Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 and ISO 21930:2017 for:

Raw Aluminum Profiles

from

Schluter Systems

Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB; EPD is registered through aligned regional hub: EPD North America (www.epdna.com)
Licensee:	EPD North America
Type of EPD:	EPD of multiple products from a company
EPD registration number:	EPD-IES-0033563:002
Version date:	2026-07-31
Validity date:	2031-07-31 *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*

This EPD covers multiple products based on a representative product. The complete list of products is available in the product information section of this EPD.

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
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 Construction products, version 2.0.1
PCR review was conducted by: 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. Rob Rouwette (chair), Noa Meron (co-chair)

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: Stephen Forson, ViridisPride Ltd. 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: Schluter Systems

Address: Schluter-Systems, 194 Pleasant Ridge Rd, Plattsburgh, NY 12901, United States

Contact: Kali Pharand, kpharand@schluter.com

Address and contact information of the LCA practitioner commissioned by the EPD owner:
Gaëlle Guillaume and Srikrishna Sai Chitakana, WAP Sustainability
info@wapsustainability.com

Description of the organisation: Schluter-Systems has its headquarters in Iserlohn, Germany. In Europe, there are also subsidiaries in France, Italy, Spain, Turkey, and England. Many other countries are served by sales representatives. In North America, Schluter Systems has four locations: Plattsburgh, New York; Reno, Nevada; Dallas-Fort Worth, Texas; and Montréal, Québec. Schluter-Systems KG is dedicated to creating innovative solutions for the tile industry, and working closely with its network of distributors, dealers, tile contractors, architects, specifiers and other members of the building and construction industry.

Location of production sites: Iserlohn, Germany and Plattsburgh, New York, USA

PRODUCT INFORMATION

Product name: Raw aluminum profiles

Product identification: CSI division 09 30 50, UN CPC 41532

Product description: Ceramic and stone tiles are ideal floor coverings due to their durability and aesthetic appeal. Schluter®-Systems offers an extensive line of finishing and edge-protection profiles in a variety of shapes, colors, patterns, sizes, and materials, allowing for limitless design possibilities and practical alternatives to traditional trim.
Schluter profiles serve multiple purposes: they protect tile edges from cracking and chipping, eliminate the need for caulking at transitions, and ensure clean, professional finishes between adjacent floor and wall coverings. Integrated into the tile assembly, they can also enhance visual appeal — adding bold accents or subtle detailing — while supporting the long-term durability of the installation. Schluter profiles are available in a wide range of sizes to match common tile thicknesses, from 3/16" (4.5 mm) up to 1" (25 mm) or more, depending on the product line. This ensures a proper fit with virtually any tile type or application, whether it's a low-profile backsplash or a heavy-duty commercial floor.
The profiles are constructed from raw aluminum extrusion suited to both aesthetic and performance needs.
A reference product, Schluter®-SCHIENE, SCHIENE, A100, was chosen to represent the raw aluminum profile portfolio for this EPD. For more information about this product, please visit the product page on Schlüter Systems's website.

Item	Schluter®-SCHIENE, SCHIENE, A100	Units
Color/surface	Aluminum	-
Length	2.5	m
Gross weight	0.237	kg

List of products covered by the EPD:

Schluter®-DECO	DECO	A80D
Schluter®-DECO	DECO	BW80D
Schluter®-DECO	DECO	MBW80D
Schluter®-DECO	DECO	MGS80D
Schluter®-RENO	RENO-TK	ATK80
Schluter®-RENO	RENO-V	AVT80B20/100
Schluter®-RENO	RENO-V	AVT100B20/100
Schluter®-Schiene	SCHIENE	A80
Schluter®-Schiene	SCHIENE	A90
Schluter®-Schiene	SCHIENE	A100
Schluter®-Schiene	SCHIENE	A110
Schluter®-Schiene	SCHIENE	A125
Schluter®-Schiene	SCHIENE-V	A125V
Schluter®-Schiene	SCHIENE-BASIC	ABS100/300
Schluter®-Schiene	SCHIENE-BASIC	ABS110
Schluter®-Schiene	SCHIENE-BASIC	ABS110/300
Schluter®-Schiene	SCHIENE-BASIC	ABS125/300

CONTENT DECLARATION

A reference product, Schluter®-SCHIENE, SCHIENE, A100, was chosen to represent the raw aluminum profile portfolio for this EPD.

