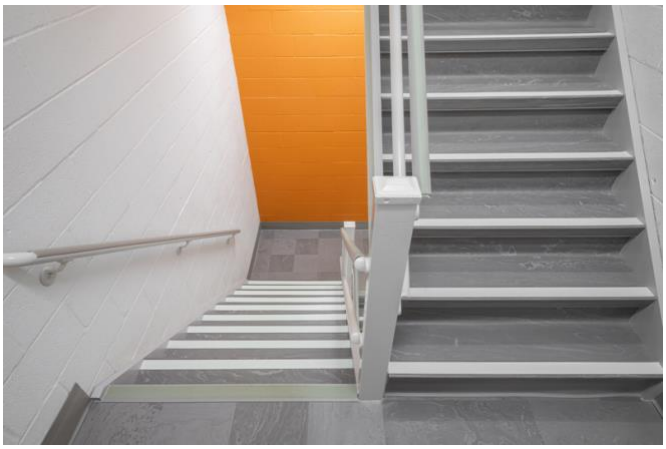
Environmental Product Declaration

ASTM INTERNATIONAL

According to ISO 21930:2017

Johnsonite Angle Fit Rubber Stair Treads



Even the smallest details can help take a project to the next level. Stair treads play a key role in the safety of your clients and their customers by providing durable, slip-resistant surfaces that integrate into overall space design. With 115 solid colors and 45 speckled colorways to choose from in 8 different finishing textures –with or without a visually impaired strip–the humble stairwell can be every bit as interesting as the rest of your scheme.

100% Renewable Energy

Manufactured with 100% renewable energy through Tarkett's renewable energy investment.

Embodied Carbon – 2" (5.0 cm) wide, with riser, cradle to gate (A1-A3) – with Renewable Energy Credits

CO_2 1.95 kg CO2 eq. (per 1 m of product)

Embodied Carbon – 2" (5.0 cm) wide, without riser, cradle to gate (A1-A3) – with Renewable Energy Credits

CO_2 1.24 kg CO2 eq. (per 1 m of product)

For years, Tarkett has raised the sustainability standards of the flooring industry. It purposefully designs floors with total transparency to create healthier, safer spaces for both people and planet. Committed to changing the game with circular economy and to reducing its carbon footprint, the Group has implemented an eco-innovation strategy based on Cradle to Cradle principles, fully aligned with its Tarkett Human-Conscious Design® approach. When Tarkett floors reach their end of life, the company's ReStart® program makes it possible for them to be repurposed or recycled.

Environmental Product Declaration

Johnsonite Angle Fit Rubber Stair Treads

Thermoset Rubber Stair Treads

EPD Program Operator Name, Logo, Address, and Website	ASTM International – WWW.ASTM.ORG 100 Barr Harbor Dr., West Conshohocken, PA
General Program Instructions and Version Number	ASTM General Program Instructions. V.8.0, April 29, 2020
Manufacturer Name and Address	Tarkett Johnsonite, 16035 Industrial Pkwy, Middlefield, OH 44062
Declaration Number	EPD 491
Declared Product & Functional Unit or Declared Unit	1 m of installed stair tread product
Reference PCR and Version Number	ISO 219030:2017 serves as the core PCR and UL Part A
Description of product application/use	Slip-resistant surface for stairwell management
Market(s) of applicability	Commercial
Product RSL Description (if Appl.)	35 years
Date of Issue	06/01/2023
Period of Validity	5 years
EPD Type	Product specific
EPD Scope	Cradle to gate (A1-A3)
Year(s) of reported primary data	2020
LCA Software & Version Number	SimaPro v9.4.0.1
LCI Database(s) & Version Number	Ecoinvent v3.8 compiled in November 2021 DATASMART LCI, Long Trail Sustainability, version 2021.1
LCIA Methodology & Version Number	TRACI 2.1
PART A PCR review was conducted by:	Lindita Bushi, PhD, Chair, Athena Sustainable Materials Institute Hugues Imbeault-Tétreault - Groupe AGÉCO Jack Geibig, Ecoform
This declaration was independently verified in accordance with ISO 21930:2017, UL Part A, and ISO 14025: 2006. ☐ INTERNAL ☒ EXTERNAL	Timothy S. Brooke ASTM International
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	Cher Xue TrueNorth Collective
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Lindita Bushi, PhD Athena Sustainable Materials Institute

Limitations

Environmental declarations from different programs (ISO 14025) may not be comparable.

