



Environmental Product Declaration

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



AEROSANA VISCONN

**Sprayable frost- and moisture-resistant sealant,
humidity-variable**

from

pro clima – MOLL bauökologische Produkte GmbH

Covered Product by the EPD:

AEROSANA VISCONN (foil tube: 0.6 L) GTIN 4026639226129

AEROSANA VISCONN (bucket: 10 L) GTIN 4026639251688

AEROSANA VISCONN white (foil tube: 0.6 L) GTIN 4026639227492

AEROSANA VISCONN white (bucket: 10 L) GTIN 4026639217400

AEROSANA VISCONN FIBRE (foil tube: 0.6 L) GTIN 4026639226334

AEROSANA VISCONN FIBRE (bucket: 5 L) GTIN 4026639247261

AEROSANA VISCONN FIBRE white (foil tube: 0.6 L) GTIN 4026639227508

AEROSANA VISCONN FIBRE white (bucket: 5 L) GTIN 4026639227119



Programme:

Programme operator:

Type of EPD

EPD registration number:

Version date

Validity date

The International EPD System, www.environdec.com

EPD International AB

EPD of multiple products, based on a representative product

EPD-IES-0032694:001

30/07/2026

30/07/2031

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com

General information

Programme information

Programme: The International EPD System

Address: EPD International AB
Box 210 60
SE-100 31 Stockholm
Sweden

Website: www.environdec.com

E-mail: support@environdec.com

Product Category Rules (PCR)

CEN standard EN 15804 and ISO Standard ISO 21930 serve as the Core Product Category Rules (PCR)

Product category rules (PCR): PCR 2019:14 Construction Products, version 2.0.1

UN CPC code: No. 35420: "Glues and gelatine, peptones and their derivatives, and related products; caseinates and other casein derivatives; albuminates and other albumin derivatives".

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. Chairs of the PCR review: 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: Jan Weinzettel, weinzettel@seznam.cz

Approved by: The 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

pro clima / MOLL bauökologische Produkte GmbH
Rheintalstr. 35-43 – 68723 Schwetzingen – Germany
T: +49 (0) 62 02 – 27 82.0; info@proclima.com

Contact

Michael Förster: support@proclima.com

Life Cycle Assessment (LCA)

LCA accountability: Jannik Schulz, María Díaz Cáceres
brands & values GmbH, info@brandsandvalues.com

Description of the organisation

pro clima is a pioneer in the intelligent, reliable sealing of building envelopes. The company develops and markets product systems for achieving maximum protection against moisture damage to structures and mould:

- Humidity-variable hydrosafe® high-performance vapour check and airtightness membranes for interior sealing on new buildings and renovation projects.
- Roofing underlays and breather membranes (WRBs) with active moisture transport for permanently protected exterior sealing of roofs and walls.
- Special adhesives and waterproof tapes.
- Sealing grommets as detailed solutions.

Highest quality for optimal performance

- The system products are manufactured using state-of-the-art production processes at leading production facilities in Germany.
- Production is subject to the highest quality standards, ensuring that insulation is reliably protected against moisture damage and mould.
- Highest effectiveness of thermal insulation.
- Reduction of heating costs due to optimal air sealing.
- Dry insulation materials.
- Best possible protection against moisture damage to structures and mould.
- Comfortable interiors in summer and winter.
- Healthy indoor climates.

Together towards a successful future

People are the focus of every decision at pro clima, and the company's guiding mission is to advance building culture as a whole. To achieve this goal, system products have been developed for over 30 years that are consistently geared to meet the health and comfort needs of users. Many of pro clima's pioneering developments are now established as state-of-the-art approaches. Today, these products are successfully used in over 40 countries worldwide.

Product-related or management system-related certifications

All production sites are ISO 9001 certified.

Product information

Product name

AEROSANA VISCONN

Product identification

Sprayable frost- and moisture-resistant sealant, humidity-variable

Visual representation of the product



UN CPC code

No. 35420: "Glues and gelatine, peptones and their derivatives, and related products; caseinates and other casein derivatives; albuminates and other albumin derivatives".

