Environmental Product Declaration (EPD)
According to ISO 14025 and EN 15804+A2:2019

Sanitary partitions made of glass

Registration number:	EPD-Kiwa-EE-237069-EN
Issue date:	18-05-2026
Valid until:	18-05-2031
Declaration owner:	Schäfer Trennwandsysteme GmbH
Publisher:	Kiwa-Ecobility Experts
Programme operator:	Kiwa-Ecobility Experts
Status:	verified

1 General information

1.1 PRODUCT

Sanitary partitions made of glass

1.2 REGISTRATION NUMBER

EPD-Kiwa-EE-237069-EN

1.3 VALIDITY

Issue date: 18-05-2026

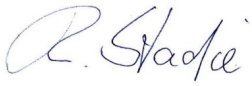
Valid until: 18-05-2031

1.4 PROGRAMME OPERATOR

Kiwa-Ecobility Experts
Wattstraße 11-13
13355 Berlin
DE

Raoul Mancke

(Head of programme operations, Kiwa-Ecobility Experts)



Dr. Ronny Stadie

(Verification body, Kiwa-Ecobility Experts)

1.5 OWNER OF THE DECLARATION

Declaration owner: Schäfer Trennwandsysteme GmbH

Address: Industriepark 37, 56593 Horhausen, Germany

E-mail: info@schaefer-tws.de

Website: www.schaefer-tws.de

Production location: Schäfer Trennwandsysteme GmbH

Address production location: Industriepark 37, 56593 Horhausen, Germany

1.6 VERIFICATION OF THE DECLARATION

The independent verification is in accordance with the ISO 14025:2011. The LCA is in compliance with ISO 14040:2006 and ISO 14044:2006. The EN 15804+A2:2019 serves as the core PCR.

☐ Internal ☒ External

Lucas Pedro Berman, Senda

1.7 STATEMENTS

The owner of this EPD shall be liable for the underlying information and evidence. The programme operator Kiwa-Ecobility Experts shall not be liable with respect to manufacturer data, life cycle assessment data and evidence.

1.8 PRODUCT CATEGORY RULES

Kiwa-EE GPI R.3.0 (2025)
Kiwa-Ecobility Experts, General Programme Instructions “Product Level”, SOP EE 1201_R.3.0 (03.06.2025)

Kiwa-EE GPI R.3.0 Annex B1 (2025)
Kiwa-Ecobility Experts, General Programme Instructions “Product Level” – Annex B1 Environmental Information Programme according to EN 15804 / ISO 21930 , SOP EE 1203_R.3.0 (03.06.2025)

1 General information

1.9 COMPARABILITY

In principle, a comparison or assessment of the environmental impacts of different products is only possible if they have been prepared in accordance with EN 15804+A2:2019. For the evaluation of the comparability, the following aspects have to be considered in particular: PCR used, functional or declared unit, geographical reference, the definition of the system boundary, declared modules, data selection (primary or secondary data, background database, data quality), scenarios used for use and disposal phases, and the life cycle inventory (data collection, calculation methods, allocations, validity period). PCRs and general program instructions of different EPD program operators may differ. Comparability needs to be evaluated. For further guidance, see EN 15804+A2:2019 and ISO 14025.

1.10 CALCULATION BASIS

LCA method R<THINK: Ecobility Experts | EN15804+A2

LCA software*: Simapro 9.6

Characterization method: RETHINK characterization method (see references for more details)

LCA database profiles: ecoinvent (for version see references)

Version database: v3.20f (20260507)

** Simapro is used for calculating the characterized results of the Environmental profiles within R<THINK.*

1.11 LCA BACKGROUND REPORT

This EPD is generated on the basis of the LCA background report 'Sanitary partitions made of glass' with the calculation identifier ReTHiNK-137069.

