

Environmental Product Declaration

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

GreenGirt CMH Delta Adjustable



Advanced Architectural Products



Programme	The International EPD System, www.environdec.com
Programme operator	EPD International AB
Licensee	EPD North America (www.epdna.com)
Type of EPD	EPD of multiple products based on worst case results The included products are presented in Product Table.
EPD registration number	EPD-IES-0024478
Version date	2025-09-05
Valid until	2030-09-04

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	
EPD owner	The International EPD System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website	www.environdec.com
E-mail	support@environdec.com

PCR and verification	
Product Category Rules (PCR)	<p>CEN standard EN 15804 serves as the Core Product Category Rules (PCR)</p> <p>PCR 2019:14 Construction products (EN 15804:A2) (2.0.1)</p> <p>PCR review was conducted by: PCR review was conducted by the Technical Committee of the International EPD System. See https://environdec.com/about-us/the-international-epd-system-about-the-system for a list of members. Review chair: Rob Rouvette, Start2see. The review panel may be contacted via the Secretariat www.environdec.com/contact</p>
Third-party verification:	<p>External and independent "third-party" verification of the declaration and data, according to ISO14025:2006, via EPD verification through:</p> <p><input checked="" type="checkbox"/> Individual EPD verification without a pre-verified LCA/EPD tool</p> <p>Third-party verifier Stephen Forson, ViridisPride Ltd.</p>  <p>Approved by: The International EPD® System</p>
Procedure for follow-up data during EPD validity involves third party verifier: No	

Ownership and limitations on use of EPD
<p>The EPD owner has the sole ownership, liability, and responsibility of the EPD.</p> <p>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.</p>


Information about EPD owner

Information about EPD owner	
EPD owner	Advanced Architectural Products
Contact	José Carrasco
Contact details	jose.c@greengirt.com
Address	959 Industrial Drive Allegan, MI 49010 USA
Description of the organisation	Headquartered in West Michigan with an additional warehouse near Seattle, Advanced Architectural Products (A2P) is the creator and manufacturer of GreenGirt CMH continuous insulation and SMARTci building enclosure systems. GreenGirt CMH is a family of continuous insulation systems that combines structural composite metal hybrid sub-framing and compatible accessories with expert engineering support. GreenGirt systems can be used with mineral wool, spray foam, or your preferred insulation material to eliminate thermal bridging and increase energy efficiency. The SMARTci building enclosure system is an air- and water-tight building enclosure system comprised of GreenGirt CMH sub-framing, integrated insulation panels, and necessary accessories. The SMARTci system installs in a single-pass and is 92-99% thermally efficient, eliminates thermal bypass, and provides the highest R-value available — up to 50% higher than competitive systems. Made in the USA.
Life Cycle Assessment (LCA)	Carbonzero AB

Product information

Product information	
Product name (s)	GreenGirt CMH Delta Adjustable
Product description:	GreenGirt CMH Delta Adjustable is an adjustable composite metal hybrid continuous insulation system that combines the structural properties of steel with the thermal benefits of fiberglass and is comprised of GreenGirt Delta Adjustable Z or L-profile base brackets, rails, or clips.
UN CPC code	412 - Products of iron or steel
Name and location of production site(s):	Name of plant: Advanced Architectural Products Location: Michigan, United States
Technical or actual lifespan	Life of building, typically 50 years

Product image

	<p>Manufacturing process The products are made by pultruding the raw materials into a composite Z or L-profile base bracket. Steel is then used to reinforce the flanges of the base bracket.</p>
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Product Table

As GreenGirt CMH Delta is sold in the USA, information are given in Imperial units as well as metric. The 6 inch girt with 6 inch rail is the worst case scenario product shown throughout this EPD.

Product width	Weight, kg/m		Weight, lb/ft		Link to product page
	2 inch rail	6 inch rail	2 inch rail	6 inch rail	
2 inch	1.59	4.27	1.07	2.87	https://greengirt.com/products/greengirt-cmh-delta-adjustable/
3 inch	1.96	4.64	1.32	3.12	
4 inch	2.56	5.24	1.72	3.52	
5 inch	3.30	5.98	2.22	4.02	
6 inch	3.75	6.43	2.52	4.32	

Physical Properties

Test	Results	Standard
Tensile properties	Lengthwise: 50 000 psi minimum Crosswise: 40 000 psi minimum	ASTM D638
Compression	Lengthwise: 50 000 psi minimum Crosswise: 30 000 psi minimum	ASTM D641/D6641M
Flexural properties	Lengthwise: 50 000 psi minimum Crosswise: 40 000 psi minimum	ASTM D790
Modulus of elasticity	Lengthwise: 3 000 000 psi minimum Crosswise: 3 300 000 psi minimum	ASTM D790
Water absorption	<0.46% by weight within 24 hours	ASTM D570
Relative density	0.062 - 0.070 lbs/cubic inch	ASTM D792
Coefficient of linear thermal expansion	7.0×10^{-6} inch/inch/degrees F	ASTM D696
Notched Izod Pendulum Impact Resistance	Lengthwise: 160 ft lbs/inch Crosswise: 100 ft lbs/inch	ASTM D256
Barcol Hardness	45	ASTM D2583

Content declaration

The content declaration represents the content of the product with the worst case results, meaning the 6 inch girt with 6 inch rail.

