

Environmental Product Declaration



INTERNATIONAL EPD SYSTEM



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021

Fiberglass SheerWeave®

from



Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Licensee:	EPD North America
Type of EPD:	EPD of multiple products, based on a representative product
EPD registration number:	EPD-IES-0033902:001
Version date:	2026-08-27
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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



GENERAL INFORMATION

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): Construction Products <i>PCR 2019:14, version 2.0.1, International EPD System</i>
PCR review was conducted by: Rob Rouwette (chair), Noa Meron (co-chair). The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com . The review panel may be contacted via support@environdec.com .

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:
☒ Individual EPD verification without a pre-verified LCA/EPD tool Third-party verifier: Gloria FJ Kartikasari, PT Life Cycle Indonesia Approved by: International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier:
☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.

For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Phifer Incorporated

Address: 4400 Reese Phifer Ave, Tuscaloosa, AL 35401-7042

Contact: Andrew Caldwell, andrew.caldwell@phifer.com

Address and contact information of the LCA practitioner commissioned by the EPD owner:
WAP Sustainability, 103 Powell Ct., Suite 200, Brentwood, TN 37027

Description of the organisation: Phifer Incorporated is a manufacturer in the insect screen, solar control fabrics, drawn wire, engineered products and designed fabrics industries. As the world's largest producer of aluminum and fiberglass insect screening, Phifer has capitalized on its wire drawing and textile weaving expertise to flourish in these and other related markets. Our products keep pace with technological innovations and design trends, and our workforce reflects the diversity, international versatility and customer service commitment expected in today's marketplace.

Product-related or management system-related certifications: Our operations in Tuscaloosa, Alabama, adhere to ISO standards, monitored through annual audits to maintain quality and environmental responsibility across manufacturing processes. Phifer maintains an active ISO 9001:2015 certification, demonstrating our commitment to quality management, performance improvement, and risk management. Certified lead auditors conduct internal audits, while third-party audits are performed by Phifer's registrar (DQS) to ensure compliance with the ISO 9001:2015 standard. Resulting corrective actions are implemented without undue delay, and audit results are reported to management. In addition to ISO compliance, we monitor adherence to all applicable environmental, workplace safety, and regulatory requirements across our operations. We also expect our suppliers to certify compliance with relevant state, federal, and international laws, supported by our New Fabric Supplier Survey and Supplier Code of Conduct, which help ensure responsible practices throughout our supply chain.

PRODUCT INFORMATION

Product name: Fiberglass SheerWeave® including styles:

- Basic Series: Basic 1%, Basic 3%, Basic 5%
- 2000, 2100, 2390, 2360, 2410, 2500, 2710, 2705, 2703, 2701.

Product identification: SheerWeave® is a window roller shade engineered to reduce solar heat gain and glare, protect against UV rays, and enhance interior comfort.

Visual representation (e.g., an image) of the product



UN CPC code: 27997

Product description: Manufactured with ease of fabrication in mind, Styles 2500, 2410, 2390 and 2360 are full basketweaves designed expressly for those applications which require a more opaque and nondirectional fabric. Styles 2500, 2410, 2390 and 2360 can also be used in exterior roller shades.

Styles 2701, 2703, 2705 and 2710 are woven from a unique twill pattern that displaces the individual yarns to create a two-sided fabric for maximum performance in heat reduction, glare reduction and improved visibility. Style 2701/2703/2705/2710 can also be used in exterior roller shades.

Location of production site: Tuscaloosa, Alabama

CONTENT DECLARATION

All values are reported according to the declared unit of 1 m² of shade fabric. Basic 1% is the representative product for Fiberglass SheerWeave® products, as it represents the typical construction and production processes common across the product group..

Product	Product Mass (kg/m ²)	Product Components		Recycled Content (%)	Biogenic Carbon (kg C / m ²)
		Fiberglass (%)	PVC Coating (%)		
Basic 1%	0.59	41	59	0	0
Basic 3%	0.56				
Basic 5%	0.49				
2000	0.48	38	62	0	0
2100	0.43				
2390	0.40				
2360	0.35				
2410	0.48				
2500	0.54				
2710	0.35				
2705	0.40				
2703	0.46				
2701	0.49				

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.