Products covered by the EPD

AEROSANA VISCONN (foil tube: 0.6 L) GTIN 4026639226129

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AEROSANA VISCONN white (foil tube: 0.6 L) GTIN 4026639227492

AEROSANA VISCONN white (bucket: 10 L) GTIN 4026639217400

AEROSANA VISCONN FIBRE (foil tube: 0.6 L) GTIN 4026639226334

AEROSANA VISCONN FIBRE (bucket: 5 L) GTIN 4026639247261

AEROSANA VISCONN FIBRE white (foil tube: 0.6 L) GTIN 4026639227508

AEROSANA VISCONN FIBRE white (bucket: 5 L) GTIN 4026639227119

The declared product, AEROSANA VISCONN 600 ml, was selected as the representative product because it is the best-selling variant within the product group. This EPD covers multiple GTINs and product variants. All variants are based on the same adhesive formulation and fulfil the same technical function. Differences between the variants are limited to the presence of reinforcing fibres, the adhesive colour, and the type of packaging. These modifications are intended to meet specific customer and application requirements and do not significantly influence the environmental profile of the adhesive itself.

A variability assessment was performed across all covered variants (See additional environmental information) The results show that the deviations for all environmental indicators are within a range of -8% to +6% compared to the declared representative product. This level of variation is considered sufficiently small to justify the use of a single representative EPD for the entire product group.

Product description

AEROSANA VISCONN has the following components:

Sealant: Modified aqueous acrylate polymer dispersion, fibre-reinforced for the AEROSANA VISCONN FIBRE and AEROSANA VISCONN FIBRE white variants

Applications

For use as a humidity-variable vapour control, airtightness or windtightness layer that can be applied as a spray or using a brush on wall, ceiling and floor surfaces, such as non-plastered masonry or porous panel-form materials, and to seal penetrations and non-airtight or non-windtight subsurfaces, e.g. on foamed window joints.

- Also for the creation of joints to components such as windows, roofs, walls, ceilings and floors, and for panel joints on airtight wood-based panels (e.g. OSB).
- Can also be used for strengthening subsurfaces on renovation projects.
- The humidity-variable diffusion resistance of this product means that it can be used on the interior and exterior of building structures.
- Forms a seamless, elastic airtight and vapour-controlling protective layer once it has dried.
- With the fibre reinforcement in the FIBRE variants, joints and cracks of up to 20 mm (¾") can be covered and sealed. Apply AEROSANA FLEECE to larger joints.

Properties

Time-saving and can be applied in versatile ways: spray with an airless sprayer or AEROFIXX (compressed air) or else paint on. Reliable structures thanks to excellent adhesive properties on all standard construction surfaces. Covers cracks and joints of up to 3 mm (1/8") or with the FIBRE variants 20 mm (¾") in width. Larger joints can also be covered in combination with AEROSANA FLEECE. Creates robust building structures: moisture-resistant, permanently elastic and highly durable once it has dried. Improves surfaces: forms a bonding course between subsurfaces and subsequent coatings. Can be plastered/painted over, and pro clima adhesive tapes can be applied over it. Flexible use in indoor and protected outdoor areas thanks to its humidity-variable sd value. Excellent values in hazardous substance testing, has been tested according to the ISO 16000 evaluation scheme.

Name and location of production site(s)

Manufacturer: pro clima / MOLL bauökologische Produkte GmbH

Location of manufacturing site: Germany

The declared product is manufactured at a production site in Germany under contract for pro clima / MOLL bauökologische Produkte GmbH. The city is not disclosed in this public EPD for reasons of commercial confidentiality, as publication would reveal commercially sensitive supply chain information. The exact production site is documented in the background report and has been made available to the independent verifier.