2 Product

2.1 PRODUCT DESCRIPTION

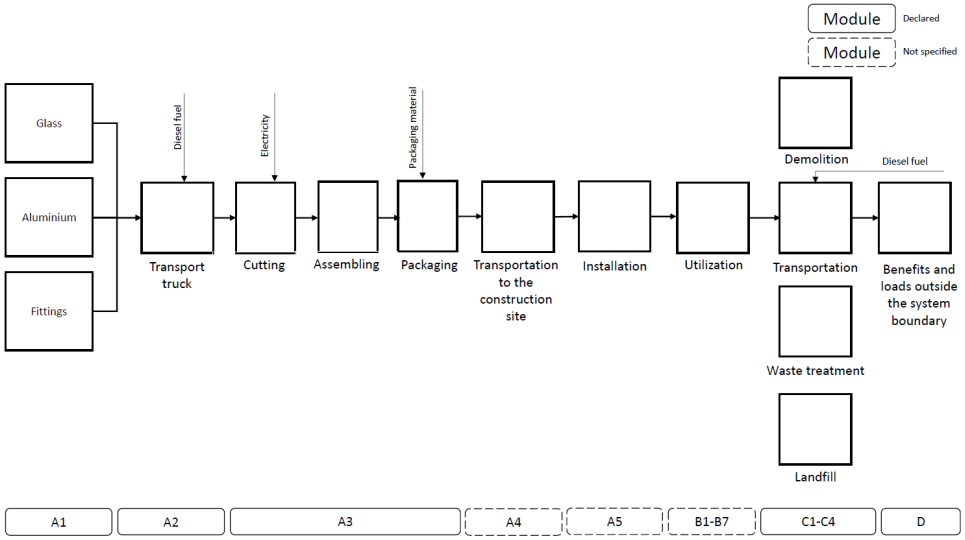
This Environmental Product Declaration applies to the product family Vitrum II, Vitrum III and VENTO.

The Life Cycle Assessment is based on the product type Vitrum, which has been selected as the worst-case reference product within this product family. Vitrum was chosen because it has the greatest mass among the declared variants and therefore represents the worst option from an environmental impact perspective.

The products are used as WC partitions and shelves for public and semi-public areas in various designs, either as a standard product with floor and ceiling clearance (Vitrum II and Vitrum III) or as a room-height closed construction (VENTO). They are manufactured from single pane safety glass or laminated safety glass in combination with extruded anodized or powder-coated aluminium profiles and fittings made of aluminium or stainless steel.

Product specification
The composition of the product is described in the following table:

Materials	Weight (%)
Panels	approx. 99.6
Steel	approx. 0.3
Aluminium	< 0.1
Synthetic rubber	< 0.1
Adhesive, epoxy 2 components	< 0.1
Polyamide (PA6)	< 0.1
Polyurethane, flexible foam	< 0.1



2.2 APPLICATION (INTENDED USE OF THE PRODUCT)

WC partitions are typically used in public or semi-public areas to separate compartments for toilet use in large sanitary facilities. Glass shelves are used mainly in public or semi-public areas to store personal belongings during showers, sport or personal activities.

2.3 REFERENCE SERVICE LIFE

RSL PRODUCT

As the use phase is not declared in this EPD, there is no need to specify a reference service life.

USED RSL (YR) IN THIS LCA CALCULATION:

20

2.4 SUBSTANCES OF VERY HIGH CONCERN

The product does not contain any substances of very high concern.

2 Product

2.5 DESCRIPTION PRODUCTION PROCESS

For production, glass is cut to size according to the specific dimensions of the project and processed using CNC machines. At the same time, the aluminium profiles are cut to size and CNC machined. In the final assembly stage, the profiles, panels and fittings are joined together. The product is prepared as far as possible for final assembly on site.

3 Calculation rules

3.1 DECLARED UNIT

m2

The declared unit is one square meter of sandwich panel systems. This EPD represents the product type Vitrum. As it represents the worst-case scenario among the considered product
types, it conservatively covers the product types Vitrum II, Vitrum III and VENTO.