No substances included in the Candidate List of Substances of Very High Concern for authorization under REACH Regulations are present in Schluter Systems membranes, either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt./wt).

Product content	Mass, kg	Post-consumer recycled material, mass-% of product	Pre-consumer recycled material, mass-% of product	Biogenic material, mass-%, kg C per functional unit
Aluminum	2.37E-01	28%	32%	0%, 0.00E+00
TOTAL	**2.37E-01**	**28%**	**32%**	**0%, 0.00E+00**

Some variability may be present in the recycled content figures provided due to the dynamics of the global aluminium scrap market.

Packaging materials	Mass, kg	Mass-% (versus product)	Post-consumer recycled material, mass-% of packaging	Biogenic material, kg C per functional unit
Cardboard	2.19E-02	9.2%	0%	9.42E-03
Wrapping foil	1.03E-06	<0.1%	0%	0.00E+00
Graphic paper	6.58E-04	<0.1%	0%	2.83E-04
Film packaging	3.46E-03	1.4%	0%	0.00E+00
XPS packaging	2.02E-05	<0.1%	0%	0.00E+00
Thermal printing foil	6.83E-05	<0.1%	0%	0.00E+00
TOTAL	**2.61E-02**	**11%**	**0%**	**9.70E-03**

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO_2.

LCA INFORMATION

Functional unit: Provide protection and finishing tile edge trim for 2.5 meter of floor and wall over 75 years

Reference flow: One profile of 2.5 meters (2.5 m) installed for 75 years

Conversion factor to mass: 0.0948 kg/m

Reference service life: 75 years

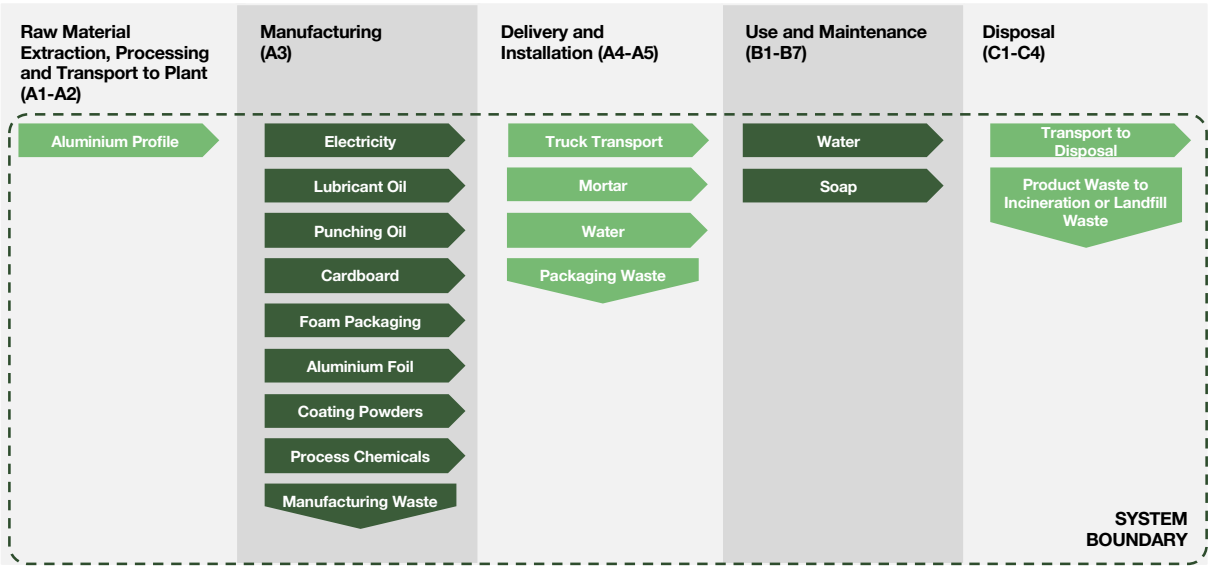
Time representativeness: Primary data were provided by the manufacturer and represent all information for calendar year 2024.

Geographical scope: Europe, North America (A1, A2); Germany, United States (A3); North America (A4-A5, B1-B7, C1-C4, D)

Database(s) and LCA software used: MLC (Managed LCA Content) database 2025.2 and LCA FE (Life Cycle Assessment for Experts) 10.9.2 software.