Final warehouse and quality control: pro clima / MOLL bauökologische Produkte GmbH, Schwetzingen, Germany

Further information can be found under <https://proclima.com/products/connections/liquid-seals/aerosana-visconn>

Technical specifications

Property	Regulation	Value
Colour	N/A	AEROSANA VISCONN and FIBRE: Dark blue, when fully dry dark blue/black; AEROSANA VISCONN white and FIBRE white: White.
Surface weight	EN 1849-2	290 g/m ² ; 0.95 oz/ft ² (dried, at 0.3 mm ; 13 mil thickness)
Coating application	N/A	0.2 - 1.0 mm ; 8 - 39 mil / FIBRE variants: 0.6 - 1.4 mm ; 24 - 55 mil - wet film
sd value	EN 1931	6 m / FIBRE variants: 3.5 m (at 0.3 mm ; 13 mil thickness)
sd value, humidity-variable	EN ISO 12572	0.13 - 10.00 m / FIBRE variants: 0.15 - 5.00 m
g value	N/A	30 MN-s/g / FIBRE variants: 17.5 MN-s/g (at 0.3 mm ; 13 mil thickness)
g value, humidity-variable	N/A	0.65 - 50 MN-s/g / FIBRE variants: 0.75 - 25 MN-s/g
Vapour permeance	ASTM E96-A	0.55 US perms / FIBRE variants: 0.94 US perms (at 0.3 mm ; 13 mil thickness)
Vapour permeance, humidity-variable	EN ISO 12572	0.33 - 25 US perms / FIBRE variants: 0.66 - 22 US perms
Fire class	EN 13501-1	E
Outdoor exposure	N/A	3 months
Resistance to driving rain	ift, MO-01/1:2007-01, Abs. 5	Up to 600 Pa, around window
Watertightness to liquid water	EN 1928	W1
Water column	EN ISO 811	2 000 mm ; 6' 7"
Airtightness	ift, MO-01/1:2007-01, Abs. 5	Up to 1000 Pa, around window
Can be plastered/painted over	N/A	Yes, and pro clima tapes adhere to it
Durability after artificial ageing	N/A	Passed
Application temperature	N/A	+5 °C to +60 °C; 40 °F to 140 °F (also applies to substrate temperature)
Drying	N/A	Approx. 12 (FIBRE variants: 6) - 48 hours (at 20 °C ; 68 °F, 65% rel. humidity), depending on substrate and applied thickness
Temperature resistance	N/A	Permanent -40 °C to +90 °C ; -40 °F to +194 °F (dried)
Coverage	N/A	~ 1.33 m ² /l ; 0.42 ft ² /US fl oz (± 0.75 l/m ² ; 2.36 US fl oz/ft ²) / FIBRE variants: 1.25-2.5 m ² /l ; 0.40-0.80 ft ² /US fl oz (± 0.4-0.8 l/m ² ; 1.26-2.51 US fl oz/ft ²) ; depending on substrate and application method
Storage	N/A	-15 °C to +25 °C ; 5 °F to 77 °F / white and FIBRE white variants: +5 °C to +25 °C ; 41 °F to 77 °F; closed in an airtight manner
Passive House Certification	Passivhaus Institut	phA

Content declaration

The content declaration refers to the declared unit of 1l of AEROSANA VISCONN adhesive

Product components	Weight, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit	Composition range, kg
Water	0.170	0.0%	0.0%	0 kg C	0.156 - 0.17
Additives	0.152	0.0%	0.0%	0 kg C	0.152 - 0.163
Adhesives	0.748	0.0%	0.0%	0 kg C	0.743 - 0.748
Printing ink	0.001	0.0%	0.0%	0 kg C	0.001 - 0.003
Total product	1.071	0.0%	0.0%	0 kg C	1.064 - 1.071
Packaging materials	Weight, kg	Mass-% (versus the product)	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit	Composition range, kg
Packaging (PE)	0.001	0.1%	0.0%	0 kg C	0.001 - 0.001
Packaging (PEHD)	0.005	0.4%	0.0%	0 kg C	0 - 0.005
Packaging (Pallet)	0.058	4.9%	2.5%	0.03 kg C	0.057 - 0.06
Packaging (PP)	0.007	0.6%	0.0%	0 kg C	0.007 - 0.042
Packaging (Cardboard)	0.033	2.8%	1.2%	0.014 kg C	0.001 - 0.109
Packaging (Alu)	0.009	0.7%	0.0%	0 kg C	0 - 0.009
Packaging (Wood)	0.000	0.0%	0.0%	0 kg C	0 - 0.013
Total packaging	0.112	9.5%	3.7%	0.044 kg C	0.112 - 0.204
TOTAL Product with packaging	1.183		4%	0.044 kg C	0.112 - 1.268

The biogenic carbon content of product and packaging is 0.121 kg CO₂ eq. per declared unit.