Reference unit: square meter (m2)

3.2 CONVERSION FACTORS

Description	Value	Unit
Reference unit	1	m2
Weight per reference unit	28.641	kg
Conversion factor to 1 kg	0.034915	m2

3.3 SCOPE OF DECLARATION AND SYSTEM BOUNDARIES

This is a Cradle to gate with modules C1-C4 and module D EPD. The life cycle stages included are as shown below:

(X = module included, ND = module not declared)

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X

The modules of the EN 15804 contain the following:

Module A1 = Raw material supply	Module B5 = Refurbishment
Module A2 = Transport	Module B6 = Operational energy use
Module A3 = Manufacturing	Module B7 = Operational water use
Module A4 = Transport	Module C1 = De-construction / Demolition
Module A5 = Construction - Installation process	Module C2 = Transport
Module B1 = Use	Module C3 = Waste Processing
Module B2 = Maintenance	Module C4 = Disposal
Module B3 = Repair	Module D = Benefits and loads beyond the product system boundaries
Module B4 = Replacement	

3.4 REPRESENTATIVENESS

This EPD is representative for sanitary partitions made of glass, a product of Schäfer Trennwandsysteme GmbH. The results of this EPD are representative for the European Union.

3.5 CUT-OFF CRITERIA

Product stage (A1-A3)

All input flows (e.g. raw materials, transportation, energy use, packaging, etc.) and output flows (e.g. production waste) are considered in this LCA. The total neglected input flows do

3 Calculation rules

therefore not exceed the limit of 5% of energy use and mass.
Excluded processes are:

- Long-term emissions
- The manufacture of equipment used in production, buildings or any other capital goods;
- The transport of personnel to the plant;
- The transportation of personnel within the plant;
- Research and development activities

End of life stage (C1-C4)

All input flows (e.g. energy use for demolition or disassembly, transport to waste processing, etc.) and output flows (e.g. end-of-life waste processing of the product, etc.) are considered in this LCA. The total neglected input flows do therefore not exceed the limit of 5% of energy use and mass.

Benefits and loads beyond the system boundary (Module D)

All benefits and loads beyond the system boundary resulting from reusable products, recyclable materials and/or useful energy carriers leaving the product system are considered in this LCA.

3.6 ALLOCATION

Allocations were avoided as far as possible. There are no coproducts or by-products in the manufacturing of the examined product. Based on energy consumption measurements, the energy requirements of the production were allocated to the individual products. Specific information about allocations within the background data is included in the documentation of the ecoinvent datasets.

3.7 DATA COLLECTION & REFERENCE PERIOD

All process-specific data refer to the data collection period from 01/2024 to 12/2024.

3.8 ESTIMATES AND ASSUMPTIONS

The material inputs in kg/m² were calculated by multiplying the total mass per installation, consisting of 10 Vitrum Vento cabins, by the conversion factor 1/134.369 = 0.007442. This conversion is based on a total relevant product area of 134.369 m² per installation.

All datasets chosen for the LCA refer to Europe as the geographic reference.

A dataset for a non-specific truck was used for module A2.

For the end-of-life, waste scenarios from the Dutch Environmental Database (Nationale Milieudatabase (NMD)) were used.

This EPD is developed in accordance with EN 15804 and applies the Polluter Pays Principle, assigning environmental impacts to the responsible entity, and the Modularity Principle, ensuring that impacts are reported in the specific life cycle stage in which they occur—supporting transparency, accountability, and comparability across product systems.

3.9 DATA QUALITY

The quality level of geographical representativeness can be considered “good”.
The quality level of technical representativeness can be considered “good”.
The quality level of time representativeness can also be regarded as “good”.

The overall data quality for this EPD can, therefore, be described as “good”. All relevant process-specific data were collected during data collection.

In all possible cases, primary data from customers was used, which has very good data quality because it comes directly from the source. In addition, secondary data from the ecoinvent database (2022, version 3.9.1) was used when no primary data could be supplied. The database is checked regularly and, therefore, meets the requirements of DIN EN ISO 14040/44 (background data not older than 10 years). The background data meets the requirements of EN 15804+A2. The quantities of raw materials, consumables and supplies used and the energy consumption were recorded and averaged over the entire operating year.

The general rule that specific data from certain production processes or average data derived from certain processes must take precedence when calculating an EPD or LCA was adhered to. Data for processes over which the manufacturer has no influence were assigned to generic data/scenarios. When selecting these, care was taken to always choose the data set/scenario that most realistically represents the processes. Thus, the scenarios included are currently in use and are representative for one of the most likely scenario alternatives.