Comparison of the environmental performance of Wall Base Products using EPD information shall be based on the product's use and impacts at the construction works level, and therefore EPDs may not be used for comparability purposes when not considering the construction works energy use phase as instructed under this PCR.

Full conformance with the PCR for Wall Base Products allows EPD comparability only when all stages of a life cycle have been considered, when they comply with all referenced standards, use the same sub-category Part B PCR, and use equivalent scenarios with respect to construction works. 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.

Environmental Product Declaration

Johnsonite Angle Fit Rubber Stair Treads

Thermoset Rubber Stair Treads

Product Definition and Information

1.1. Description of Company/Organization

With a history of 140 years, Tarkett is a worldwide leader in innovative flooring and sports surface solutions, with net sales of €2.8 billion in 2021. Offering a wide range of products including vinyl, linoleum, rubber, carpet, wood, laminate, artificial turf and athletic tracks, the Group serves customers in over 100 countries across the globe. Tarkett has 12,000 employees and 34 industrial sites, and sells 1.3 million square meters of flooring every day, for hospitals, schools, housing, hotels, offices, stores and sports fields.

1.2. Product Description

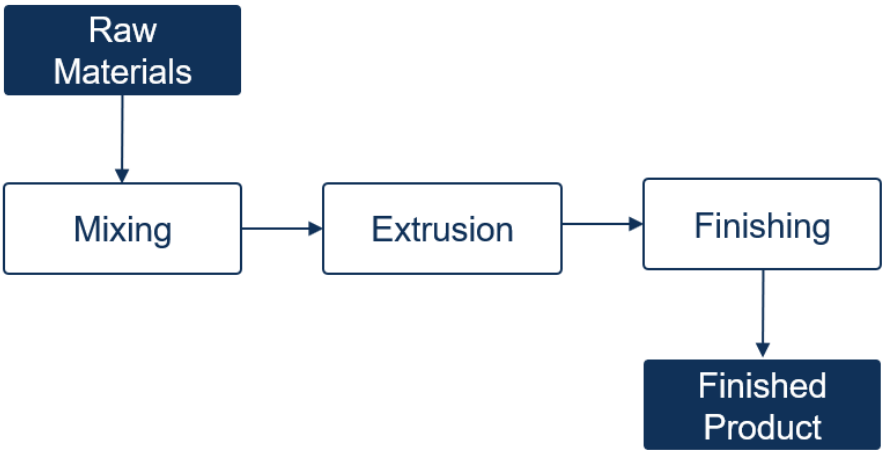
Product Identification

Even the smallest details can help take a project to the next level. Stair treads play a key role in the safety of your clients and their customers by providing durable, slip-resistant surfaces that integrate into overall space design. With 115 solid colors and 45 speckled colorways to choose from in 8 different finishing textures –with or without a visually impaired strip–the humble stairwell can be every bit as interesting as the rest of your scheme.

Product Specification

Johnsonite Angle Fit Rubber Stair Treads are available with 2” (5.0 cm) wide and in multiple lengths: 3 ft. (0.9 m), 3.5 ft. (1.1 m), 4 ft. (1.2 m), 4.5 ft. (1.4 m), 5 ft. (1.5 m), 6 ft. (1.8 m), 7 ft. (2.1 m), 8 ft. (2.4 m), and 9 ft. (2.7 m). Johnsonite Angle Fit Rubber Stair Treads are available with or without risers. Product weight per 6’ length ranges from 1.4 to 2.2 lbs depending on color, texture, with or without riser. Calculated product weight per declared unit is 1.2 lbs per meter and 0.77 lbs per meter with and without riser, respectively. The reference flow in LBS/m is identical across all standard sizes mentioned above.

Flow Diagram



1.3. Application

Slip-resistant surface for stairwell management.

1.4. Properties of Declared Product as Delivered

Stair treads are 2” (5.0 cm) wide and are availble with or without risers.

1.5. Material Composition

100% Thermoset rubber. No substances required to be reported as hazardous are associated with the production of this product.