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
None	Not applicable	Not applicable	Not applicable

LCA information

LCA conducted for EPD of multiple products, based on the representative product AEROSANA VISCONN fibre adhesive in 600ml packaging.

Declared unit: 1 Litre of AEROSANA VISCONN adhesive

Conversion factor to mass: 0.934 L/Kg

Density of the product: 1.071 kg/L

Reference service life: 100 years

Time representativeness: Based on yearly manufacturing data from 01/01/2023 until 31/12/2023.

Geographical Scope: Global

Database and LCA software used: For the LCA model, the software system for holistic balancing (LCA for Experts) version 10.9 was used.

Background data sets from the current version of the LCA for experts (GaBi) database service pack 2026.1 were used entirely. EN 15804 +A2 (based on EF 3.1) characterisation factors provided in LCA for Experts were applied

Description of the manufacturing processes:

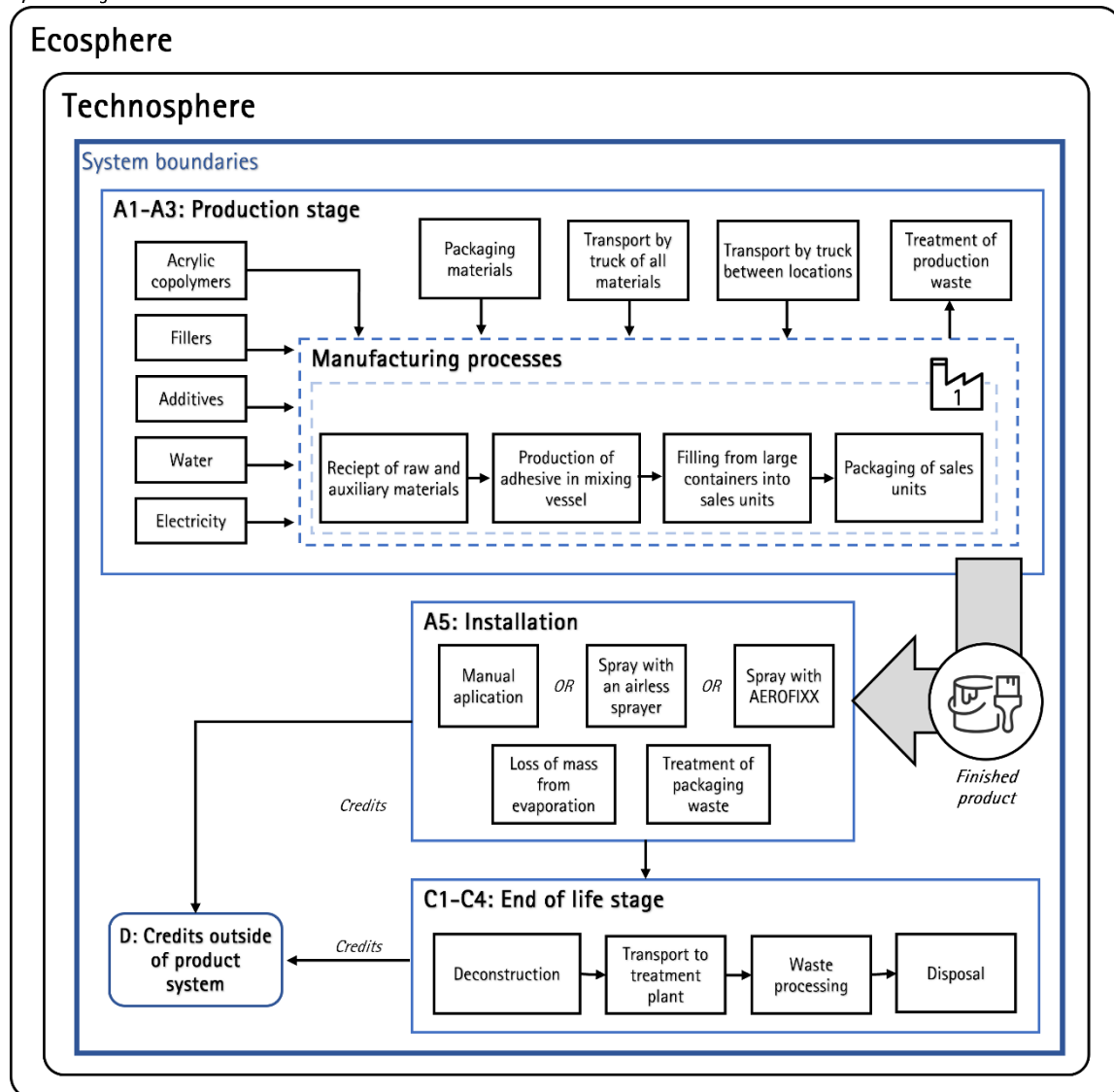
AEROSANA VISCONN is produced by mixing the components, including the fibre reinforcement for the AEROSANA VISCONN FIBRE and AEROSANA VISCONN FIBRE white variants, in a batch system under specific temperature and pressure conditions according to a prescribed recipe. The product is then filled into foil cartridges or buckets, which are the sales units. These units are then packaged and sent for storage and distribution, first to the central warehouse in Germany, and then all over the world for further sale.