3.10 POWER MIX

The electricity input was modelled using the German residual electricity mix (“Electricity (DE) – low voltage (max 1 kV), residual mix” from ecoinvent 3.9.1) with a global warming potential of 0.725 kg CO_2 eq/kWh, applying a market-based approach.

4 Scenarios and additional technical information

4.1 DE-CONSTRUCTION, DEMOLITION (C1)

No inputs are needed for the product at the de-construction / demolition phase

4.2 TRANSPORT END-OF-LIFE (C2)

The following distances and transport conveyance are assumed for transportation during end of life for the different types of waste processing.

Waste Scenario	Transport conveyance	Not removed (stays in work) [km]	Landfill [km]	Incineration [km]	Recycling [km]	Re-use [km]
(ei3.9.1) aluminium (GLO), wrought alloy for buildings (i.a. profiles, sheets, pipes) (NMD ID 5)	(ei3.9.1) Lorry (Truck), unspecified (default) | market group for (GLO)	0	100	150	50	50
(ei3.9.1) glass (i.a. flat glass) (NMD ID 28)	(ei3.9.1) Lorry (Truck), unspecified (default) | market group for (GLO)	0	100	150	50	50
(ei3.9.1) Metals, others (i.a. fasteners, fittings) (NMD ID 50)	(ei3.9.1) Lorry (Truck), unspecified (default) | market group for (GLO)	0	100	150	50	50
(ei3.9.1) polyolefines (i.a. pe,pp) (i.a. pipes, foils) (NMD ID 57)	(ei3.9.1) Lorry (Truck), unspecified (default) | market group for (GLO)	0	100	150	50	50

The transport conveyance(s) used in the scenario(s) for transport during end of life has the following characteristics.

	Value and unit
Vehicle type used for transport	(ei3.9.1) Lorry (Truck), unspecified (default) | market group for (GLO)
Fuel type and consumption of vehicle	not available
Capacity utilisation (including empty returns)	50 % (loaded up and return empty)
Bulk density of transported products	inapplicable
Volume capacity utilisation factor	1

4.3 END OF LIFE (C3, C4)

The scenario(s) assumed for end of life of the product are given in the following tables.
First the assumed percentages per type of waste processing are displayed, followed by the assumed amounts.

4 Scenarios and additional technical information

Waste Scenario	Region	Not removed (stays in work) [%]	Landfill [%]	Incineration [%]	Recycling [%]	Re-use [%]
(ei3.9.1) aluminium (GLO), wrought alloy for buildings (i.a. profiles, sheets, pipes) (NMD ID 5)	NL	0	3	3	94	0
(ei3.9.1) glass (i.a. flat glass) (NMD ID 28)	NL	0	30	0	70	0
(ei3.9.1) Metals, others (i.a. fasteners, fittings) (NMD ID 50)	NL	0	5	5	90	0
(ei3.9.1) polyolefines (i.a. pe,pp) (i.a. pipes, foils) (NMD ID 57)	NL	0	10	85	5	0

Waste Scenario	Not removed (stays in work) [kg]	Landfill [kg]	Incineration [kg]	Recycling [kg]	Re-use [kg]
(ei3.9.1) aluminium (GLO), wrought alloy for buildings (i.a. profiles, sheets, pipes) (NMD ID 5)	0.000	0.108	0.108	3.389	0.000
(ei3.9.1) glass (i.a. flat glass) (NMD ID 28)	0.000	7.500	0.000	17.500	0.000
(ei3.9.1) Metals, others (i.a. fasteners, fittings) (NMD ID 50)	0.000	0.002	0.002	0.031	0.000
(ei3.9.1) polyolefines (i.a. pe,pp) (i.a. pipes, foils) (NMD ID 57)	0.000	0.000	0.001	0.000	0.000
Total	**0.000**	**7.610**	**0.111**	**20.920**	**0.000**

4.4 BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY (D)

The presented Benefits and loads beyond the system boundary in this EPD are based on the following calculated Net output flows in kilograms and Energy recovery displayed in MJ Lower Heating Value.