Packaging Information

Packaging listed applies to all Fiberglass SheerWeave® products.

Packaging Component	Packaging Mass (kg/m ²)	Packaging Mass % vs the representative product (%)	Biogenic Carbon (kg C / m ²)
Wood bin	1.6E-01	26	4.7E-02
Cardboard	1.2E-01	20	6.5E-02
Tin cap	3.1E-03	1	0.0E+00

1 kg biogenic carbon in the product/package is equivalent to the uptake of 44/12 kg of CO₂.

LCA INFORMATION

Declared unit: 1 m² of shade fabric

Time representativeness: 2024

Geographical scope: Global

Database(s) and LCA software used: MLC Database 2025.2

EPD/LCA Tool used: Sphera LCA for Experts 10.9.0.31

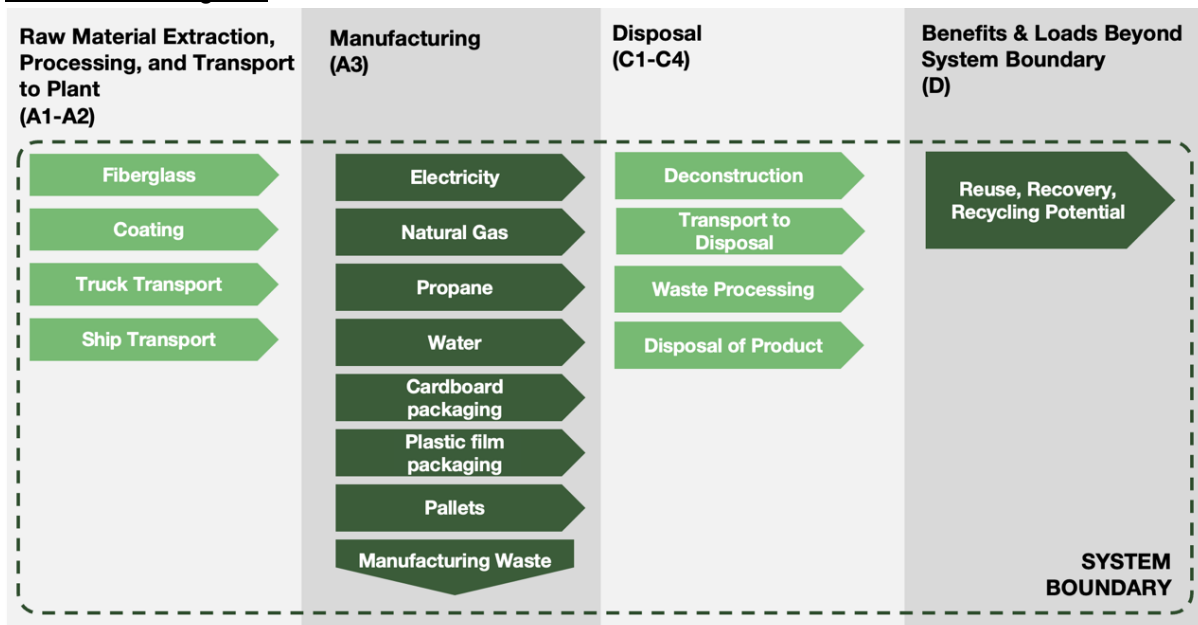
Description of system boundaries:

This EPD is a Cradle-to-Gate with modules C1-C4, and module D (A1-A3 + C + D) study. The system boundaries studied as part of this life cycle assessment include the following stages:

- Raw Material Extraction and Processing – Modules A1 and A2 which include the extraction, manufacture, and transportation of raw materials.
- Manufacturing – Module A3 includes fabric production and final packaging.
- Disposal – Modules C1-C4 which includes disposal of the product at the end-of-life.

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. As such, infrastructure was excluded from foreground data from Phifer facilities. However, Sphera datasets (i.e., background data) automatically include infrastructure.