Product Components	Mass, kg	Post-consumer material, mass-% of products	Biogenic material, mass-% of product	Biogenic material, kg C / declared unit
Metal	3.2E+00	12.3 %	0.0	0.0
Pigments	2.0E-02	0.0	0.0	0.0
Minerals	2.0E+00	0.0	0.0	0.0
Chemicals	5.4E-01	0.0	0.0	0.0
Plastic	7.4E-01	0.0	0.0	0.0
Total	6.4E+00	12.3 %	0.0	0.0

Packaging Materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C / declared unit
Engineered Wood Products	2.2E-02	0.34	8.3E-03
Total	2.2E-02	0.34	8.3E-03

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
-	-	-	0.00

At the date of issue of this declaration, there is no "Substance of Very High Concern" (SVHC) in concentration above 0.1% by weight, and neither does the packaging, following the European REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals)

LCA information

LCA information	
Conversion factor to mass	6.42 kg per m
Declared unit	1 m
Time representativeness	Data obtained refers to the year 2024
System Boundary	The system boundaries are set to be "cradle to gate" with the modules A1-A3, A4, A5, C1-C4, D
Excluded modules	B1, B2, B3, B4, B5, B6, B7
Database(s) and LCA software used	Eando X version 1.01
RSL	Not applicable
Characterisation factors used	The characterization factors used in this study refer to PCR 2019:14 and EN 15804+A2 (based on EF 3.1).
Allocation procedures used	Secondary material content was provided by AAP. The content was used to scale the datasets.
Cut-off rules	The use of cut-off criterion on mass inputs and primary energy at the unit process level (1%) and at the information module level (5%) was applied

Energy Breakdown

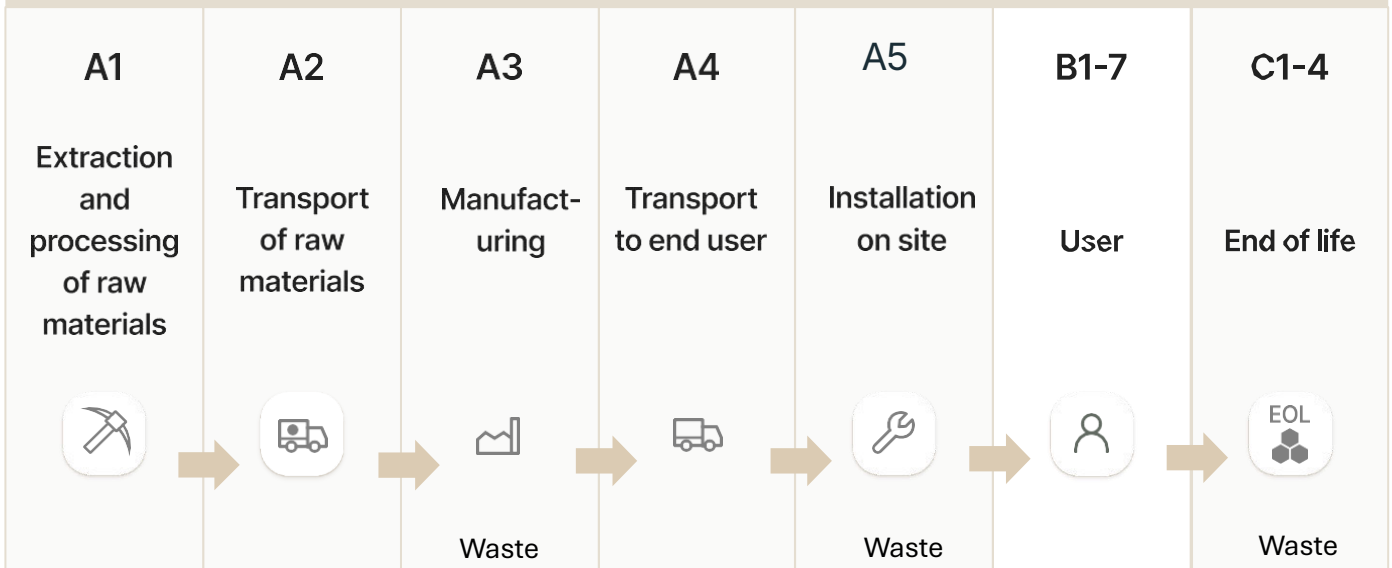
Electricity used in manufacturing

Name	Data Source	GWP-GHG [kg CO ₂ -eq/kWh]
Electricity from photovoltaic (solar/PV)	ecoinvent 3.11	5.2E-03
Electricity grid mix - United States (Michigan) (2023)	EPA (2023)	5.1E-02