Waste Scenario	Net output flow [kg]	Energy recovery [MJ]
(ei3.9.1) aluminium (GLO), wrought alloy for buildings (i.a. profiles, sheets, pipes) (NMD ID 5)	3.388	0.000
(ei3.9.1) glass (i.a. flat glass) (NMD ID 28)	11.405	0.000
(ei3.9.1) Metals, others (i.a. fasteners, fittings) (NMD ID 50)	0.015	0.000
(ei3.9.1) polyolefines (i.a. pe,pp) (i.a. pipes, foils) (NMD ID 57)	0.000	0.052
Total	**14.809**	**0.052**

5 Results

For the impact assessment long-term emissions (>100 years) are not considered. The results of the impact assessment are only relative statements that do not make any statements about end-points of the impact categories, exceedance of threshold values, safety margins or risks. The following tables show the results of the indicators of the impact assessment, of the use of resources as well as of waste and other output flows.

5.1 ENVIRONMENTAL IMPACT INDICATORS PER SQUARE METER

CORE ENVIRONMENTAL IMPACT INDICATORS EN 15804+A2

Abbr.	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	1.14E+2	6.62E+0	2.89E+0	1.24E+2	0.00E+0	2.72E-1	1.31E+0	4.68E-2	-6.99E+1
GWP-f	kg CO_2 eq.	1.14E+2	6.60E+0	4.61E+0	1.25E+2	0.00E+0	2.71E-1	1.26E+0	4.67E-2	-6.96E+1
GWP-b	kg CO_2 eq.	2.29E-1	2.15E-3	-1.72E+0	-1.49E+0	0.00E+0	8.82E-5	5.64E-2	3.54E-5	-1.13E-1
GWP-luluc	kg CO_2 eq.	2.47E-1	2.35E-2	2.51E-3	2.73E-1	0.00E+0	9.65E-4	1.23E-3	1.29E-5	-1.96E-1
ODP	kg CFC 11 eq.	9.06E-7	1.17E-7	6.52E-8	1.09E-6	0.00E+0	4.82E-9	1.47E-8	1.52E-9	-6.53E-7
AP	mol H+ eq.	6.59E-1	3.17E-2	1.34E-2	7.04E-1	0.00E+0	1.30E-3	4.93E-3	3.01E-4	-4.38E-1
EP-fw	kg P eq.	2.81E-3	6.56E-5	2.43E-4	3.11E-3	0.00E+0	2.69E-6	2.47E-5	3.81E-7	-2.17E-3
EP-m	kg N eq.	1.08E-1	1.20E-2	2.78E-3	1.23E-1	0.00E+0	4.93E-4	1.04E-3	1.26E-4	-6.92E-2
EP-T	mol N eq.	1.27E+0	1.28E-1	3.20E-2	1.43E+0	0.00E+0	5.25E-3	1.12E-2	1.36E-3	-7.86E-1
POCP	kg NMVOC eq.	3.45E-1	4.38E-2	1.04E-2	3.99E-1	0.00E+0	1.79E-3	3.69E-3	5.33E-4	-2.34E-1
ADP-mm	kg Sb-eq.	1.17E-4	2.07E-5	2.41E-5	1.62E-4	0.00E+0	8.48E-7	2.32E-5	5.32E-8	2.69E-4
ADP-f	MJ	1.19E+3	9.45E+1	7.20E+1	1.35E+3	0.00E+0	3.88E+0	9.62E+0	1.14E+0	-6.50E+2
WDP	m3 world eq.	1.28E+1	5.16E-1	2.52E-1	1.36E+1	0.00E+0	2.12E-2	1.74E-1	5.46E-3	-8.90E+0