Process flow diagram:



Modules declared, geographical scope, share of primary data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage				Beyond product life cycle
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling- potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	GLO	GLO	US	-	-	-	-	-	-	-	-	-	US	US	US	US	US
Share of primary data	17%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	-25 to -4%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Modules declared = “X”; Modules not declared = “ND”

Data quality assessment

The EPD covers Fiberglass SheerWeave® manufactured in 2024. Primary data was collected directly from the manufacturer and suppliers, while background data was sourced from Sphera Managed LCA Content 2025.2.

The quality of the data has been assessed according to EN 15804:2012+A2:2019, Annex E, and EN 15941. Using the semi-quantitative evaluation criteria for data quality (DQR) proposed by the European Commission in its Environmental Footprint Guide, the following results were obtained:

- Temporal representativeness (TiR): Good
- Geographical representativeness (GeR): Very Good
- Technological representativeness (TeR): Very Good

Overall, the data quality is rated as Very good. All datasets are within a 10-year period, with the exception of 2 datasets which are beyond a 10-year period: RNA: Softwood lumber (CORRIM, 2011) and US: Corrugated product (Sphera/AF&PA, 2012). These datasets are used for the packaging materials and represent very good geographical and technological coverage although time coverage is considered poor. All assessed datasets represent more than 80% of the results of each declared environmental impact indicator, ensuring that the EPD is based on sufficiently robust and reliable data.

Cut-Off Criteria

Cut-off rules are consistent with the PCR. 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.

The list of excluded inputs include:

- Items like labels, inks, stickers, adhesives, etc. may have been excluded from the product and packaging BOMs due to their small mass compared to the total product and packaging.

- Some material and energy inputs may have been excluded within the MLC datasets used for this project. All MLC datasets have been critically reviewed and conform to the exclusion requirements of the PCR.

Estimates and Assumptions

All estimates and assumptions are within the requirements of ISO 14040/44. A distance of 160 km (100 miles) by diesel-powered truck is used to represent the distribution of product at end-of life to its final disposal of landfill.

LCA software

Sphera LCA for Experts 10.9.0.31

Data Sources

Primary data for raw material production were collected from suppliers. Primary data for energy and water consumption were collected from facility personnel at Phifer Inc. Secondary data for energy generation, and waste disposal were sourced from the Sphera Managed LCA Content Database 2025.1. The electricity was modeled as the local grid mix, with a total GWP-GHG impact of 0.429 kgCO₂eq/kWh.

Process	Source type	Source	Reference year	Data category	Share on GWP-GHG results for A1-A3	Share of primary data, of GWP-GHG results for A1-A3 ¹
Extraction and production of raw materials	Database	Sphera MLC 2025.2	2024	Secondary data	71%	0%
Extraction and production of packaging materials	Database	Sphera MLC 2025.2	2024	Secondary data	8%	0%
Generation of electricity used in manufacturing of product	Collected data	Sphera MLC 2025.2	2024	Primary data	17%	17%
Generation of natural gas used in manufacturing of product	Collected data	Sphera MLC 2025.2	2024	Primary data	<0%	<0%
Generation of propane used in manufacturing of product	Collected data	Sphera MLC 2025.2	2024	Primary data	<0%	<0%
Total share of primary data, of GWP-GHG results for A1-A3					96%	17%

¹The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

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 coproducts, no allocation based on co-products is required. To derive a per-unit value for manufacturing inputs and outputs such as electricity, packaging, and waste, allocation based on total area produced was utilized.

Disposal

At the end of life, this product is assumed to be disposed per PCR requirements. The product is manually removed and as such, C1 is zero. It is assumed that 100% of the product is landfilled at end-of-life, and there is no waste processing. 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.

Reuse, Recycling and Energy Recovery

At the end of its life, the fabric is removed from the building manually (i.e., no equipment or energy required), transported via truck to a landfill, and disposed.

ENVIRONMENTAL PERFORMANCE

LCA results

All results are given per declared unit of 1m² for the representative product, SheerWeave® Basic 1%. The acronyms for all reported indicators can be found in the Abbreviations section. The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks. The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the production stage (modules A1- A3).