Description of system boundaries:

Cradle to gate with options: Modules A1–A3, A5, C1–C4, and module D.

- All processing steps are balanced within the system boundaries.
- The LCI data was gathered for the specific declared product, and no co-product allocation was necessary.
- The allocation of waste follows the polluter-pays principle. The system boundary to the next product system is set when the waste reaches the end-of-waste state. The impacts of waste treatment from production are included in Module A3. The impacts of waste treatment during end-of-life are included in Module C, where the product reaches the end-of-waste status.
- All the LCI data in Modules A2–A3 corresponds to primary data collected from the manufacturing plant and contracted suppliers, including material and energy inputs, and waste and emission outputs.
- Modules A4 and B1–B7 are not declared. Module A4 has been omitted because transport distances vary significantly depending on the distribution route and destination market, resulting in variability exceeding the permitted range for a representative declaration. Modules B1–B7 are not relevant, as the declared product does not require maintenance, repair, replacement, refurbishment, operational energy or water use during its service life.

System diagram:



Description of scenarios

The system boundaries cover the following modules:

A1. Raw Material Supply

- Extraction and processing of raw materials required for manufacturing the defined liquid adhesive: Acrylic copolymers, fillers, additives and water.
- Extraction and processing of raw materials required for packaging the finished product liquid adhesive: Plastic parts (HDPE), cardboard, film (PE) and wood pallet.
- Extraction and processing of raw materials required for internal packaging.
- Generation of electricity from primary energy resources to supply the production sites with energy.

A2. Transportation

- Transportation of the raw materials was modelled based on the providers specific locations and transportation via truck to the production site in Germany.
- The transportation of raw materials for packaging is modelled in Module A2.

A3. Manufacturing

- Manufacturing of the defined AEROSANA VISCONN adhesive occurs in Germany.
- The core production processes which are under control of the manufacturer take place in the production plant, depicted as a dashed line in the system diagram.
- The production of the adhesive is done by mixing the components in a batch system, under specific temperature, pressure and recipe.
- For the selected declared variant, the 600ml variant: The cartridge packaging is printed, assembled with the nozzle and plunger, and subsequently filled with adhesive.
- For 10 liter and 5 liter variants: The adhesive is packed either in 10 liter, or 5 liter plastic buckets.

- The products are then packed on pallets for further transportation.
- Treatment of waste generated from the manufacturing processes is included in the model. Processing up to the end-of waste status or disposal of final residues including any packaging not leaving the factory gate with the product was modelled in module A3.
- Electricity for production in module A3 is modelled with the German Residual electricity mix.

A5. Construction Installation

- The packaging waste resulting from the installation of the product in the construction site is sent for waste treatment.
- The expenses for installation and the transport expenses for disposal are also considered in module A5.
- The incineration of packaging waste receives credits for electricity and thermal energy generation, and the recycling of packaging waste receives credits for substitution potentials of the corresponding materials, which are allocated in Module D.
- The loss of mass of the adhesive during drying was considered in module A5. The environmental impacts of such vapor outputs were included in the LCA.