GWP-total=Global Warming Potential total (GWP-total) | **GWP-f**=Global Warming Potential fossil fuels (GWP-fossil) | **GWP-b**=Global Warming Potential biogenic (GWP-biogenic) | **GWP-luluc**=Global Warming Potential land use and land use change (GWP-luluc) | **ODP**=Depletion potential of the stratosperic ozon layer (ODP) | **AP**=Acidification potential, Accumulated Exceedance (AP) | **EP-fw**=Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater) | **EP-m**=Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine) | **EP-T**=Eutrophication potential, Accumulated Exceedance (EP-terrestrial) | **POCP**=Formation potential of tropospheric ozone (POCP) | **ADP-mm**=Abiotic depletion potential for non fossil resources (ADP mm) | **ADP-f**=Abiotic depletion for fossil resources potential (ADP fossil) | **WDP**=Water (user) deprication potential, deprivation-weighted water consumption (WDP)

5 Results

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS EN 15804+A2

Abbr.	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
PM	disease incidence	8.69E-6	6.51E-7	8.51E-8	9.43E-6	0.00E+0	2.67E-8	8.29E-8	7.32E-9	-5.66E-6
IR	kBq U235 eq.	1.65E+0	3.69E-2	1.98E-1	1.88E+0	0.00E+0	1.51E-3	2.59E-2	5.24E-4	-5.06E-1
ETP-fw	CTUe	1.78E+3	6.97E+1	1.27E+1	1.86E+3	0.00E+0	2.86E+0	7.61E+0	1.37E+0	-2.49E+2
HTP-c	CTUh	3.85E-6	3.49E-9	2.36E-9	3.85E-6	0.00E+0	1.43E-10	9.58E-10	1.82E-11	-8.24E-8
HTP-nc	CTUh	4.46E-4	7.59E-8	5.67E-8	4.46E-4	0.00E+0	3.11E-9	2.85E-8	2.40E-10	-8.97E-7
SQP	Pt	2.17E+2	7.45E+1	1.48E+2	4.39E+2	0.00E+0	3.06E+0	8.56E+0	2.30E+0	-1.06E+2

PM=Potential incidence of disease due to PM emissions (PM) | **IR**=Potential Human exposure efficiency relative to U235 (IRP) | **ETP-fw**=Potential Comparative Toxic Unit for ecosystems (ETP-fw) | **HTP-c**=Potential Comparative Toxic Unit for humans (HTP-c) | **HTP-nc**=Potential Comparative Toxic Unit for humans (HTP-nc) | **SQP**=Potential soil quality index (SQP)

CLASSIFICATION OF DISCLAIMERS TO THE DECLARATION OF CORE AND ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

ILCD classification	Indicator	Disclaimer
ILCD type / level 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
ILCD type / level 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
	Potential Human exposure efficiency relative to U235 (IRP)	1
ILCD type / level 3	Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2
	Potential Comparative Toxic Unit for humans (HTP-c)	2
	Potential Comparative Toxic Unit for humans (HTP-nc)	2

5 Results

ILCD classification	Indicator	Disclaimer
	Potential Soil quality index (SQP)	2

Disclaimer 1 – 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.

Disclaimer 2 – 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.

5.2 INDICATORS DESCRIBING RESOURCE USE AND ENVIRONMENTAL INFORMATION BASED ON LIFE CYCLE INVENTORY (LCI)

PARAMETERS DESCRIBING RESOURCE USE

Abbr.	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
PERE	MJ	1.12E+2	1.34E+0	1.40E+1	1.28E+2	0.00E+0	5.48E-2	9.93E-1	2.55E-2	-6.93E+1
PERM	MJ	1.80E+0	0.00E+0	1.45E+1	1.63E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PERT	MJ	1.14E+2	1.34E+0	2.85E+1	1.44E+2	0.00E+0	5.48E-2	9.93E-1	2.55E-2	-6.93E+1
PENRE	MJ	1.19E+3	9.46E+1	7.04E+1	1.35E+3	0.00E+0	3.88E+0	9.62E+0	1.14E+0	-6.50E+2
PENRM	MJ	3.13E-1	0.00E+0	1.64E+0	1.96E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.03E-3
PENRT	MJ	1.19E+3	9.46E+1	7.20E+1	1.35E+3	0.00E+0	3.88E+0	9.62E+0	1.14E+0	-6.50E+2
SM	Kg	5.50E+0	0.00E+0	0.00E+0	5.50E+0	0.00E+0	0.00E+0	0.00E+0	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
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
FW	m^3	5.39E-1	2.28E-2	4.35E-2	6.06E-1	0.00E+0	9.37E-4	6.82E-3	1.31E-3	-3.83E-1