1.6. Manufacturing

Stair tread has a single layer, homogeneous composition of rubber, additives and colorants. It is produced in several stages beginning with the mixing of the raw materials. After homogoneous mixing, the resulting compound is extruded and vulcanized, cut into lengths, stacked or rolled and packaged. Scrap produced during manufacturing is collected and sent to a third party for electricity generation or beneficial reuse. Electricity, natural gas, water and propane for manufacturing were collected and allocated to the product. The upstream burdens for energy production take into consideration the geographic location of manufacturing. Tarkett has renewable energy investment and all facilities in Ohio use 100% renewable energy (wind).

1.7. Packaging

Carton box with 50% recycled content.

1.8. Transportation

Product delivery is not included within system boundaries for Tarkett’s stair tread products.

1.9. Product Installation

Installation is not included within system boundaries for Tarkett’s stair tread products.

1.10. Health Safety and Environmental Aspects

Johnsonite Angle Fit Rubber Stair Treads products are certified in the FloorScore® Indoor Air Quality program and comply with the VOC emissions requirements of the California Department of Public Heath (CDPH) Standard Method for the Testing and Evaluation of the Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers, v1.1, Feb 2010 (also known as the California 01350 Specification). Tarkett’s recommended installation instructions should be followed and the appropriate adhedive Material Safety Data Sheets (MSDSs) referenced.

1.11. Reference Service Life and Estimated Building Service Life

Stair tread product is assumed to have a reference service life of 35 years.

1.12. Disposal

Product End of Life is not included within system boundaries for Tarkett’s stair tread products.

1.13. Reuse, Recycling, and Energy Recovery

Product End of Life is not included within system boundaries for Tarkett’s stair tread products.

Life Cycle Assessment Background Information

2.1. Functional or Declared Unit

For stair tread products, the declared unit is 1 m of installed stair tread product. All flows to and from the environment within the system boundary are normalized to one pound of product output, which is then multiplied by the actual product weight per linear meter.

2.2. System Boundary

The system boundaries of the study are split into modules according to the requirements of the PCR, consistent with ISO 21930. The life cycle phases considered within system boundaries include:

- Extraction and processing of raw materials (A1)
- Inbound transportation (A2)
- Manufacturing (A3)

2.3. Limitations

The findings in the study are limited by the inherent uncertainty of creating a representative model through LCA, but efforts were made to reduce uncertainty by examining 100% of the materials that make up the product. With the current availability of data, it is nearly impossible to follow the entire supply chain associated with the product in a company-specific way. Many of the processes within the supply chains are modeled using average industry data with varying amounts of specificity. This makes it difficult to accurately determine how well the unit process data represents the actual factors in the products' life cycle.

2.4. Cut-off Criteria

While the PCR allows for any mass flow to be omitted if it is less than 1%, with cumulative flows not exceeding 5%, this study includes 100% of the material flows and thus follows the cut-off criteria. No known flows are deliberately excluded from this EPD.

2.5. Data Sources

The quality of the results of an LCA study is directly dependent on the quality of input data used in the inventory for modeling. In this study, data was collected from multiple sources and primary data was used when available. Data on material composition and manufacturing are primary data from Tarkett and are based on year 2020. All upstream and downstream activities are included using a combination of primary and secondary data. While the majority of inventory data are sourced from primary resources, representative proxies are used to close gaps in the absence of primary data.

2.6. Data Quality

Primary and secondary data are represented ecoinvent v3.8 and DATASMART LCI Package (Long Trail Sustainability, 2021)). Ecoinvent v3.8 is used as the main database for background data. This version is published in 2021. Ecoinvent is widely used in research and industry to support life cycle assessment practices. Each version of this database goes through thorough review process and documentation of precision and completeness is available by the provider.

2.7. Period under Review

Primary data collected from Tarkett are based on averaged 2020 annual data for production details (energy, water, and emissions). Raw material inputs were based on standard product weight and formulation.

2.8. Allocation

Given that raw materials are key contributors to environmental performance, mass-based allocation of plant utility consumption, resource use and waste generation was applied for facilities that produced more than one flooring product. Raw material inputs are allocated to 1 pound of product output based on formula.