While this EPD does not confirm to ISO 21930, impact indicators for ISO 21930 were included given the manufacturing location is in the US and their relevance to the US market.

Impact category indicators according to ISO 21930

Results for SheerWeave® Basic 1% per 1m ²							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
IPCC AR6							
GWP-incl	kg CO ₂ eq.	2.6E+00	0.0E+00	7.8E-03	0.0E+00	1.3E-02	-2.2E-02
GWP-excl	kg CO ₂ eq.	2.5E+00	0.0E+00	7.8E-03	0.0E+00	1.3E-02	-2.12E-02
TRACI 2.1							
AP	kg SO ₂ eq	1.3E-02	0.0E+00	2.2E-05	0.0E+00	6.7E-05	-1.4E-05
EP	kg N eq	5.8E-04	0.0E+00	1.9E-06	0.0E+00	1.0E-04	-1.8E-06
ODP	kg CFC 11 eq	1.6E-12	0.0E+00	3.5E-16	0.0E+00	2.8E-15	-2.1E-15
SFP	kg O ₃ eq	1.1E-01	0.0E+00	5.0E-04	0.0E+00	1.2E-03	-3.0E-04

Mandatory impact category indicators according to EN 15804 + A2 (EF 3.1)

Results for SheerWeave® Basic 1% per 1m ²							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	2.6E+00	0.0E+00	7.8E-03	0.0E+00	1.3E-02	-2.2E-02
GWP-fossil	kg CO ₂ eq.	2.5E+00	0.0E+00	7.8E-03	0.0E+00	1.3E-02	-2.2E-02
GWP-biogenic	kg CO ₂ eq.	9.6E-02	0.0E+00	4.5E-05	0.0E+00	2.2E-05	-9.4E-06
GWP-luluc	kg CO ₂ eq.	1.9E-03	0.0E+00	4.1E-06	0.0E+00	8.6E-06	-1.5E-05
ODP	kg CFC 11 eq.	1.1E-11	0.0E+00	1.8E-15	0.0E+00	3.4E-14	-1.0E-13
AP	mol H ⁺ eq.	1.6E-02	0.0E+00	2.4E-05	0.0E+00	7.7E-05	-1.5E-05
EP-freshwater	kg P eq.	2.4E-05	0.0E+00	1.4E-08	0.0E+00	1.5E-05	-7.3E-09
EP-marine	kg N eq.	2.0E-03	0.0E+00	1.2E-05	0.0E+00	1.9E-05	-5.2E-06
EP-terrestrial	mol N eq.	2.2E-02	0.0E+00	1.3E-04	0.0E+00	2.1E-04	-5.7E-05
POCP	kg NMVOC eq.	7.2E-03	0.0E+00	2.3E-05	0.0E+00	5.9E-05	-1.5E-05
ADP-minerals&metals*	kg Sb eq.	1.1E-02	0.0E+00	1.2E-09	0.0E+00	1.5E-09	-2.3E-09
ADP-fossil*	MJ	4.3E+01	0.0E+00	1.0E-01	0.0E+00	2.0E-01	-3.5E-01
WDP*	m ³	4.9E-01	0.00E+00	1.1E-04	0.0E+00	5.7E-04	-2.6E-03

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Additional mandatory and voluntary impact category indicators (EN 15804+A2, EF3.1)

Results for SheerWeave® Basic 1% per 1m ²							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO ₂ eq.	2.5E+00	0.0E+00	7.8E-03	0.0E+00	1.3E-02	-2.2E-02
PM ²	kg CO ₂ eq.	7.2E-07	0.0E+00	2.7E-10	0.0E+00	8.8E-10	-1.8E-10
IRP ³	kg CO ₂ eq.	1.2E-01	0.0E+00	2.9E-05	0.0E+00	2.0E-04	-2.2E-03
ETP-fw ³	kg CO ₂ eq.	2.0E+01	0.0E+00	7.2E-02	0.0E+00	8.7E-01	-3.3E-02
HTP-c ³	kg CFC 11 eq.	4.2E-09	0.0E+00	1.3E-12	0.0E+00	2.4E-12	-1.8E-12
HTP-nc ³	mol H ⁺ eq.	1.0E-08	0.0E+00	3.6E-11	0.0E+00	1.4E-10	-4.0E-11
SQP ³	kg P eq.	1.E+01	0.0E+00	1.5E-02	0.0E+00	1.4E-02	-9.2E-02

¹This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero.