Grid mix of United States (Michigan) 2023

Name	% of mix	Dataset name	Geography	Data Source
Gas	51.2	Electricity production natural gas conventional power plant	US-RFC	ecoinvent 3.11
Hard coal	25.6	Electricity production from hard coal	US-RFC	ecoinvent 3.11
Nuclear	10.2	Electricity production nuclear, pressure water reactor	US-RFC	ecoinvent 3.11
Wind	8.8	Electricity production wind, <1MW turbine, onshore	US-RFC	ecoinvent 3.11
Biomass	1.5	Electricity, high voltage biofuels, import from DE	CH	ecoinvent 3.11
Solar	1.3	Electricity production, photovoltaic, 570kWp open ground	US-RFC	ecoinvent 3.11
Oil	1.5	Electricity production, oil	US-RFC	ecoinvent 3.11

System diagram



D Benefits and loads beyond the system boundary

A1	Raw material supply	This module considers the extraction and processing of all raw materials, energy, and transportation which occur upstream to the studied manufacturing process, including packaging material.
A2	Transport to the manufacturer	The raw materials are transported to the manufacturing site.
A3	Manufacturing*	This module includes all the resources used to produce and waste produced. This also includes additives and packaging material.
A4	Transport	This module includes transportation from the manufacturing site to the distribution centre and then from the distribution centre to the building site.
	Transport Scenario	Truck: 500km
A5	Construction installation	This module covers all on-site activities required to install the product into the building structure as well as the management, transport, and treatment of any installation waste or packaging residues at the construction site.
B1-B7	Use stage	This stage is not declared.
C1	Deconstruction/ Demolition	This stage includes the de-construction and/or demolition of the building.
C2	Transport	This stage represents the transport distance to the waste processing facility, 80 km.
C3	Waste processing	This stage includes any waste treatment needed.
	EOL Scenario	Landfill 100%. Incineration 0%. Recycling 0%.
C4	Final disposal	This includes any material that is landfilled.
D	Benefits	Emission credits obtained from energy recovery and/or recycling materials.

* If purchased electricity used in the manufacturing process of module A3 accounts for more than 30% of the GWP-GHG results of modules A1-A3, the EPD shall declare the energy source behind the purchased electricity and its climate impact as kg CO2 eq./kWh. This information can be found at the end of the EPD.

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

	Product stage			Assembly stage		Use stage							End of life stage				Benefits & loads beyond system boundary
	Raw Materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	De-construction / Demolition	Transport	Waste Processing	Disposal	
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Declared	X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	US	US	US	US	US	-	-	-	-	-	-	-	US	US	US	US	US
Specific data used	10.2%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - Products	-84%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - Sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Declaration of data sources, reference years, and share of primary data:

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Manufacturing of product	Collected data	EPD owner	2024	Primary data	4.0 %
Transportation of raw materials to manufacturing site	Collected data	EPD owner	2024	Primary data	6.2
Production of metal	Collected data	Ecoinvent 3.11	2024	Representative generic data	0%
Production of pigment	Collected data	Ecoinvent 3.11	2023	Representative generic data	0%
Production of mineral	Collected data	Ecoinvent 3.11	2024	Representative generic data	0%
Production of chemical	Collected data	Ecoinvent 3.11	2024	Representative generic data	0%
Production of plastic	Collected data	Ecoinvent 3.11	2024	Representative generic data	0%
Production of packaging	Collected data	Ecoinvent 3.11	2024	5% primary data 95% generic data	0%
Total share of primary data, of GWP-GHG results A1-A3					10.2
Summary of data quality	Manufacturing data is from the most recent ended full year. Time representativeness is in summary very good for the datasets, good for technical representativeness and mostly fair for geographical, due to absence of datasets representing American conditions.				