C1-C4. End of Life

- Module C2 contains the environmental impact of transportation of the product to the waste treatment plant.
- The adhesive is treated as waste in module C3 by means of incineration.
- The loads for waste treatment are mapped here until the end of the waste property is reached. Emissions are assigned to module C3.

D. Reuse, recovery, recycling potential

- Module D accounts for potential benefits as material or energy inputs for a downstream product system in the form of the energy recovered from the waste-to-energy treatment and material recovery.
- The value flows resulting from the treatment of packaging waste (Module A5) are accounted for completely in module D as credits outside of product system.
- The amounts of benefits from energy recovery are dictated by the generic datasets of incineration used in the modelling. The datasets used to account for the recovered energy are RER: Electricity grid mix and RER: Thermal energy from natural gas.

Allocation

The production is modelled with specific data for the declared products; there are no co-products where allocation is needed. The total energy consumption for manufacturing was calculated by the manufacturer based on the maximum power consumption of the equipment, using a conservative approach. For the input of secondary material, the cut-off method is applied. Therefore, secondary materials enter the system under consideration without any environmental loads. This applies to wastepaper for cardboard production in modules A1-A3.

Cut-off criteria

The impact associated with the disregarded mass shares is less than 5% of the impact categories per module. In addition, less than 1% of the total mass and the primary energy used is cut-off. No substances or processes with high environmental relevance were cut-off. Equipment and infrastructure required in production are not included in this LCA. The resulting inventory fulfils EN 15804+A2 completeness requirements, covering >99% of total mass and energy inflows and at least 95% per life-cycle stage (A1-A3, A4-A5, C1-C4, D)

Data quality assessment

Primary data include internal production and environmental data, supplier information and energy supply. Data were checked for plausibility and consistency, with attention to completeness and alignment with ISO 14044 requirements. For the upstream processes, generic data was selected. LCI data corresponds to manufacturer-provided data, including material inputs, outputs, and energy demands. The data collection period represents the production year 2023.

Background datasets were selected from Sphera Managed LCA Content databases (Servicepack 2026.1) and are generally not older than 10 years. Overall, the data are considered representative of standard production, with good consistency and completeness.

Overall, data quality is rated as good in accordance with EN 15941, with scores of 1.5 and 2.3 for the specific data and the background datasets used, respectively. There are no inventories with poor data quality.

Climate impact of energy

The energy requirements for production were modelled using the Residual electricity mix of the electricity supplier on the market. In this case the LCA for Experts dataset of [Residual grid mix: AC, technology mix: consumption mix, to consumer: <1kV](#) in Germany. The modelled electricity has a GWP-GHG of 0.848 kg CO₂e/kWh.

More information

- Additional information can be obtained by contacting pro clima at info@proclima.com
- LCA practitioner: brands & values GmbH, info@brandsandvalues.com

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

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery- Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	DE	DE	DE		GLO								GLO	GLO	GLO	GLO	GLO
Specific data used	3%																
Variation – products	-2% to 5%																
Variation – sites	0%																

Modules declared: (X = included; ND = not declared).

The table below presents the processes contributing more than 10% to the GWP-GHG results of life cycle modules A1–A3.

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1–A3	% GWP-GHG A1–A3
Adhesives	Collected data, database	pro clima, LCA FE (2026.1)	2023	Primary data, secondary data	0%	69%
Packaging	Collected data, database	pro clima, LCA FE (2026.1)	2023	Primary data, secondary data	0%	13%
Other processes with <10% GWP-GHG	Collected data, database	pro clima, LCA FE (2026.1)	2023	Primary data, secondary data	3%	18%
Total share of primary data, of GWP-GHG results for A1–A3					3%	100%

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.

Maximum variations in the results of individual products compared to the representative product in %: None of the indicators present a variation in the result of an impact category over the life cycle (modules A–C) greater than 10%:

Variation of products ranges from -2% to 5% in the GWP-GHG Indicator.