² This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

³ The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Carbon Emissions and Removals

Results for SheerWeave® Basic 1% per 1m ²							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
BCRP	kg CO2	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
BCEP	kg CO2	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
BCRK	kg CO2	4.8E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
BCEK	kg CO2	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
BCEW	kg CO2	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
CCE	kg CO2	5.3E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
CCR	kg CO2	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
CWNR	kg CO2	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Resource Use, Waste Parameters, and Output Flows

Results for SheerWeave® Basic 1% per 1m ²							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Resource Use							
PERE	MJ	4.8E+00	0.0E+00	4.2E-03	0.0E+00	2.8E-02	-4.8E-02
PERM	MJ	4.9E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
PERT	MJ	9.7E+00	0.0E+00	4.2E-03	0.0E+00	2.8E-02	-4.8E-02
PENRE	MJ	3.6E+01	0.0E+00	1.0E-01	0.0E+00	2.0E-01	-3.5E-01
PENRM	MJ	7.2E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
PENRT	MJ	4.3E+01	0.0E+00	1.0E-01	0.0E+00	2.0E-01	-3.5E-01
SM	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
RSF	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
NRSF	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
RE	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
FW	m3	1.5E-02	0.0E+00	4.5E-06	0.0E+00	2.1E-05	-7.9E-05
Waste Parameters							
HWD	kg	1.2E-08	0.0E+00	1.7E-11	0.0E+00	4.7E-11	-3.5E-11
NHWD	kg	6.9E-01	0.0E+00	1.0E-05	0.0E+00	5.9E-01	-8.6E-05
RWD	kg	1.4E-03	0.0E+00	3.4E-07	0.0E+00	2.2E-06	-2.7E-05
HLRW	kg	1.6E-06	0.0E+00	4.1E-10	0.0E+00	2.5E-09	-3.2E-08
ILLRW	kg	1.3E-03	0.0E+00	3.4E-07	0.0E+00	2.2E-06	-2.7E-05
CRU	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
MR	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
MER	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
EEE	MJ	1.3E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
EET	MJ	5.1E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

ADDITIONAL ENVIRONMENTAL INFORMATION

The table below presents extrapolation factors for converting the declared results to results for additional products within this product group. In the formulas below, X = A1-A3 results of representative product.