Description of system boundaries: Cradle-to-grave with module D

Process flow diagram:



Manufacturing:
The raw aluminum profiles are purchased from domestic or regional suppliers. These profiles arrive in their final extruded shape (e.g., L-shaped, square, or rounded). The extruded profiles are shipped by truck, rail, or ocean freight from suppliers to the client's manufacturing facility. This includes all logistics involved in delivering the finished profiles to storage areas on site.
Profiles are received and stored at the Schluter Systems manufacturing site until production. All profiles undergo punching to add holes or functional features needed for installation. The profiles are labelled, picked, and packaged for distribution to customers.

Electricity:
Energy resources used in the manufacturing process are accounted in the model.

For the facility located in Iserlohn, Germany, the electricity is sourced from a directly connected supplier, and no onsite electricity generation is used. Electricity for A3 uses the electricity provider information for Schluter Systems supplying 100% hydropower to the Iserlohn manufacturing site. A proxy data representing hydropower has been used to represent this power source which conforms to the requirements of the Construction Products PCR v2.0.1 (EPD International, 2025).
The emissions associated with the electricity used (100% hydropower) in the LCA are 8.69E-03 kg CO_2 eq per kWh using the GWP-GHG impact assessment methodology.

For the facility located in Plattsburgh, NY, the electricity is sourced from the power grid, and no onsite electricity generation is used. Regional residual grid mix datasets from MLC are used to assess the generation, distribution, and transmission of electricity. No other energy resources are used.
The emissions associated with the electricity used (residual mix – NYUP) in the LCA are 2.66E-01 kg CO_2 eq per kWh using the GWP-GHG impact assessment methodology.

Cut-off Criteria:
Cumulative excluded material inputs, energy inputs, and environmental impacts must not exceed 5% based on total weight, energy use, or environmental impact of the declared unit. Inputs or outputs greater than 1% (based on total mass of the final product) were included within the scope of analysis. Material inputs less than 1% were included if sufficient data was available to warrant inclusion and/or the material input was thought to have significant environmental impact. Cumulative excluded material inputs and environmental impacts are less than 5% based on total weight and impact of the declared unit. The list of excluded inputs include:

- As the tools used during the installation of the product are multi-use tools and can be reused after each installation, the per-declared unit impacts are considered negligible and therefore are not included.
- 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.

Allocation:
General principles of allocation were based on ISO 14040/44 and the requirements from EN 15804+A2 (CEN, 2019). Aluminum scrap is also generated at the Iserlohn alongside the profiles and is considered a co-product that can be used in subsequent product systems. As such an economic allocation approach was applied. However, the economic value of that scrap is assumed to be $0.
To derive a per-unit value for manufacturing inputs such as electricity, thermal energy, and water, allocation based on total production by mass was adopted.
As a default, secondary MLC datasets use a physical basis for allocation. Additionally, impacts and benefits associated with secondary functions of materials at end of life are included (i.e., production into a third life or energy generation from the incineration plant).

Production impacts of machines, facilities and infrastructure/capital goods are excluded. Infrastructure impacts for electricity production were included as modelled in the Sphera secondary datasets.

Data Sources:
Primary data were used where available, including supplier data for raw materials used in the production process. When primary data does not exist, secondary data for raw material production are obtained from the MLC database.

Data Quality:
Data quality follows the schema defined by the UN Environment Global Guidance on LCA database development, per Annex E of EN15804+A2.

Geographical Coverage:
The geographical scope of the manufacturing portion of the life cycle is Germany. The geographical scope of the raw material acquisition is Europe. Customer distribution, site installation, and use portions of the life cycle is within Europe.

Time Coverage:
The temporal scope is production during calendar year 2024 (January 2024 – December 2024).

Technological Coverage:
The technological scope is the specific technology the company uses in manufacturing their product.

Post-Factory Gate Scenario Development

A4 (Delivery to Installation Site) Scenario Per Functional Unit
The product is delivered to the Schluter Systems distribution centers in the United States. It originates from the manufacturing sites in Iserlohn (through truck and ship transportation) and Plattsburgh (through truck transportation). Transportation averages are calculated based on sales records. Empty backhauls have been considered for transportation as per the PCR requirements.