Life Cycle Assessment Results

The system boundaries of the study are split into modules according to the requirements of the PCR, consistent with ISO 21930. These modules include extraction and processing of raw materials (A1), inbound transportation (A2), and manufacturing (A3). No impacts from the product's construction stage, use stage, or end of life stage are included. The optional module D, for reporting benefits and loads beyond the system boundary has also been excluded. A summary of the system boundaries by module is provided below in Table 1. Modules with an 'X' are included in the study and those with an 'MND' are Module Not Declared.

Table 1. Description of the system boundary modules

	Product Stage			Construct-Ion Stage		Use Stage							End Of Life Stage				Benefits and Loads Beyond the System Boundary
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
	Raw Material Supply	Transport	Manufacturing	Transport From Gate to Site	Assembly/Install	Use	Maintenance	Repair	Replacement	Refurbishment	Building Operational Energy Use During Product Use	Building Operational Water Use During Product Use	Deconstruction	Transport	Waste Processing	Disposal	Reuse, Recovery, Recycling Potential
EPD	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

3.1 Life Cycle Impact Assessment Results – With Renewable Energy Credits

Table 2. North American Impact Assessment Results for 2" (5.0cm) wide with riser – with RECs

TRACI v2.1	Unit	Total	A1	A2	A3
Global Warming Potential (GWP 100)	kg CO2 eq	1.95E+00	1.53E+00	1.24E-01	2.90E-01
Ozone Depletion Potential (ODP)	kg CFC-11 eq	1.40E-07	7.68E-08	2.93E-08	3.43E-08
Smog Formation Potential (SFP)	kg O3 eq	3.61E-01	3.28E-01	2.29E-02	9.40E-03
Acidification (AP)	kg SO2 eq	1.53E-02	1.39E-02	9.03E-04	5.03E-04
Eutrophication Potential (EP)	kg N eq	3.41E-03	3.11E-03	1.51E-04	1.54E-04
Abiotic Resource Depletion Potential of Non-renewable energy resources (ADPfossil)	MJ, LHV	5.10E+00	4.12E+00	2.62E-01	7.15E-01

Table 3. North American Impact Assessment Results for 2" (5.0cm) wide without riser – with RECs

TRACI v2.1	Unit	Total	A1	A2	A3
Global Warming Potential (GWP 100)	kg CO2 eq	1.24E+00	9.77E-01	7.97E-02	1.86E-01
Ozone Depletion Potential (ODP)	kg CFC-11 eq	8.96E-08	4.88E-08	1.88E-08	2.20E-08
Smog Formation Potential (SFP)	kg O3 eq	2.31E-01	2.10E-01	1.47E-02	6.03E-03
Acidification (AP)	kg SO2 eq	9.82E-03	8.92E-03	5.79E-04	3.23E-04
Eutrophication Potential (EP)	kg N eq	2.16E-03	1.96E-03	9.67E-05	9.89E-05
Abiotic Resource Depletion Potential of Non-renewable energy resources (ADPfossil)	MJ, LHV	3.26E+00	2.64E+00	1.68E-01	4.59E-01

3.2 Life Cycle Inventory Results – With Renewable Energy Credits

Table 4. Resource Use for 2" (5.0cm) wide with riser – with RECs

Parameter	Unit	Total	A1	A2	A3
Renewable primary energy as energy carrier (RPRE)	MJ, LHV	5.30E+00	2.95E+00	2.08E-02	2.32E+00
Renewable primary energy as material utilization (RPRM)	MJ, LHV	0.00E+00	x	x	x
Total use of renewable primary energy resources (RPRT)	MJ	5.30E+00	2.95E+00	2.08E-02	2.32E+00
Non-renewable primary energy as energy carrier (NRPRE)	MJ	2.67E+01	2.03E+01	1.85E+00	4.55E+00
Non-renewable primary energy as material utilization (NRPRM)	MJ	9.89E+00	9.89E+00	x	x
Total use of non-renewable primary energy resources (NRPRT)	MJ	3.66E+01	3.02E+01	1.85E+00	4.55E+00
Use of secondary materials (SM)	kg	0.00E+00	x	x	x
Renewable secondary fuels (RSF)	MJ	0.00E+00	x	x	x
Use of non-renewable secondary fuels (NRSF)	MJ	0.00E+00	x	x	x
Recovered energy (RE)	MJ	0.00E+00	x	x	x
Use of net fresh water (FW)	m^3	1.45E-02	1.16E-02	2.01E-04	2.66E-03