Conversion factors for Fiberglass SheerWeave® (includes A1-A3)													
Indicator	Unit	Basic 3%	Basic 5%	2000	2100	2390	2360	2410	2500	2710	2705	2703	2701
IPCC AR6													
GWP-incl	kg CO ₂ eq.	X 0.97	X 0.9	X 0.9	X 0.84	X 0.81	X 0.76	X 0.89	X 0.96	X 0.76	X 0.81	X 0.88	X 0.9
GWP-excl	kg CO ₂ eq.	X 0.96	X 0.9	X 0.89	X 0.84	X 0.81	X 0.76	X 0.89	X 0.96	X 0.75	X 0.81	X 0.87	X 0.9
TRACI 2.1													
AP	kg SO ₂ eq	X 0.96	X 0.87	X 0.87	X 0.81	X 0.77	X 0.7	X 0.86	X 0.95	X 0.7	X 0.77	X 0.85	X 0.88
EP	kg N eq	X 0.98	X 0.93	X 0.93	X 0.89	X 0.87	X 0.83	X 0.92	X 0.97	X 0.83	X 0.87	X 0.91	X 0.93
ODP	kg CFC 11 eq	X 0.99	X 0.97	X 0.97	X 0.95	X 0.94	X 0.92	X 0.97	X 0.99	X 0.92	X 0.94	X 0.96	X 0.97
SFP	kg O ₃ eq	X 0.96	X 0.89	X 0.88	X 0.82	X 0.79	X 0.73	X 0.88	X 0.96	X 0.72	X 0.79	X 0.86	X 0.89
Mandatory impact category indicators according to EN 15804 + A2 (EF 3.1)													
GWP-total	kg CO ₂ eq.	X 0.97	X 0.9	X 0.9	X 0.84	X 0.81	X 0.76	X 0.89	X 0.96	X 0.76	X 0.81	X 0.88	X 0.9
GWP-fossil	kg CO ₂ eq.	X 0.96	X 0.9	X 0.89	X 0.84	X 0.81	X 0.76	X 0.89	X 0.96	X 0.75	X 0.81	X 0.87	X 0.9
GWP-biogenic	kg CO ₂ eq.	X 0.99	X 0.98	X 0.99	X 0.98	X 0.97	X 0.96	X 0.98	X 1	X 0.96	X 0.97	X 0.98	X 0.99
GWP-luluc	kg CO ₂ eq.	X 0.97	X 0.91	X 0.9	X 0.86	X 0.83	X 0.78	X 0.9	X 0.96	X 0.78	X 0.83	X 0.89	X 0.91
ODP	kg CFC 11 eq.	X 0.97	X 0.91	X 0.91	X 0.86	X 0.84	X 0.79	X 0.91	X 0.97	X 0.78	X 0.84	X 0.89	X 0.92
AP	mol H ⁺ eq.	X 0.96	X 0.87	X 0.87	X 0.8	X 0.76	X 0.7	X 0.86	X 0.95	X 0.69	X 0.76	X 0.84	X 0.88
EP-freshwater	kg P eq.	X 0.99	X 0.98	X 0.98	X 0.98	X 0.97	X 0.96	X 0.98	X 0.99	X 0.96	X 0.97	X 0.98	X 0.99
EP-marine	kg N eq.	X 0.96	X 0.89	X 0.88	X 0.82	X 0.78	X 0.73	X 0.87	X 0.95	X 0.72	X 0.78	X 0.85	X 0.88
EP-terrestrial	mol N eq.	X 0.96	X 0.88	X 0.88	X 0.82	X 0.78	X 0.72	X 0.87	X 0.95	X 0.72	X 0.78	X 0.85	X 0.88
POCP	kg NMVOC eq.	X 0.96	X 0.88	X 0.88	X 0.81	X 0.78	X 0.72	X 0.87	X 0.95	X 0.71	X 0.78	X 0.85	X 0.88
ADP-minerals&metals*	kg Sb eq.	X 0.95	X 0.86	X 0.89	X 0.81	X 0.76	X 0.69	X 0.88	X 0.98	X 0.68	X 0.76	X 0.86	X 0.89
ADP-fossil*	MJ	X 0.96	X 0.89	X 0.89	X 0.83	X 0.8	X 0.74	X 0.88	X 0.96	X 0.74	X 0.8	X 0.87	X 0.9
WDP*	m ³	X 0.98	X 0.93	X 0.93	X 0.89	X 0.87	X 0.84	X 0.92	X 0.97	X 0.83	X 0.87	X 0.91	X 0.93