Transport to the building site (A4)

Vehicle type	Distance (km)	Capacity utilization* (%)	Bulk density of transported products (kg/m ³)	Volume capacity utilisation factor**
Truck-Trailer 40 tonne	500	50.8	as product density	1.0
*Including empty returns **Factor: =1 or <1 or >= 1 for compressed or nested packaged products				

Installation of the product in the building (A5)

Scenario information	Unit (expressed per functional unit or per declared unit)
Ancillary materials for installation (specified by material)	None
Water use	None
Other resource use	None
Quantitative description of energy type (regional mix) and consumption during the installation process	Not applicable
Waste materials on the building site before waste processing, generated by the product's installation (specified by type)	0.022 kg Engineered Wood Products (packaging)
Output materials (specified by type) as result of waste processing at the building site e.g. of collection for recycling, for energy recovery (specified by route)	0.022 kg incineration (packaging) for incineration waste
Direct emissions to ambient air, soil and water	None

End-of-life (C1-C4)

Scenario information	Unit (expressed per functional unit or per declared unit)
C1: Collection process specified by type	6.421 kg demolition/deconstruction of steel, wood and other materials Energy carrier: Diesel. Quantity: 1.1 kWh/tonne
C2: Waste transport specified by type	6.421 kg materials not to be incinerated transported for 80 km
C3: Recovery system specified by type	0 kg for re-use
C4: Disposal specified by type	0.743 kg Plastic for final disposal 0.540 kg Chemicals for final disposal 3.155 kg Metal for final disposal 0.020 kg Pigments for final disposal 1.963 kg Minerals for final disposal
Assumptions for scenario development, e.g. transportation	The transportation is modelled with the same specifications as the truck transportation in module A4, except the transportation distance is assumed to be 80 km for materials not to be incinerated and 130 km for materials to be incinerated.

Environmental Performance

LCA results of the product(s) - main environmental performance results

Mandatory impact category indicators according to EN 15804+A2

Results per declared unit: 1 m									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	1,66E+01	6,11E-01	2,48E-02	2,52E-03	1,59E-01	0,00E+00	3,67E-01	0,00E+00
GWP-fossil	kg CO2 eq	1,65E+01	6,10E-01	3,36E-04	2,52E-03	1,59E-01	0,00E+00	2,30E-02	0,00E+00
GWP-biogenic	kg CO2 eq	-1,81E-03	7,10E-04	2,45E-02	5,80E-07	1,84E-04	0,00E+00	3,44E-01	0,00E+00
GWP-luluc	kg CO2 eq	1,13E-02	2,02E-04	1,11E-07	2,85E-07	5,26E-05	0,00E+00	1,68E-05	0,00E+00
ODP	kg CFC- 11 eq	4,91E-07	1,33E-08	7,33E-12	4,02E-11	3,46E-09	0,00E+00	5,42E-10	0,00E+00
AP	mole H+ eq	8,15E-02	1,96E-03	1,08E-06	2,34E-05	5,10E-04	0,00E+00	1,64E-04	0,00E+00
EP-freshwater*	kg P eq	6,34E-03	4,17E-05	2,30E-08	7,76E-08	1,09E-05	0,00E+00	6,03E-06	0,00E+00
EP-marine	kg N eq	1,81E-02	6,65E-04	3,66E-07	1,09E-05	1,73E-04	0,00E+00	6,14E-05	0,00E+00
EP-terrestrial	mole N eq	1,80E-01	7,19E-03	3,96E-06	1,18E-04	1,87E-03	0,00E+00	6,56E-04	0,00E+00
POCP	kg NMVOC eq	6,79E-02	2,97E-03	1,64E-06	3,48E-05	7,73E-04	0,00E+00	2,22E-04	0,00E+00
ADP-minerals & metals**	kg Sb eq	6,83E-04	2,06E-06	1,13E-09	8,80E-10	5,36E-07	0,00E+00	4,67E-08	0,00E+00
ADP-fossil**	MJ	2,63E+02	8,70E+00	4,79E-03	3,31E-02	2,26E+00	0,00E+00	5,10E-01	0,00E+00
WDP**	m3	6,53E+00	4,66E-02	2,56E-05	1,11E-04	1,21E-02	0,00E+00	2,20E-02	0,00E+00
Acronyms	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 & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption								

* The results in kg PO4 eq. can be obtained by multiplying the results in kg P eq. by a factor of 3,07.

** 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 experience with the indicator.

Use of resources

Results per declared unit: 1 m									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1,87E+01	1,41E-01	1,90E-01	1,88E-04	3,67E-02	0,00E+00	8,52E-03	0,00E+00
PERM	MJ	2,38E-01	0,00E+00	-1,90E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,89E+01	1,41E-01	7,78E-05	1,88E-04	3,67E-02	0,00E+00	8,52E-03	0,00E+00
PENRE	MJ	2,46E+02	8,70E+00	4,79E-03	3,31E-02	2,26E+00	0,00E+00	2,45E+01	0,00E+00
PENRM	MJ	2,40E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	- 2,40E+01	0,00E+00
PENRT	MJ	2,70E+02	8,70E+00	4,79E-03	3,31E-02	2,26E+00	0,00E+00	5,10E-01	0,00E+00
SM	kg	7,90E-01	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
FW	m3	1,57E-01	1,08E-03	5,96E-07	2,59E-06	2,81E-04	0,00E+00	5,14E-04	0,00E+00
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water								