Table 5. Resource Use for 2" (5.0cm) wide without riser – with RECs

Parameter	Unit	Total	A1	A2	A3
Renewable primary energy as energy carrier (RPRE)	MJ, LHV	3.35E+00	1.85E+00	1.34E-02	1.49E+00
Renewable primary energy as material utilization (RPRM)	MJ, LHV	0.00E+00	x	x	x
Total use of renewable primary energy resources (RPRT)	MJ	3.35E+00	1.85E+00	1.34E-02	1.49E+00
Non-renewable primary energy as energy carrier (NRPRE)	MJ	1.71E+01	1.30E+01	1.19E+00	2.92E+00
Non-renewable primary energy as material utilization (NRPRM)	MJ	6.34E+00	6.34E+00	x	x
Total use of non-renewable primary energy resources (NRPRT)	MJ	2.34E+01	1.93E+01	1.19E+00	2.92E+00
Use of secondary materials (SM)	kg	0.00E+00	x	x	x
Renewable secondary fuels (RSF)	MJ	0.00E+00	x	x	x
Use of non-renewable secondary fuels (NRSF)	MJ	0.00E+00	x	x	x
Recovered energy (RE)	MJ	0.00E+00	x	x	x
Use of net fresh water (FW)	m^3	9.22E-03	7.38E-03	1.29E-04	1.70E-03

Table 6. Output Flows and Waste Categories for 2" (5.0cm) wide with riser – with RECs

Parameter	Unit	Total	A1	A2	A3
Hazardous waste disposed (HWD)	kg	0.00E+00	x	x	x
Non-hazardous waste disposed (NHWD)	kg	0.00E+00	x	x	x
High Level Radioactive waste disposed (HRWD)	kg	0.00E+00	x	x	x
Low and Intermediate Level Radioactive waste disposed (LRWD)	kg	0.00E+00	x	x	x
Components for re-use (CRU)	kg	5.06E-02	x	x	5.06E-02
Materials for recycling (MR)	kg	0.00E+00	x	x	x
Materials for energy recovery (MER)	kg	3.80E-02	x	x	3.80E-02
Exported electrical energy (EE, electrical)	MJ, LHV	0.00E+00	x	x	x
Exported thermal energy (EE, thermal)	MJ, LHV	0.00E+00	x	x	x

Table 7. Output Flows and Waste Categories for 2" (5.0cm) wide without riser – with RECs

Parameter	Unit	Total	A1	A2	A3
Hazardous waste disposed (HWD)	kg	0.00E+00	x	x	x
Non-hazardous waste disposed (NHWD)	kg	0.00E+00	x	x	x
High Level Radioactive waste disposed (HRWD)	kg	0.00E+00	x	x	x
Low and Intermediate Level Radioactive waste disposed (LRWD)	kg	0.00E+00	x	x	x
Components for re-use (CRU)	kg	3.25E-02	x	x	3.25E-02
Materials for recycling (MR)	kg	0.00E+00	x	x	x
Materials for energy recovery (MER)	kg	2.44E-02	x	x	2.44E-02
Exported electrical energy (EE, electrical)	MJ, LHV	0.00E+00	x	x	x
Exported thermal energy (EE, thermal)	MJ, LHV	0.00E+00	x	x	x

Table 8. Carbon Emissions and Removals for 2" (5.0cm) wide with riser – with RECs

Parameter	Unit	Total	A1	A2	A3
Biogenic Carbon Removal from Product (BCRP)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Emission from Product (BCEP)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Removal from Packaging (BCRK)	kg CO2	-7.92E-01	0.00E+00	0.00E+00	-7.92E-01
Biogenic Carbon Emission from Packaging (BCEK)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 9. Carbon Emissions and Removals for 2" (5.0cm) wide without riser – with RECs

Parameter	Unit	Total	A1	A2	A3
Biogenic Carbon Removal from Product (BCRP)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Emission from Product (BCEP)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Removal from Packaging (BCRK)	kg CO2	-7.65E-01	0.00E+00	0.00E+00	-7.65E-01
Biogenic Carbon Emission from Packaging (BCEK)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00