Environmental performance

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

EN 15804 +A2 (based on EF 3.1) characterisation factors provided in LCA for Experts were applied. Biogenic CO₂ and materially bound primary energy were adjusted manually based on the composition of the declared unit.

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit								
Indicator	Unit	Tot. A1-A3	A5	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	1.38E+00	4.68E-02	0.00E+00	8.65E-03	1.19E+00	0.00E+00	-4.72E-01
GWP-biogenic	kg CO ₂ eq.	-1.74E-01	1.88E-01	0.00E+00	1.06E-05	1.00E-04	0.00E+00	-2.40E-03
GWP-luluc	kg CO ₂ eq.	1.23E-01	1.31E-05	0.00E+00	3.81E-05	2.99E-05	0.00E+00	-5.97E-04
GWP-total	kg CO ₂ eq.	1.33E+00	2.35E-01	0.00E+00	8.69E-03	1.19E+00	0.00E+00	-4.75E-01
ODP	kg CFC 11 eq.	7.67E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-9.00E-12
AP	mol H ⁺ eq.	4.56E-03	3.60E-05	0.00E+00	1.57E-05	1.78E-04	0.00E+00	-6.16E-04
EP-freshwater	kg P eq.	2.12E-05	6.44E-09	0.00E+00	2.15E-08	3.03E-08	0.00E+00	-2.21E-07
EP-marine	kg N eq.	2.38E-03	1.51E-05	0.00E+00	6.59E-06	5.04E-05	0.00E+00	-1.78E-04
EP-terrestrial	mol N eq.	1.42E-02	1.85E-04	0.00E+00	7.15E-05	7.90E-04	0.00E+00	-2.06E-03
POCP	kg NMVOC eq.	4.00E-03	9.66E-03	0.00E+00	1.44E-05	1.38E-04	0.00E+00	-4.66E-04
ADP-minerals&metals*	kg Sb eq.	1.01E-06	5.71E-10	0.00E+00	6.21E-10	2.72E-09	0.00E+00	-7.88E-08
ADP-fossil*	MJ	3.21E+01	6.29E-02	0.00E+00	1.11E-01	3.23E-01	0.00E+00	-8.03E+00
WDP*	m ³	4.59E-01	1.10E-02	0.00E+00	3.45E-05	1.24E-01	0.00E+00	-3.91E-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 of these results are high or as there is limited experience 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).

Potential environmental impact – additional mandatory and voluntary indicators

Results per functional or declared unit								
Indicator	Unit	Tot. A1-A3	A5	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO ₂ eq.	1.51E+00	4.68E-02	0.00E+00	8.68E-03	1.19E+00	0.00E+00	-4.72E-01
PM	Disease incidence	ND	ND	ND	ND	ND	ND	ND
IR	kBq U235 eq.	ND	ND	ND	ND	ND	ND	ND
ETP-fw	CTUe	ND	ND	ND	ND	ND	ND	ND
HTP-c	CTUh	ND	ND	ND	ND	ND	ND	ND
HTP-nc	CTUh	ND	ND	ND	ND	ND	ND	ND
SQP	dimensionless	ND	ND	ND	ND	ND	ND	ND
Acronyms	GWP-GHG = 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; PM = Particulate matter emissions; IR = Ionizing radiation, human health; ETP-fw = Eco-toxicity – freshwater; HTP-c = Human toxicity, cancer effect; HTP-nc = Human toxicity, non-cancer effects; SQP = Land use related impacts/Soil quality							

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 CO₂ is set to zero."

Resource use indicators

Results per functional or declared unit								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
PERE	MJ	7.68E+00	2.02E+00	0.00E+00	7.95E-03	1.04E-01	0.00E+00	-2.84E+00
PERM	MJ	2.00E+00	-2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	9.68E+00	2.39E-02	0.00E+00	7.95E-03	1.04E-01	0.00E+00	-2.84E+00
PENRE	MJ	1.90E+01	5.84E-01	0.00E+00	1.11E-01	1.29E+01	0.00E+00	-8.03E+00
PENRM	MJ	1.31E+01	-5.21E-01	0.00E+00	0.00E+00	-1.26E+01	0.00E+00	0.00E+00
PENRT	MJ	3.21E+01	6.29E-02	0.00E+00	1.11E-01	3.23E-01	0.00E+00	-8.03E+00
SM	kg	3.28E-02	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
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	1.33E-02	2.64E-04	0.00E+00	2.50E-06	2.92E-03	0.00E+00	-2.18E-03
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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water							