Additional mandatory indicators

Results per declared unit: 1 m									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	1,66E+01	6,11E-01	3,37E-04	2,52E-03	1,59E-01	0,00E+00	3,67E-01	0,00E+00
Acronyms	GWP-GHG global warming potential - greenhouse gases								

The GWP-GHG indicator is identical to GWP-total except that the characterisation factor (CF) for biogenic CO₂ is set to zero. This means that the uptake and emissions of biogenic CO₂ are "balanced out" already in modules A1-A3, instead of in modules A1-A5 (for packaging) or modules A-C (for product). In the context of Norwegian public procurement legislation, GWP-GHG is also referred to as GWP-IOBC.

Waste flows

Results per declared unit: 1 m									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2,99E+00	8,73E-03	4,81E-06	0,00E+00	2,27E-03	0,00E+00	0,00E+00	0,00E+00
NHWD	kg	3,00E+01	9,41E-02	5,18E-05	0,00E+00	2,45E-02	0,00E+00	6,42E+00	0,00E+00
RWD	kg	1,31E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acronyms	HW Hazardous waste disposed; NHW Non-hazardous waste disposed; RW Radioactive waste disposed								

Output flows

Results per declared unit: 1 m									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
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
MFR	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	0,00E+00	0,00E+00	3,08E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	6,19E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acronyms	CRU Components for reuse; MFR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy								

Information on biogenic carbon content

Parameter	Unit	Value
Biogenic carbon content in product	kg C	0
Biogenic carbon content in accompanying packaging	kg C	8.3E-03
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Additional LCA results

Environmental impact performance from 100% scenarios

Mandatory impact category indicators according to EN 15804+A2

Results per functional unit: 1 m													
Indicator	Unit	C2 100% RC	C2 100% INC	C2 100% LF	C3 100% RC	C3 100% INC	C3 100% LF	C4 100% RC	C4 100% INC	C4 100% LF	D 100% RC	D 100% INC	D 100% LF
GWP-total	kg CO2 eq	1.59E-1	9.78E-2	1.59E-1	4.55E-1	0.00E+0	0.00E+0	0.00E+0	3.92E-2	3.67E-1	-1.28E+1	-7.41E-1	0.00E+0
GWP-fossil	kg CO2 eq	1.59E-1	9.76E-2	1.59E-1	3.50E-1	0.00E+0	0.00E+0	0.00E+0	3.87E-2	2.30E-2	-1.28E+1	-7.41E-1	0.00E+0
GWP-biogenic	kg CO2 eq	1.85E-4	1.13E-4	1.85E-4	1.05E-1	0.00E+0	0.00E+0	0.00E+0	4.73E-4	3.44E-1	-1.17E-2	0.00E+0	0.00E+0
GWP-luluc	kg CO2 eq	5.26E-5	3.24E-5	5.26E-5	5.77E-4	0.00E+0	0.00E+0	0.00E+0	6.85E-5	1.68E-5	-8.75E-3	-3.21E-5	0.00E+0
ODP	kg CFC-11 eq	3.46E-9	2.13E-9	3.46E-9	4.06E-9	0.00E+0	0.00E+0	0.00E+0	7.97E-10	5.42E-10	-4.15E-7	-3.17E-14	0.00E+0
AP	mole H+ eq	5.10E-4	3.14E-4	5.10E-4	1.82E-3	0.00E+0	0.00E+0	0.00E+0	2.16E-4	1.64E-4	-6.39E-2	-5.81E-4	0.00E+0
EP-freshwater*	kg P eq	1.08E-5	6.68E-6	1.08E-5	6.73E-5	0.00E+0	0.00E+0	0.00E+0	5.44E-6	6.03E-6	-4.63E-3	-5.44E-8	0.00E+0
EP-marine	kg N eq	1.73E-4	1.06E-4	1.73E-4	7.14E-4	0.00E+0	0.00E+0	0.00E+0	7.77E-5	6.14E-5	-1.40E-2	-1.56E-4	0.00E+0
EP-terrestrial	mole N eq	1.87E-3	1.15E-3	1.87E-3	6.10E-3	0.00E+0	0.00E+0	0.00E+0	8.22E-4	6.56E-4	-1.40E-1	-1.68E-3	0.00E+0
POCP	kg NMVOC eq	7.73E-4	4.76E-4	7.73E-4	2.04E-3	0.00E+0	0.00E+0	0.00E+0	2.98E-4	2.22E-4	-5.31E-2	-4.58E-4	0.00E+0
ADP-minerals & metals**	kg Sb eq	5.36E-7	3.30E-7	5.36E-7	2.26E-6	0.00E+0	0.00E+0	0.00E+0	9.84E-8	4.67E-8	-5.80E-4	-2.52E-9	0.00E+0
ADP-fossil**	MJ	2.26E+0	1.39E+0	2.26E+0	4.88E+0	0.00E+0	0.00E+0	0.00E+0	7.26E-1	5.10E-1	-2.06E+2	-2.28E+1	0.00E+0
WDP**	m3	1.21E-2	7.45E-3	1.21E-2	6.03E-2	0.00E+0	0.00E+0	0.00E+0	-9.36E-3	2.20E-2	-4.95E+0	-1.52E-2	0.00E+0
Acronyms	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&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption; RC = Recycling; INC = Incineration; LF = Landfill												

