.10 LCI data are used.
Uncertainty of the Information: Uncertainty related to data, models, and assumptions	Uncertainty related to materials in the products and packaging is low. Actual supplier data for upstream operations were not available and the study relied upon the use of existing representative datasets. These datasets contained relatively recent data (<10 years) but lacked geographical representativeness. Uncertainty related to the impact assessment methods used in the study are high. The impact assessment method required by the PCR includes impact potentials, which lack characterization of providing and receiving environments or tipping points.

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#### 3.8 PERIOD UNDER REVIEW

The period of review is calendar year 2023.

#### 3.9 ALLOCATION

Manufacturing resource use was allocated to the products based on surface area of the products. Area-based allocation was deemed most appropriate for the wallcovering products as total facility production was available as total square meters of product produced. Impacts from transportation were allocated based on the mass of material and distance transported.

#### 3.10 COMPARABILITY

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

# 4. LCA: Scenarios and Additional Technical Information

#### Product storage (A4 - A5)

Following manufacture, the products are stored at the manufacturer's warehouse facility prior to shipment to consumers. Electricity and natural gas used at the warehousing facility were allocated to the products based on the product area as a fraction of the total facility storage.

# 5. LCA: Results

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

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

Impact Category	Unit
Global Warming Potential	kg CO₂ eq
Ozone Depletion Potential	kg CFC 11 eq
Acidification Potential	kg SO₂ eq
Eutrophication Potential	kg N eq
Smog Formation Potential	kg O₃ eq
Fossil Fuel Depletion Potential	MJ Surplus, LHV

**Table 9.** Life Cycle Impact Assessment results for the vinyl wallcovering products from cradle-to-gate and product storage. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits.

Impact Category	Unit	Raw Materials	Upstream Transport	Manufacturing	Warehousing
Global warming	kg CO <sub>2</sub> eq	1.74	0.113	0.667	2.46x10 <sup>-2</sup>
Giodal warfilling	%	68%	4.4%	26%	0.97%
Acidification	kg SO <sub>2</sub> eq	1.05x10 <sup>-2</sup>	8.78x10 <sup>-4</sup>	1.36x10 <sup>-3</sup>	3.21x10 <sup>-5</sup>
Acidification	%	82%	6.9%	11%	0.25%
Eutrophication	kg N eq	2.25x10 <sup>-2</sup>	1.27x10 <sup>-4</sup>	6.69x10 <sup>-3</sup>	1.56x10 <sup>-4</sup>
Eutrophication	%	76%	0.43%	23%	0.53%
Cmog formation	kg O₃ eq	9.65x10 <sup>-2</sup>	1.97x10 <sup>-2</sup>	1.89x10 <sup>-2</sup>	4.39x10 <sup>-4</sup>
Smog formation	%	71%	15%	14%	0.32%
Ozone depletion	kg CFC11 eq	6.45x10 <sup>-7</sup>	1.77x10 <sup>-9</sup>	9.10x10 <sup>-9</sup>	3.62x10 <sup>-10</sup>
Ozorie depietion	%	98%	0.27%	1.4%	0.055%
Fossil fuel deplation	MJ, surplus	2.98	0.213	0.782	4.24x10 <sup>-2</sup>
Fossil fuel depletion	%	74%	5.3%	19%	1.1%

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

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

Resources	Unit	Waste and Outflows	Unit
Renewable primary resources used as energy carrier (fuel)	MJ, LHV	Hazardous waste disposed	kg
Renewable primary resources with energy content used as material	MJ, LHV	Non-hazardous waste disposed	kg
Non-renewable primary resources used as an energy carrier (fuel)	MJ, LHV	High-level radioactive waste, conditioned, to final repository	kg
Non-renewable primary resources with energy content used as material	MJ, LHV	Intermediate- and low-level radioactive waste, conditioned, to final repository	kg
Secondary materials	kg	Components for re-use	kg
Renewable secondary fuels	MJ, LHV	Materials for recycling	kg
Non-renewable secondary fuels	MJ, LHV	Materials for energy recovery	kg
Recovered energy	MJ, LHV	Recovered energy exported from the product system	MJ, LHV
Use of net freshwater resources	$m^3$	+	÷

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**Table 10.** Resource use for the vinyl wallcovering products from cradle-to-gate and product storage. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits.