Distribution Details	European Truck	International Ship	North American Truck
Vehicle Type	Truck-trailer, Euro mix, 20 - 28t gross weight / 27t payload capacity	Bulk commodity carrier, 1,000 to 250,000 dwt payload capacity, deep sea	Truck – Heavy heavy diesel truck / 53,333 lb payload – 8b
Fuel Efficiency [L/100km]	56.2	10,056	42
Fuel Type	Diesel	Heavy fuel oil	Diesel
Distance [km]	6.71	137.32	736.43
Capacity Utilization [%]	53%	53%	67%
Weight of Products Transported [kg]	2.37E-01	2.37E-01	2.37E-01
Capacity utilization volume factor	1	1	1

A5 (Construction) Scenario Per Functional Unit
Ancillary installation materials are required, as indicated in the table below. However, the manufacturing of the installation equipment is not included in the study as these are multi-use tools and the impacts per declared unit are considered negligible. Packaging and installation waste disposal have been modelled as per guidelines in the PCR. The profile is embedded to the surface using grout (a mixture of water and mortar).

Construction Phase End of Life Fate	Value
Mortar (kg)	5.52E-02
Net Freshwater Consumption (kg)	1.09E-02
Product wastage (%)	0%
Waste materials at the construction site before waste processing, generated by product installation (kg)	2.61E-02
Product Waste to Incineration (kg)	0.00E+00
Product Waste to Landfill (kg)	0.00E+00
Packaging Waste to Landfill (kg)	5.94E-03
Packaging Waste to Incineration (kg)	1.43E-03

Construction Phase End of Life Fate	Value
Packaging Waste to Recycling (kg)	1.87E-02
Biogenic carbon content of packaging (kg CO_2)	3.56E-02

The product should be installed according to the manufacturer's instructions found at Schluter-Systems product pages for aluminum profiles North America and E.U.

B1-B7 (Use) Scenario Per Functional Unit

This stage contains all the energy, water, and materials related to the use of the product, including cleaning, maintenance, and replacements. The profile does not require any inputs or energy for maintenance or use. Once installed, it lies between tile flooring indefinitely.

This profile typically remains in place for 75 years, equal to the building estimated life and generally doesn't need to be replaced unless they are damaged or not installed as per manufacturer guidelines.

C1-C4 (Product End of Life) Scenario Per Declared Unit
In this stage, the product is transported to the end-of-life facility and disposed.
During deconstruction (module C1), the profile is removed from the mortar. The separated profile is sent to recycling (100% recycling). The table below shows the parameters for the end-of-life scenario utilized in the model. All waste has been classified according to the PCR and regional standards.

End-of-Life Process Details	Value per Functional Unit
Diesel for demolition of steel or aluminium (kWh)	2.61E-06
Collected as mixed construction waste (kg)	2.37E-01
Waste to recycling (kg)	2.37E-01
Distance to recycling (km)	8.00E+01
Electricity for waste processing (kWh)	5.21E-04
Diesel for waste processing (kWh)	5.69E-04

Module D (Benefits and Loads Beyond the System Boundary) Scenario Per Functional Unit
Module D calculates the environmental benefits or loads from reusing products, recycling materials, and producing energy from end-of-life options. Only those flows leaving the product system that have not been allocated as co-products and have passed the end-of-waste state are included within module D. For aluminum profiles, these credits are calculated on the portion of aluminum not derived from recycled sources, in accordance with the methodology recommended by EN 15804+A2 (CEN, 2019). These credits are equal to the difference between the cradle-to-gate footprints of primary aluminum production and scrap recycling.

Modules declared, geographical scope, share of primary data and data variation (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 and 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	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	EU / RNA	DE / US	DE / US	RNA	RNA	RNA	RNA	RNA	RNA	RNA	RNA	RNA	RNA	RNA	RNA	RNA	RNA
Share of primary data	9%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	-7% / 10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	85%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Process	Source type	Source	Reference year	Data category	Overall data quality level according to EN 15941	Share of primary data, of GWP-GHG results for A1-A3
Generation of electricity used in manufacturing of product	Database	Sphera MLC	2024	Primary data	Very good	<!%
Transport of aluminum to manufacturing site	Database	Sphera MLC	2024	Primary data	Very good	<1%
Production of aluminum	EPD	Confidential	2024	Primary data, secondary data	Very good	9%
Production of packaging	EPD	Sphera MLC	2024	Primary data, secondary data	Good	0%
Other processes	Databases	Sphera MLC	2014–2024	Secondary data	Good	0%
Total share of primary data, of GWP-GHG results for A1-A3						9%

The 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.
The reported share of primary data is associated with uncertainty, as EPDs used as data source lack information on the share of primary data.
The overall data quality provided summarizes the geographical, technical, and temporal representativeness of the data used in the LCA according to EN 15941. No poor or very poor quality data was used in this LCA.