Use of resources

Results per functional unit: 1 m													
Indicator	Unit	C2 100% RC	C2 100% INC	C2 100% LF	C3 100% RC	C3 100% INC	C3 100% LF	C4 100% RC	C4 100% INC	C4 100% LF	D 100% RC	D 100% INC	D 100% LF
PERE	MJ	3.67E-2	2.26E-2	3.67E-2	2.13E-1	0.00E+0	0.00E+0	0.00E+0	1.22E-2	8.52E-3	0.00E+0	0.00E+0	0.00E+0
PERM	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PERT	MJ	3.67E-2	2.26E-2	3.67E-2	2.13E-1	0.00E+0	0.00E+0	0.00E+0	1.22E-2	8.52E-3	0.00E+0	0.00E+0	0.00E+0
PENRE	MJ	2.26E+0	1.39E+0	2.26E+0	2.88E+1	0.00E+0	0.00E+0	0.00E+0	2.47E+1	2.45E+1	0.00E+0	0.00E+0	0.00E+0
PENRM	MJ	0.00E+0	0.00E+0	0.00E+0	-2.40E+1	0.00E+0	0.00E+0	0.00E+0	-2.40E+1	-2.40E+1	0.00E+0	0.00E+0	0.00E+0
PENRT	MJ	2.26E+0	1.39E+0	2.26E+0	4.88E+0	0.00E+0	0.00E+0	0.00E+0	7.26E-1	5.10E-1	0.00E+0	0.00E+0	0.00E+0
SM	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-5.24E-1	0.00E+0	0.00E+0
RSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	m3	2.81E-4	1.73E-4	2.81E-4	1.40E-3	0.00E+0	0.00E+0	0.00E+0	-2.18E-4	5.14E-4	-1.19E-1	-3.14E-3	0.00E+0
Acronyms		<p>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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water</p>											

Mandatory additional indicators

Indicator	Unit	C2 100% RC	C2 100% INC	C2 100% LF	C3 100% RC	C3 100% INC	C3 100% LF	C4 100% RC	C4 100% INC	C4 100% LF	D 100% RC	D 100% INC	D 100% LF
GWP-GHG	kg CO2 eq	1.59E-1	9.78E-2	1.59E-1	4.55E-1	0.00E+0	0.00E+0	0.00E+0	3.92E-2	3.67E-1	-1.28E+1	-7.41E-1	0.00E+0
Acronyms	GWP-GHG global warming potential - greenhouse gases.												

Waste flows

Results per functional unit: 1 m													
Indicator	Unit	C2 100% RC	C2 100% INC	C2 100% LF	C3 100% RC	C3 100% INC	C3 100% LF	C4 100% RC	C4 100% INC	C4 100% LF	D 100% RC	D 100% INC	D 100% LF
HWD	kg	2.27E-3	1.40E-3	2.27E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.06E+0	-7.89E-10	0.00E+0
NHWD	kg	2.45E-2	1.50E-2	2.45E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.42E+0	-2.22E+1	-2.64E-3	0.00E+0
RWD	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.13E-5	-4.12E-3	0.00E+0
Acronyms		HW Hazardous waste disposed; NHW Non-hazardous waste disposed; RW Radioactive waste disposed											

Output flows

Results per functional unit: 1 m													
Indicator	Unit	C2 100% RC	C2 100% INC	C2 100% LF	C3 100% RC	C3 100% INC	C3 100% LF	C4 100% RC	C4 100% INC	C4 100% LF	D 100% RC	D 100% INC	D 100% LF
CRU	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	kg	0.00E+0	0.00E+0	0.00E+0	6.42E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MER	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EEE	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	4.48E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EET	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.75E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Acronyms		CRU Components for reuse; MFR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy											

Further environmental information

The products are sold in the USA, where it is sold per linear foot, not per metre. Therefore the results are shared here per linear foot. To convert from per metre to per foot multiply by 0.3048.