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 material | **RSF**=Use of renewable secondary fuels | **NRSF**=Use of non-renewable secondary fuels | **FW**=Net use of fresh water

5 Results

OTHER ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

Abbr.	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
HWD	Kg	2.63E-3	6.02E-4	9.99E-5	3.33E-3	0.00E+0	2.47E-5	2.24E-2	5.47E-6	2.88E-2
NHWD	Kg	1.71E+1	6.24E+0	2.78E-1	2.36E+1	0.00E+0	2.56E-1	9.77E-1	7.61E+0	-1.24E+1
RWD	Kg	5.48E-3	2.16E-5	2.58E-4	5.76E-3	0.00E+0	8.87E-7	1.98E-5	2.98E-7	-3.30E-4

HWD=Hazardous waste disposed | **NHWD**=Non-hazardous waste disposed | **RWD**=Radioactive waste disposed

ENVIRONMENTAL INFORMATION DESCRIBING OUTPUT FLOWS

Abbr.	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
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
MFR	Kg	5.95E-3	0.00E+0	0.00E+0	5.95E-3	0.00E+0	0.00E+0	2.09E+1	0.00E+0	3.39E+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
EET	MJ	2.51E-1	0.00E+0	0.00E+0	2.51E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.60E-2
EEE	MJ	1.39E-1	0.00E+0	0.00E+0	1.39E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	9.29E-3

CRU=Components for re-use | **MFR**=Materials for recycling | **MER**=Materials for energy recovery | **EET**=Exported Energy, Thermic | **EEE**=Exported Energy, Electric

5 Results

5.3 INFORMATION ON BIOGENIC CARBON CONTENT PER SQUARE METER

BIOGENIC CARBON CONTENT

The following Information describes the biogenic carbon content in (the main parts of) the product at the factory gate per square meter:

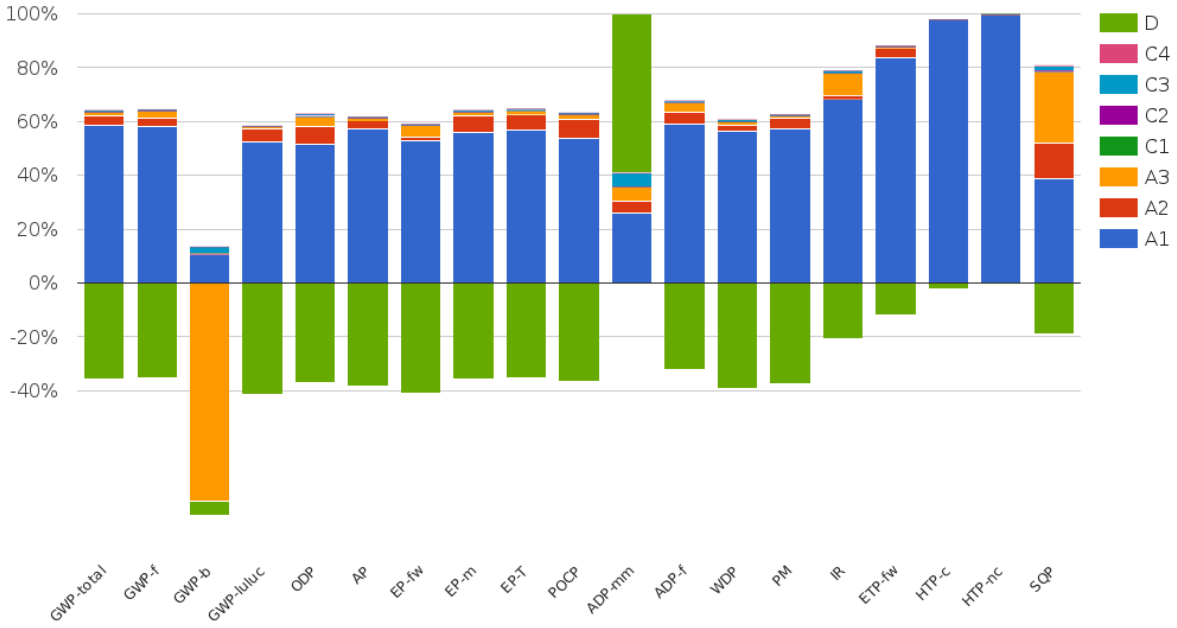
Biogenic carbon content	Amount	Unit
Biogenic carbon content in the product	0	kg C
Biogenic carbon content in accompanying packaging	0.4717	kg C