ENVIRONMENTAL PERFORMANCE

LCA results of the products - main environmental performance results

Mandatory impact category indicators according to EN 15804

Results per functional unit																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	2.20E+00	1.69E-01	4.62E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-05	2.11E-03	7.45E-04	0.00E+00	-2.46E-01
GWP-fossil	kg CO_2 eq.	2.24E+00	1.69E-01	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-05	2.11E-03	2.85E-04	0.00E+00	-2.46E-01
GWP-biogenic	kg CO_2 eq.	-4.17E-02	0.00E+00	4.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E-04	0.00E+00	0.00E+00
GWP-luluc	kg CO_2 eq.	3.09E-04	9.80E-05	4.21E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-08	1.13E-06	6.45E-07	0.00E+00	-3.54E-05
ODP	kg CFC 11 eq.	3.68E-10	3.98E-14	6.63E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-17	5.04E-16	2.00E-15	0.00E+00	-1.77E-13
AP	mol H^+ eq.	7.94E-03	9.53E-04	1.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.64E-08	1.02E-05	4.52E-07	0.00E+00	-1.40E-03
EP-freshwater	kg P eq.	3.17E-06	3.05E-07	1.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-10	3.86E-09	4.24E-10	0.00E+00	-6.44E-08
EP-marine	kg N eq.	1.06E-03	4.77E-04	2.78E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-08	5.10E-06	1.12E-07	0.00E+00	-1.53E-04
EP-terrestrial	mol N eq.	1.15E-02	5.23E-03	4.94E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-07	5.58E-05	1.19E-06	0.00E+00	-1.66E-03
POCP	kg NMVOC eq.	3.29E-03	9.67E-04	8.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-08	9.82E-06	3.10E-07	0.00E+00	-4.74E-04
ADP-minerals&metals*	kg Sb eq.	3.68E-07	2.59E-08	8.63E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-11	3.28E-10	5.76E-11	0.00E+00	-3.98E-08
ADP-fossil*	MJ	2.04E+01	2.17E+00	2.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	2.75E-02	6.43E-03	0.00E+00	-2.36E+00
WDP*	m^3	3.16E-01	2.37E-03	5.24E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-06	3.01E-05	5.32E-05	0.00E+00	-5.05E-02
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															

** 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.*
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 product stage (modules A1-A3). Biogenic carbon leaving the product system in module A5 has been balanced out already in modules A1-A3. The use of the results of modules A1-A3 without considering the results of module C is discouraged.

Additional mandatory and voluntary impact category indicators

Results per functional unit																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PM	disease inc.	1.26E-07	9.79E-09	1.27E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E-13	5.30E-11	4.25E-12	0.00E+00	-2.26E-08
IRP	kBq U235 eq.	3.60E-02	6.23E-04	3.29E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-07	7.90E-06	3.40E-05	0.00E+00	-5.70E-03
ET	CTUe	2.03E+01	1.57E+00	3.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E-04	1.98E-02	2.45E-03	0.00E+00	-3.71E+00
HTP-c	CTUh	4.40E-09	3.99E-11	5.18E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-14	3.15E-13	6.05E-14	0.00E+00	1.05E-09
HTP-nc	CTUh	3.49E-08	8.00E-10	1.92E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.92E-13	9.96E-12	1.36E-12	0.00E+00	-6.74E-09
LU	Pt	6.05E+00	3.23E-01	4.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-04	4.07E-03	7.82E-04	0.00E+00	-5.35E-02
GWP-GHG[1]	kg CO_2 eq.	2.24E+00	1.69E-01	7.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-05	2.11E-03	2.86E-04	0.00E+00	-2.46E-01
Acronyms	PM = particulate matter; IRP = Ionizing radiation, human health; ET = Ecotoxicity, freshwater; HTP-c = Human toxicity, cancer; HTP-nc = Human toxicity, non-cancer; LU = Land use; GHG = greenhouse gas															