Mandatory impact category indicators according to EN 15804+A2

Results per declared unit: 1 foot									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	5,05E+00	1,86E-01	7,56E-03	7,69E-04	4,84E-02	0,00E+00	1,12E-01	0,00E+00
GWP-fossil	kg CO2 eq	5,04E+00	1,86E-01	1,02E-04	7,69E-04	4,83E-02	0,00E+00	7,00E-03	0,00E+00
GWP-biogenic	kg CO2 eq	-5,53E-04	2,16E-04	7,45E-03	1,77E-07	5,62E-05	0,00E+00	1,05E-01	0,00E+00
GWP-luluc	kg CO2 eq	3,44E-03	6,16E-05	3,39E-08	8,68E-08	1,60E-05	0,00E+00	5,13E-06	0,00E+00
ODP	kg CFC- 11 eq	1,50E-07	4,06E-09	2,24E-12	1,22E-11	1,06E-09	0,00E+00	1,65E-10	0,00E+00
AP	mole H+ eq	2,49E-02	5,98E-04	3,29E-07	7,13E-06	1,55E-04	0,00E+00	5,00E-05	0,00E+00
EP-freshwater*	kg P eq	1,93E-03	1,27E-05	7,00E-09	2,36E-08	3,31E-06	0,00E+00	1,84E-06	0,00E+00
EP-marine	kg N eq	5,52E-03	2,03E-04	1,12E-07	3,31E-06	5,27E-05	0,00E+00	1,87E-05	0,00E+00
EP-terrestrial	mole N eq	5,49E-02	2,19E-03	1,21E-06	3,59E-05	5,70E-04	0,00E+00	2,00E-04	0,00E+00
POCP	Kg NMVOC eq	2,07E-02	9,06E-04	4,99E-07	1,06E-05	2,36E-04	0,00E+00	6,76E-05	0,00E+00
ADP-minerals & metals**	kg Sb eq	2,08E-04	6,28E-07	3,46E-10	2,68E-10	1,63E-07	0,00E+00	1,42E-08	0,00E+00
ADP-fossil**	MJ	8,03E+01	2,65E+00	1,46E-03	1,01E-02	6,89E-01	0,00E+00	1,56E-01	0,00E+00
WDP**	m3	1,99E+00	1,42E-02	7,81E-06	3,39E-05	3,69E-03	0,00E+00	6,70E-03	0,00E+00
Acronyms	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 & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption								

* The results in kg PO4 eq. can be obtained by multiplying the results in kg P eq. by a factor of 3,07.

** 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 experience with the indicator.

Use of resources

Results per declared unit: 1 foot									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	5,69E+00	4,31E-02	5,80E-02	5,74E-05	1,12E-02	0,00E+00	2,60E-03	0,00E+00
PERM	MJ	7,24E-02	0,00E+00	-5,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	5,77E+00	4,31E-02	2,37E-05	5,74E-05	1,12E-02	0,00E+00	2,60E-03	0,00E+00
PENRE	MJ	7,51E+01	2,65E+00	1,46E-03	1,01E-02	6,89E-01	0,00E+00	7,46E+00	0,00E+00
PENRM	MJ	7,30E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-7,30E+00	0,00E+00
PENRT	MJ	8,24E+01	2,65E+00	1,46E-03	1,01E-02	6,89E-01	0,00E+00	1,56E-01	0,00E+00
SM	kg	2,41E-01	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
FW	m3	4,80E-02	3,30E-04	1,82E-07	7,91E-07	8,57E-05	0,00E+00	1,57E-04	0,00E+00
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water								

Additional mandatory indicators

Results per declared unit: 1 foot									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	5,06E+00	1,86E-01	1,03E-04	7,69E-04	4,84E-02	0,00E+00	1,12E-01	0,00E+00
Acronyms	GWP-GHG global warming potential - greenhouse gases								

Waste flows

Results per declared unit: 1 foot									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	9,13E-01	2,66E-03	1,47E-06	0,00E+00	6,92E-04	0,00E+00	0,00E+00	0,00E+00
NHWD	kg	9,14E+00	2,87E-02	1,58E-05	0,00E+00	7,45E-03	0,00E+00	1,96E+00	0,00E+00
RWD	kg	3,99E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acronyms	HW Hazardous waste disposed; NHW Non-hazardous waste disposed; RW Radioactive waste disposed								

Output flows

Results per declared unit: 1 foot									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
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
MFR	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	0,00E+00	0,00E+00	9,37E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	1,89E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acronyms	CRU Components for reuse; MFR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy								

Information on biogenic carbon content

Parameter	Unit	Value
Biogenic carbon content in product	kg C	0
Biogenic carbon content in accompanying packaging	kg C	2.5E-03
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Additional information

The product has a Declare Label and a Red List free certification

The Declare Label can be found on the ILFI website: <https://declare.living-future.org/products/greengirt>