Impact Category	Unit	Raw Materials	Upstream Transport	Manufacturing	Warehousing
Resources					
Use of renewable primary energy resources	MJ	4.90	2.13x10 <sup>-2</sup>	1.39	5.43x10 <sup>-3</sup>
	%	78%	0.34%	22%	0.086%
Use of renewable primary energy resources used as raw materials	MJ	0.00	0.00	0.00	0.00
	%	0%	0%	0%	0%
Use of nonrenewable primary energy resources	MJ	25.2	1.53	9.03	0.337
	%	70%	4.2%	25%	0.93%
Use of nonrenewable primary energy resources used as raw materials	MJ	0.00	0.00	0.00	0.00
	%	0%	0%	0%	0%
Use of secondary materials	kg	5.91x10 <sup>-2</sup>	0.00	0.00	0.00
Use of renewable secondary fuels	MJ	0.00	0.00	0.00	0.00
Use of nonrenewable secondary fuels	MJ	0.00	0.00	0.00	0.00
Recovered energy	MJ	0.00	0.00	0.00	0.00
Use of net fresh water	m <sup>3</sup>	0.908	1.20x10 <sup>-3</sup>	3.05x10 <sup>-2</sup>	5.66x10 <sup>-4</sup>
	%	97%	0.13%	3.2%	0.06%

**Table 11.** Waste and outflows for the vinyl wallcovering products from cradle-to-gate and product storage. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits.

Impact Category	Unit	Raw Materials	Upstream Transport	Manufacturing	Warehousing
Wastes and Outflows					
Hazardous waste	kg	1.89x10 <sup>-3</sup>	1.01x10 <sup>-5</sup>	2.83x10 <sup>-5</sup>	1.37x10 <sup>-6</sup>
	%	98%	0.52%	1.5%	0.071%
Bulk waste	kg	0.125	5.63x10 <sup>-2</sup>	0.252	6.14x10 <sup>-3</sup>
	%	28%	13%	57%	1.4%
Radioactive waste	kg	2.67x10 <sup>-5</sup>	3.18x10 <sup>-7</sup>	3.34x10 <sup>-5</sup>	6.15x10 <sup>-7</sup>
	%	44%	0.52%	55%	1%
Components for re-use	kg	0.00	0.00	0.00	0.00
Materials for recycling	kg	0.00	0.00	0.00	0.00
Materials for energy recovery	kg	0.00	0.00	0.00	0.00
Exported energy, electrical	MJ	0.00	0.00	0.00	0.00
Exported energy, thermal	MJ	0.00	0.00	0.00	0.00

# 6. LCA: Interpretation

The contributions to total impact indicator results are dominated by the raw material extraction and processing (A1) followed by the product manufacturing (A3) phase. Impact contributions from the upstream transport phase (A2) range from less than 1% to 14% while impacts from product storage (A4) are minimal.

# 7. Additional Environmental Information

The PVC resin portion of this product is comprised of bio-attributed PVC resin produced under a mass balance program certified by ISCC+ and RSB.

# 8. References

- Life Cycle Assessment of Circon Vinyl Wallcovering. SCS Global Services Report. Prepared for client. July 2024
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- ISO 14040: 2006/Amd1:2017 Environmental Management Life cycle assessment Principles and Framework
- ISO 14044: 2006/Amd 1:2017/ Amd 2:2020 Environmental Management Life cycle assessment Requirements and Guidelines.
- PCR for Building-Related Products and Services Part A: LCA Calculation Rules and Report Requirements, UL 10010, UL v.4.0, March 2022,
- UL Part B PCR Guidance for Building-Related Products and Services Part B: Wall and Door Protection EPD Requirements, UL 10010-10, First Edition, Dated May 22, 2019.
- ISO 21930: 2017 Sustainability in buildings and civil engineering works Core rules for environmental product declarations of construction products and services.
- SCS Type III Environmental Declaration Program: Program Operator Manual. V12.0 December 2023. SCS Global Services.
- Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI). Dr. Bare, J., <a href="https://www.epa.gov/chemical-research/tool-reduction-and-assessment-chemicals-and-other-environmental-impacts-traci">https://www.epa.gov/chemical-research/tool-reduction-and-assessment-chemicals-and-other-environmental-impacts-traci</a>
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- European Joint Research Commission. International Reference Life Cycle Data System handbook. *General guide for Life Cycle Assessment Detailed Guidance*. © European Union, 2010.

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# DESIGNED SURFACES

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