Resource use indicators

Results per functional unit																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	3.81E+01	3.61E-01	1.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-04	4.57E-03	5.32E-03	0.00E+00	-6.67E+00
PERM[2]	MJ	9.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	9.54E+00	9.03E-02	4.12E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-05	1.14E-03	1.33E-03	0.00E+00	-1.67E+00
PENRE	MJ	8.08E+01	8.68E+00	8.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.27E-03	1.10E-01	2.57E-02	0.00E+00	-9.43E+00
PENRM[2]	MJ	3.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	2.04E+01	2.17E+00	2.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	2.75E-02	6.43E-03	0.00E+00	-2.36E+00
SM	kg	1.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.14E-01	3.89E-04	5.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-07	4.93E-06	6.67E-06	0.00E+00	-2.08E-02
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															

[1] This 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 CO_2 is set to zero.

[2] The primary energy resources used as raw materials were calculated by multiplying the mass of each material of the product and packaging content with the lower calorific value (MJ/kg) of the material. Specifically, option B within Annex 3 of the PCR (EPD International, 2022) was utilized for these calculations, whereby the energy used as raw material is declared as an input to the module where it enters the product system and as an output from the product system if it exits the product system as useful energy.

Waste and output flow indicators

Results per functional unit																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1.51E-03	1.44E-09	2.84E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.98E-13	1.82E-11	1.16E-11	0.00E+00	1.02E-05
Non-hazardous waste disposed	kg	2.06E+00	8.89E-04	2.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-07	1.12E-05	6.75E-06	0.00E+00	-3.83E-01
Radioactive waste disposed	kg	3.71E-04	7.43E-06	3.32E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-09	9.43E-08	4.10E-07	0.00E+00	-3.34E-05
Components for re-use	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	2.27E-01	0.00E+00	1.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-01	0.00E+00	0.00E+00
Materials for energy recovery	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	6.47E-05	0.00E+00	1.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	1.19E-04	0.00E+00	2.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

ADDITIONAL LCA RESULTS

Mandatory impact category indicators according to ISO 21930

Results per functional unit																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWPexcl	kg CO_2 eq.	2.24E+00	1.69E-01	7.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-05	2.11E-03	2.85E-04	0.00E+00	-2.46E-01
GWPincl	kg CO_2 eq.	2.20E+00	1.70E-01	9.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	2.11E-03	2.80E-04	0.00E+00	-2.46E-01
AP	kg SO_2 eq.	1.22E-02	8.86E-04	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-08	9.48E-06	3.87E-07	0.00E+00	-1.15E-03
EP	kg N eq.	2.74E-04	6.68E-05	2.06E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E-09	7.36E-07	4.25E-08	0.00E+00	-2.59E-05
ODP	kg CFC 11 eq.	3.68E-10	7.56E-15	2.36E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-18	9.59E-17	4.84E-17	0.00E+00	-3.76E-15
SFP	kg O_3 eq.	1.09E-01	2.03E-02	1.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.35E-07	2.16E-04	6.12E-06	0.00E+00	-9.58E-03
ADPf	MJ	2.44E+01	2.15E+00	1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-03	2.72E-02	5.28E-03	0.00E+00	-2.27E+00
Acronyms	GWPincl = Global Warming Potential including biogenic carbon; GWPexcl = Global Warming Potential excluding biogenic carbon; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential; EP = Eutrophication potential; SFP = Smog formation potential; ADPf = Abiotic depletion potential for fossil resources.															

Resource use indicators according to ISO 21930

Results per functional unit																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	3.81E+01	3.61E-01	1.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-04	4.57E-03	5.32E-03	0.00E+00	-6.67E+00
PERM[2]	MJ	9.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	8.08E+01	8.68E+00	8.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.27E-03	1.10E-01	2.57E-02	0.00E+00	-9.43E+00
PENRM[3]	MJ	3.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SM	kg	1.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.14E-01	3.89E-04	5.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-07	4.93E-06	6.67E-06	0.00E+00	-2.08E-02

[3] The primary energy resources used as raw materials were calculated by multiplying the mass of each material of the product and packaging content with the lower calorific value (MJ/kg) of the material. Specifically, option B within Annex 3 of the PCR (EPD International, 2022) was utilized for these calculations, whereby the energy used as raw material is declared as an input to the module where it enters the product system and as an output from the product system if it exits the product system as useful energy.