Link to approval letter for the Red List Free certification: https://greengirt.com/search-results/?search_listings=red+list

Disclaimers

ILCD classification	Indicator	Disclaimer
ILCD Type 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
ILCD Type 2	Acidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	None
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	None
	Formation potential of tropospheric ozone (POCP)	None
ILCD Type 3	Abiotic depletion potential for non-fossil resources (ADP-minerals & metals)	1
	Abiotic depletion potential for fossil resources (ADP-fossil)	1
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	1
Disclaimer 1 – 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 experience with the indicator.		
Note 1: 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.		
Note 2: The results presented for modules A1-A3 alone shall not be used for comparisons unless all relevant life cycle stages, particularly end-of-life (C1-C4), are included. This ensures a more accurate and representative environmental impact assessment over the full product life cycle.		

Abbreviations

General Abbreviations

EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative

Environmental Impact Indicators (EN 15804)

GHG	Greenhouse gas
GWP	Global Warming Potential (kg CO ₂ eq.)
GWP-fossil	Global Warming Potential from fossil sources (kg CO ₂ eq.)
GWP-biogenic	Global Warming Potential from biogenic sources (kg CO ₂ eq.)
GWP-luluc	Global Warming Potential from land use and land use change (kg CO ₂ eq.)
GWP-total	Total Global Warming Potential (kg CO ₂ eq.)
GWP-GHG	Global Warming Potential for greenhouse gases (kg CO ₂ eq.)
ODP	Ozone Depletion Potential (kg CFC-11 eq.)
AP	Acidification Potential (mol H ⁺ eq.)
EP	Eutrophication Potential
EP-freshwater	Freshwater eutrophication potential (kg P eq.)
EP-marine	Marine eutrophication potential (kg N eq.)
EP-terrestrial	Terrestrial eutrophication potential (mol N eq.)
POCP	Photochemical Ozone Creation Potential (kg NMVOC eq.)
ADP	Abiotic Depletion Potential
ADP-minerals&metals	Abiotic depletion potential for non-fossil resources (kg Sb eq.)
ADP-fossil	Abiotic depletion potential for fossil resources (MJ)
WDP	Water Deprivation Potential (m ³)

Resource Use Indicators

PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)
PERM	Use of renewable primary energy resources used as raw materials (MJ)
PERT	Total use of renewable primary energy resources (MJ)
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)
PENRM	Use of non-renewable primary energy resources used as raw materials (MJ)
PENRT	Total use of non-renewable primary energy resources (MJ)
SM	Use of secondary material (kg)
RSF	Use of renewable secondary fuels (MJ)
NRSF	Use of non-renewable secondary fuels (MJ)
FW	Use of net fresh water (m ³)
Waste Indicators	
HW	Hazardous Waste (disposed) (kg)
NHW	Non-Hazardous Waste (disposed) (kg)
RW	Radioactive Waste (disposed) (kg)

Output Flow Indicators

CFR	Components for Reuse (kg)
MR	Material for Recycling (kg)
MER	Materials for Energy Recovery (kg)
EEE	Exported Energy, Electricity (MJ)
EET	Exported Energy, Thermal (MJ)

Lifecycle Stages / Modules

A1	Raw material supply
A2	Transport
A3	Manufacturing
A4	Transport to site
A5	Construction/Installation
B1	Use
B2	Maintenance
B3	Repair
B4	Replacement
B5	Refurbishment
B6	Operational energy use
B7	Operational water use
C1	Deconstruction/Demolition
C2	Transport to waste processing
C3	Waste processing
C4	Disposal
D	Reuse-Recovery-Recycling potential

Other Relevant Terms

SVHC	Substances of Very High Concern
EC No.	European Community Number
CAS No.	Chemical Abstracts Service Number
MJ	Megajoule
kg	Kilogram
m ³	Cubic Meter
NMVOC	Non-Methane Volatile Organic Compounds
Sb eq.	Antimony Equivalents
P eq.	Phosphorus Equivalents
N eq.	Nitrogen Equivalents
CFC-11 eq.	Chlorofluorocarbon-11 Equivalents
CO ₂ eq.	Carbon Dioxide Equivalents
kg C	Kilograms of Carbon
kg CO ₂ eq.	Kilograms of Carbon Dioxide Equivalent
ND	Not Declared
...	

List of References and Sources

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- ISO 14020:2000 Environmental labels and declarations — General principles
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- ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines
- EN 15804:2012+A2:2019- Sustainability of construction works - Environmental product declaration - Core rules for the product category of construction products.
- Statistical Review of World Energy (2024) [<https://www.energyinst.org/statistical-review>] (Retrieved 2024-08-13)
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Version history

Version 1 2025-09-05 Original EPD

Contact Info

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