**Conversion factors for Fiberglass SheerWeave®
(includes A1-A3)**

Indicator	Unit	Basic 3%	Basic 5%	2000	2100	2390	2360	2410	2500	2710	2705	2703	2701
Additional mandatory and voluntary impact indicators													
GWP-GHG	kg CO ₂ eq.	X 0.96	X 0.9	X 0.89	X 0.84	X 0.81	X 0.76	X 0.89	X 0.96	X 0.75	X 0.81	X 0.87	X 0.9
PM ²	kg CO ₂ eq.	X 0.95	X 0.86	X 0.89	X 0.81	X 0.77	X 0.7	X 0.88	X 0.98	X 0.69	X 0.77	X 0.86	X 0.89
IRP ³	kg CO ₂ eq.	X 0.98	X 0.93	X 0.92	X 0.88	X 0.86	X 0.83	X 0.92	X 0.96	X 0.82	X 0.86	X 0.91	X 0.92
ETP-fw ³	kg CO ₂ eq.	X 0.96	X 0.88	X 0.89	X 0.83	X 0.79	X 0.73	X 0.88	X 0.97	X 0.72	X 0.79	X 0.87	X 0.9
HTP-c ³	kg CFC 11 eq.	X 1	X 0.99	X 0.99	X 0.98	X 0.98	X 0.97	X 0.99	X 1	X 0.97	X 0.98	X 0.99	X 0.99
HTP-nc ³	mol H ⁺ eq.	X 0.97	X 0.9	X 0.91	X 0.85	X 0.82	X 0.77	X 0.9	X 0.97	X 0.77	X 0.82	X 0.89	X 0.91
SQP ³	kg P eq.	X 0.99	X 0.96	X 0.97	X 0.95	X 0.94	X 0.92	X 0.96	X 0.99	X 0.92	X 0.94	X 0.96	X 0.97
Carbon Emissions and Removals													
BCRP	kg CO ₂	-	-	-	-	-	-	-	-	-	-	-	-
BCEP	kg CO ₂	-	-	-	-	-	-	-	-	-	-	-	-
BCRK	kg CO ₂	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1
BCEK	kg CO ₂	-	-	-	-	-	-	-	-	-	-	-	-
BCEW	kg CO ₂	-	-	-	-	-	-	-	-	-	-	-	-
CCE	kg CO ₂	X 0.95	X 0.86	X 0.78	X 0.71	X 0.66	X 0.6	X 0.76	X 0.86	X 0.59	X 0.66	X 0.75	X 0.78
CCR	kg CO ₂	-	-	-	-	-	-	-	-	-	-	-	-
CWNR	kg CO ₂	-	-	-	-	-	-	-	-	-	-	-	-
Resource Use													
PERE	MJ	X 0.96	X 0.89	X 0.9	X 0.84	X 0.81	X 0.76	X 0.89	X 0.96	X 0.75	X 0.81	X 0.87	X 0.9
PERM	MJ	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 0.89
PERT	MJ	X 0.98	X 0.95	X 0.95	X 0.92	X 0.91	X 0.88	X 0.94	X 0.98	X 0.88	X 0.91	X 0.94	X 0.92
PENRE	MJ	X 0.96	X 0.9	X 0.89	X 0.84	X 0.81	X 0.75	X 0.89	X 0.96	X 0.75	X 0.81	X 0.87	X 0.9
PENRM	MJ	X 0.95	X 0.86	X 0.89	X 0.81	X 0.76	X 0.69	X 0.88	X 0.98	X 0.68	X 0.76	X 0.86	X 0.99
PENRT	MJ	X 0.96	X 0.89	X 0.89	X 0.83	X 0.8	X 0.74	X 0.88	X 0.96	X 0.74	X 0.8	X 0.87	X 0.91
SM	kg	-	-	-	-	-	-	-	-	-	-	-	-
RSF	MJ	-	-	-	-	-	-	-	-	-	-	-	-
NRSF	MJ	-	-	-	-	-	-	-	-	-	-	-	-
RE	MJ	-	-	-	-	-	-	-	-	-	-	-	-

Conversion factors for Fiberglass SheerWeave® (includes A1-A3)													
Indicator	Unit	Basic 3%	Basic 5%	2000	2100	2390	2360	2410	2500	2710	2705	2703	2701
FW	m3	X 0.97	X 0.93	X 0.93	X 0.89	X 0.86	X 0.83	X 0.92	X 0.97	X 0.82	X 0.86	X 0.91	X 0.93
Waste Parameters													
HWD	kg	X 0.97	X 0.9	X 0.9	X 0.85	X 0.82	X 0.77	X 0.89	X 0.96	X 0.76	X 0.82	X 0.88	X 0.9
NHWD	kg	X 0.96	X 0.88	X 0.9	X 0.84	X 0.8	X 0.74	X 0.89	X 0.97	X 0.73	X 0.8	X 0.87	X 0.9
RWD	kg	X 0.98	X 0.93	X 0.92	X 0.89	X 0.87	X 0.83	X 0.92	X 0.96	X 0.83	X 0.87	X 0.91	X 0.92
HLRW	kg	X 0.98	X 0.93	X 0.92	X 0.89	X 0.87	X 0.83	X 0.92	X 0.96	X 0.83	X 0.87	X 0.91	X 0.92
ILLRW	kg	X 0.98	X 0.93	X 0.92	X 0.89	X 0.87	X 0.83	X 0.92	X 0.96	X 0.83	X 0.87	X 0.91	X 0.92
CRU	kg	-	-	-	-	-	-	-	-	-	-	-	-
MR	kg	-	-	-	-	-	-	-	-	-	-	-	-
MER	kg	-	-	-	-	-	-	-	-	-	-	-	-
EEE	MJ	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1
EET	MJ	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1	X 1