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; 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; SM = Use of secondary material; RSF = Use of renewable secondary fuels; RE = Recovered energy; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

Waste and output flow indicators according to ISO 21930

Results per functional unit																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1.51E-03	1.44E-09	2.84E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.98E-13	1.82E-11	1.16E-11	0.00E+00	1.02E-05
Non-hazardous waste disposed	kg	2.06E+00	8.89E-04	2.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-07	1.12E-05	6.75E-06	0.00E+00	-3.83E-01
High-level radioactive waste disposed	kg	3.10E-07	8.83E-09	3.64E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-12	1.12E-10	4.89E-10	0.00E+00	-2.75E-08
Intermediate and low-level radioactive waste disposed	kg	2.75E-04	7.42E-06	3.31E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-09	9.42E-08	4.09E-07	0.00E+00	-3.34E-05
Components for re-use	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	2.27E-01	0.00E+00	1.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-01	0.00E+00	0.00E+00
Materials for energy recovery	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	6.47E-05	0.00E+00	1.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional mandatory indicators according to ISO 21930

Results per functional unit																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
BCRP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	6.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEK	kg CO_2	3.29E-02	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acronyms	BCRP = Biogenic carbon removals from product; BCEP = Biogenic carbon emissions from product; BCRK = Biogenic carbon removals from packaging; BCEK = Biogenic carbon emissions 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															

Additional LCA results of the products

This EPD covers several raw aluminum profile products and does claim compliance with ISO 21930; therefore, variations are within the acceptable 10% threshold. The variation across all environmental categories across the full life cycle (A-C) are within -7% and 10%. These variations are expected, as the profiles are available in many different designs. The weight of the profiles can vary due to design-specific punching and the presence of perforation. Despite these differences, the products have similar characteristics in terms of raw material, manufacturing processes, and intended applications. For these reasons, grouping these profiles under one EPD was considered appropriate.

The table below additional LCA results for the product range covered by this EPD. It shows the minimum and maximum results, corresponding respectively to the lowest-weight and highest-weight profiles for a functional unit of 2.5 meters. The representative product shown in the table is the reference product for which detailed results are presented earlier in the body of the EPD.

LCA result of one functional unit (A-C)	Unit	Min (0.220 kg)	Representative (0.237 kg)	Max (0.263 kg)
GWP-fossil	kg CO_2 eq.	2.24E+00	2.42E+00	2.68E+00
GWP-biogenic	kg CO_2 eq.	3.12E-17	3.37E-17	3.74E-17
GWP-luluc	kg CO_2 eq.	3.83E-04	4.13E-04	4.58E-04
GWP-total	kg CO_2 eq.	2.24E+00	2.42E+00	2.68E+00
ODP	kg CFC 11 eq.	3.41E-10	3.68E-10	4.08E-10
AP	mol H^+ eq.	8.28E-03	8.92E-03	9.90E-03
EP-freshwater	kg P eq.	3.33E-06	3.59E-06	3.98E-06
EP- marine	kg N eq.	1.43E-03	1.54E-03	1.71E-03
EP-terrestrial	mol N eq.	1.56E-02	1.68E-02	1.87E-02
POCP	kg NMVOC eq.	3.97E-03	4.28E-03	4.75E-03
ADP-minerals&metals	kg Sb eq.	3.67E-07	3.95E-07	4.38E-07
ADP-fossil	MJ	2.10E+01	2.26E+01	2.51E+01
WDP	m^3	2.96E-01	3.19E-01	3.54E-01

ADDITIONAL ENVIRONMENTAL INFORMATION

Environmental Activities and Certifications

Schluter's raw aluminum profiles have the following certifications:

- Red List free
- VOC Certificate
- HPD

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
CPC	Central product classification
DE	Germany
EF	Environmental Footprint
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EU	European Union
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
MLC	Managed Lifecycle Content
ND	Not Declared
PCR	Product Category Rules
RNA	Region North America
US	United States

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VERSION HISTORY

Original Version of the EPD, 2026-07-31

NORTH AMERICA EPD

INTERNATIONAL EPD SYSTEM

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