UPTAKE OF BIOGENIC CARBON DIOXIDE

The following amount of carbon dioxide uptake is taken into account. Related uptake and release of carbon dioxide in downstream processes are not taken into account in this number although they do appear in the presented results. One kilogram of biogenic Carbon content is equivalent to 44/12 kg of biogenic carbon dioxide uptake.

Uptake Biogenic Carbon dioxide	Amount	Unit
Packaging	1.729	kg CO2 (biogenic)

6 Interpretation of results



The results show that the product stage (A1-A3) is the dominant life cycle phase across nearly all environmental impact categories. The main contributors are raw material supply and manufacturing processes, particularly the production of glass, aluminium profiles, fittings and the electricity consumption during manufacturing.

The construction stage is not declared in this EPD. Therefore, no installation-related impacts are included in the results.

The end-of-life stages (C1-C4) show moderate contributions. Module C1 has negligible impact, as dismantling is assumed to be performed manually without additional energy input.

6 Interpretation of results

For the glass-based product system, the environmental profile is mainly influenced by the energy-intensive production of glass and aluminium components. End-of-life processes contribute to the overall results through transport, sorting, waste processing and disposal of the different material fractions.

Overall, the environmental profile is primarily driven by material production and manufacturing energy use, while end-of-life processes play a secondary role.

7 References

ISO 14040
ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework; EN ISO 14040:2006

ISO 14044
ISO 14044:2006-10, Environmental management - Life cycle assessment - Requirements and guidelines; EN ISO 14044:2006

ISO 14025
ISO 14025:2011-10, Environmental labels and declarations — Type III environmental declarations — Principles and procedures

EN 15804+A2
EN 15804:2012+A2:2019/AC:2021, Sustainability of Buildings - Environmental Product Declarations - Framework Development Rules by Product Category

Kiwa-EE GPI R.3.0 (2025)
Kiwa-Ecobility Experts, General Programme Instructions “Product Level”, SOP EE 1201_R.3.0 (03.06.2025)

Kiwa-EE GPI R.3.0 Annex B1 (2025)
Kiwa-Ecobility Experts, General Programme Instructions “Product Level” – Annex B1 Environmental Information Programme according to EN 15804 / ISO 21930 , SOP EE 1203_R.3.0 (03.06.2025)

Ecoinvent
ecoinvent Version 3.9.1 (December 2022)

R<THINK characterization method
ecoinvent 3.9.1: EN 15804+A1 indicators (CML-IA Baseline v3.09), EN 15804+A2 indicators (EF 3.1)

8 Contact information

Publisher	Operator	Owner of declaration
Kiwa-Ecobility Experts Wattstraße 11-13 13355 Berlin, DE	**Kiwa-Ecobility Experts** Wattstraße 11-13 13355 Berlin, DE	**Schäfer Trennwandsysteme GmbH** Industriepark 37 56593 Horhausen, Germany , DE
E-mail: DE.Ecobility.Experts@kiwa.com **Website:** https://www.kiwa.com/de/en-de/areas-of-expertise/sustainable-solutions/ecobility-experts-epd-program/	**E-mail:** DE.Ecobility.Experts@kiwa.com **Website:** https://www.kiwa.com/de/en-de/areas-of-expertise/sustainable-solutions/ecobility-experts-epd-program/	**E-mail:** info@schaefer-tws.de **Website:** www.schaefer-tws.de

Kiwa-Ecobility Experts is established member of the ECO PLATFORM