3.3 Life Cycle Impact Assessment Results – Without Renewable Energy Credits

Table 10. North American Impact Assessment Results for 2" (5.0cm) wide with riser – without RECs

TRACI v2.1	Unit	Total	A1	A2	A3
Global Warming Potential (GWP 100)	kg CO2 eq	2.41E+00	1.53E+00	1.24E-01	7.56E-01
Ozone Depletion Potential (ODP)	kg CFC-11 eq	1.55E-07	7.68E-08	2.93E-08	4.92E-08
Smog Formation Potential (SFP)	kg O3 eq	3.79E-01	3.28E-01	2.29E-02	2.73E-02
Acidification (AP)	kg SO2 eq	1.74E-02	1.39E-02	9.03E-04	2.60E-03
Eutrophication Potential (EP)	kg N eq	4.48E-03	3.11E-03	1.51E-04	1.23E-03
Abiotic Resource Depletion Potential of Non-renewable energy resources (ADPfossil)	MJ, LHV	5.61E+00	4.12E+00	2.62E-01	1.23E+00

Table 11. North American Impact Assessment Results for 2" (5.0cm) wide without riser – without RECs

TRACI v2.1	Unit	Total	A1	A2	A3
Global Warming Potential (GWP 100)	kg CO2 eq	1.54E+00	9.77E-01	7.97E-02	4.85E-01
Ozone Depletion Potential (ODP)	kg CFC-11 eq	9.92E-08	4.88E-08	1.88E-08	3.16E-08
Smog Formation Potential (SFP)	kg O3 eq	2.43E-01	2.10E-01	1.47E-02	1.75E-02
Acidification (AP)	kg SO2 eq	1.12E-02	8.92E-03	5.79E-04	1.67E-03
Eutrophication Potential (EP)	kg N eq	2.85E-03	1.96E-03	9.67E-05	7.88E-04
Abiotic Resource Depletion Potential of Non-renewable energy resources (ADPfossil)	MJ, LHV	3.59E+00	2.64E+00	1.68E-01	7.88E-01

3.4 Life Cycle Inventory Results – Without Renewable Energy Credits

Table 12. Resource Use for 2" (5.0cm) wide with riser – without RECs

Parameter	Unit	Total	A1	A2	A3
Renewable primary energy as energy carrier (RPRE)	MJ, LHV	3.11E+00	2.95E+00	2.08E-02	1.36E-01
Renewable primary energy as material utilization (RPRM)	MJ, LHV	0.00E+00	x	x	x
Total use of renewable primary energy resources (RPRT)	MJ	3.11E+00	2.95E+00	2.08E-02	1.36E-01
Non-renewable primary energy as energy carrier (NRPRE)	MJ	3.36E+01	2.03E+01	1.85E+00	1.14E+01
Non-renewable primary energy as material utilization (NRPRM)	MJ	9.89E+00	9.89E+00	x	x
Total use of non-renewable primary energy resources (NRPRT)	MJ	4.35E+01	3.02E+01	1.85E+00	1.14E+01
Use of secondary materials (SM)	kg	0.00E+00	x	x	x
Renewable secondary fuels (RSF)	MJ	0.00E+00	x	x	x
Use of non-renewable secondary fuels (NRSF)	MJ	0.00E+00	x	x	x
Recovered energy (RE)	MJ	0.00E+00	x	x	x
Use of net fresh water (FW)	m^3	2.50E-02	1.16E-02	2.01E-04	1.32E-02

Table 13. Resource Use for 2" (5.0cm) wide without riser – without RECs

Parameter	Unit	Total	A1	A2	A3
Renewable primary energy as energy carrier (RPRE)	MJ, LHV	1.95E+00	1.85E+00	1.34E-02	8.71E-02
Renewable primary energy as material utilization (RPRM)	MJ, LHV	0.00E+00	x	x	x
Total use of renewable primary energy resources (RPRT)	MJ	1.95E+00	1.85E+00	1.34E-02	8.71E-02
Non-renewable primary energy as energy carrier (NRPRE)	MJ	2.15E+01	1.30E+01	1.19E+00	7.34E+00
Non-renewable primary energy as material utilization (NRPRM)	MJ	6.34E+00	6.34E+00	x	x
Total use of non-renewable primary energy resources (NRPRT)	MJ	2.78E+01	1.93E+01	1.19E+00	7.34E+00
Use of secondary materials (SM)	kg	0.00E+00	x	x	x
Renewable secondary fuels (RSF)	MJ	0.00E+00	x	x	x
Use of non-renewable secondary fuels (NRSF)	MJ	0.00E+00	x	x	x
Recovered energy (RE)	MJ	0.00E+00	x	x	x
Use of net fresh water (FW)	m^3	1.60E-02	7.38E-03	1.29E-04	8.47E-03