The additional environmental information section shall not include any claims (e.g., including certificates), related to the environmental performance indicators or other LCA indicators, that do not comply with the LCA rules of this PCR. For example, carbon-neutrality claims are not allowed, neither are claims on the reductions of GHG emissions, or reporting of certificates, based on a mass balance approach.

ABBREVIATIONS

Abbreviation	Definition
IPCC AR6	
GWPI	Global warming potential (100 years, including biogenic CO ₂)
GWPe	Global warming potential (100 years, excluding biogenic CO ₂)
TRACI 2.1	
AP	Acidification potential of soil and water
EP	Eutrophication potential
ODP	Depletion of stratospheric ozone layer
SFP	Smog formation potential
EN15804+A2, EF3.1	
GWP-total	Global warming potential total
GWP-fossil	Global warming potential fossil fuels
GWP-biogenic	Global warming potential biogenic
GWP-luluc	Global warming potential land use and land use change
ODP	Depletion potential of the stratospheric ozone layer
AP	Acidification potential, Accumulated Exceedance
EP-freshwater	Eutrophication potential, fraction of nutrients reaching freshwater end compartment
EP-marine	Eutrophication potential, fraction of nutrients reaching marine end compartment
EP-terrestrial	Eutrophication potential, Accumulated Exceedance
POCP	Formation potential of tropospheric ozone
ADP-minerals	Abiotic depletion potential for non-fossil resources
ADP-fossil	Abiotic depletion potential for fossil resources
WDP	Water deprivation potential
Additional impact indicators EN15804 + A2, EF3.1	
GWP-GHG	Global warming potential (100 years, excludes biogenic CO ₂)
PM	Potential incidence of disease due to PM emissions
IRP	Potential Human exposure efficiency relative to U235
ETP-fw	Potential Comparative Toxic Unit for ecosystems
HTP-c	Potential Comparative Toxic Unit for humans
HTP-nc	Potential Comparative Toxic Unit for humans
SQP	Potential Soil quality index
Carbon Emissions and Removals	
BCRP	Biogenic Carbon Removal from Product
BCEP	Biogenic Carbon Emission from Product
BCRK	Biogenic Carbon Removal from Packaging
BCEK	Biogenic Carbon Emission from Packaging
BCEW	Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes
CCE	Calcination Carbon Emissions
CCR	Carbonation Carbon Removals
CWNR	Carbon Emissions from Combustion of Waste from Non- Renewable Sources used in Production Processes
Resource Use Parameters	
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials
PERM	Use of renewable primary energy resources used as raw materials
PERT	Total use of renewable primary energy resources
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials
PENRM	Use of non-renewable primary energy resources used as raw materials
PENRT	Total use of non-renewable primary energy resources
SM	Use of secondary materials
RSF	Use of renewable secondary fuels
NRSF	Use of non-renewable secondary fuels
RE	Recovered energy
FW	Net use of fresh water
Waste Parameters and Output Flows	
HWD	Disposed-of-hazardous waste
NHWD	Disposed-of non-hazardous waste

Abbreviation	Definition
RWD	Radioactive waste disposed
HLRW	High-level radioactive waste, conditioned, to final repository
ILLRW	Intermediate- and low-level radioactive waste, conditioned, to final repository
CRU	Components for reuse
MR	Materials for recycling
MER	Materials for energy recovery
EEE	Exported electrical energy
EET	Exported thermal energy

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VERSION HISTORY

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