Table 14. Output Flows and Waste Categories for 2" (5.0cm) wide with riser – without RECs

Parameter	Unit	Total	A1	A2	A3
Hazardous waste disposed (HWD)	kg	0.00E+00	x	x	x
Non-hazardous waste disposed (NHWD)	kg	0.00E+00	x	x	x
High Level Radioactive waste disposed (HRWD)	kg	0.00E+00	x	x	x
Low and Intermediate Level Radioactive waste disposed (LRWD)	kg	0.00E+00	x	x	x
Components for re-use (CRU)	kg	5.06E-02	x	x	5.06E-02
Materials for recycling (MR)	kg	0.00E+00	x	x	x
Materials for energy recovery (MER)	kg	3.80E-02	x	x	3.80E-02
Exported electrical energy (EE, electrical)	MJ, LHV	0.00E+00	x	x	x
Exported thermal energy (EE, thermal)	MJ, LHV	0.00E+00	x	x	x

Table 15. Output Flows and Waste Categories for 2" (5.0cm) wide without riser – without RECs

Parameter	Unit	Total	A1	A2	A3
Hazardous waste disposed (HWD)	kg	0.00E+00	x	x	x
Non-hazardous waste disposed (NHWD)	kg	0.00E+00	x	x	x
High Level Radioactive waste disposed (HRWD)	kg	0.00E+00	x	x	x
Low and Intermediate Level Radioactive waste disposed (LRWD)	kg	0.00E+00	x	x	x
Components for re-use (CRU)	kg	3.25E-02	x	x	3.25E-02
Materials for recycling (MR)	kg	0.00E+00	x	x	x
Materials for energy recovery (MER)	kg	2.44E-02	x	x	2.44E-02
Exported electrical energy (EE, electrical)	MJ, LHV	0.00E+00	x	x	x
Exported thermal energy (EE, thermal)	MJ, LHV	0.00E+00	x	x	x

Table 16. Carbon Emissions and Removals for 2" (5.0cm) wide with riser – without RECs

Parameter	Unit	Total	A1	A2	A3
Biogenic Carbon Removal from Product (BCRP)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Emission from Product (BCEP)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Removal from Packaging (BCRK)	kg CO2	-7.92E-01	0.00E+00	0.00E+00	-7.92E-01
Biogenic Carbon Emission from Packaging (BCEK)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 17. Carbon Emissions and Removals for 2" (5.0cm) wide without riser – without RECs

Parameter	Unit	Total	A1	A2	A3
Biogenic Carbon Removal from Product (BCRP)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Emission from Product (BCEP)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Removal from Packaging (BCRK)	kg CO2	-7.65E-01	0.00E+00	0.00E+00	-7.65E-01
Biogenic Carbon Emission from Packaging (BCEK)	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00

LCA Interpretation

The cradle-to-gate impacts with Renewable Energy Credits are dominated by A1, Raw Material (55% to 91%), followed by A2, Upstream Transportation (6% to 21%), and A3, Manufacturing (3% to 24%).

The cradle-to-gate impacts without Renewable Energy Credits are dominated by A1, Raw Material (49% to 87%), followed by A3, Manufacturing (7% to 32%), and A2, Upstream Transportation (3% to 19%).

Additional Information

5.1 Accreditations

- ISO 14001 Environmental Management System
- ISO 9001 Quality Management System
- ISO 45001 Occupational Health and Safety System

5.2 Applicable Product Standards

- ASTM F2169, 2020 Edition, May 28, 2020 - Standard Specification for Resilient Stair Tread
- CSI MasterFormat Code: 09 65 13 Resilient Base and Accessories

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