Waste indicators

Results per functional or declared unit								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.70E-05	4.70E-11	0.00E+00	5.00E-12	2.09E-10	0.00E+00	-5.96E-09
Non-hazardous waste disposed	kg	6.60E-02	1.39E-03	0.00E+00	2.15E-05	4.15E-02	0.00E+00	-3.79E-03
Radioactive waste disposed	kg	4.96E-04	3.76E-06	0.00E+00	1.74E-07	1.62E-05	0.00E+00	-5.12E-04

Output flow indicators

Results per functional or declared unit								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Components for re-use	kg	1.20E-02	5.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	4.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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
Exported energy, electricity	MJ	0.00E+00	1.53E-01	0.00E+00	0.00E+00	1.93E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	2.72E-01	0.00E+00	0.00E+00	3.45E+00	0.00E+00	0.00E+00

Additional environmental information

TRACI Indicators

The following TRACI indicators v 2.1 were calculated to comply with US Market requirements. The EPD complies with the ISO 21930:2017 Standard.

These indicators are provided as additional information to the EN 15804+A2 indicators to facilitate the use of this EPD in the North American market. As they are based on the TRACI v2.2 impact assessment method, the results are not directly comparable with the environmental indicators calculated according to EN 15804+A2.

	Unit	A1-A3	A5	C1	C2	C3	C4	D
Acidification Air	kg SO ₂ eq.	4.24E-03	3.19E-05	0.00E+00	1.37E-05	1.45E-04	0.00E+00	-5.33E-04
Ecotoxicity (recommended and interim)	CTUe	7.01E-01	2.58E-03	0.00E+00	1.17E-03	1.75E-03	0.00E+00	-2.63E-02
Ecotoxicity (recommended)	CTUe	3.36E-01	2.34E-03	0.00E+00	4.01E-04	6.12E-04	0.00E+00	-1.34E-02
Eutrophication – freshwater	kg P eq.	9.45E-06	2.91E-09	0.00E+00	9.72E-09	1.37E-08	0.00E+00	-1.01E-07
Eutrophication – marine	kg N eq.	1.91E-03	2.68E-05	0.00E+00	1.03E-05	9.70E-05	0.00E+00	-2.85E-04
Global Warming Air, excl. biogenic CO ₂	kg CO ₂ eq.	1.37E+00	4.67E-02	0.00E+00	8.54E-03	1.19E+00	0.00E+00	-4.68E-01
Global Warming Air, incl. biogenic CO ₂	kg CO ₂ eq.	1.09E+00	1.02E-01	0.00E+00	8.39E-03	1.19E+00	0.00E+00	-4.68E-01
Human Health Particulate Air	kg PM _{2.5} eq.	8.08E-04	8.13E-07	0.00E+00	5.85E-07	5.76E-06	0.00E+00	-2.91E-05
Ozone Depletion Air	kg CFC 11 eq.	1.02E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.10E-11
Photochemical Oxidation Formation	kg O ₃ eq.	6.61E-02	2.27E-02	0.00E+00	2.75E-04	3.01E-03	0.00E+00	-9.66E-03
Human toxicity, cancer (recommended and interim)	CTUh	3.91E-09	3.30E-11	0.00E+00	6.00E-12	4.70E-11	0.00E+00	-1.41E-10
Human toxicity, cancer (recommended)	CTUh	1.24E-09	3.10E-11	0.00E+00	0.00E+00	6.00E-12	0.00E+00	-5.60E-11
Human toxicity, non-canc. (recommended and interim)	CTUh	4.71E-07	2.90E-10	0.00E+00	7.80E-10	5.09E-09	0.00E+00	-1.92E-08
Human toxicity, non-canc. (recommended)	CTUh	1.56E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.00E-12

Variability

The variability between the product variants is primarily driven by differences in packaging format (600 ml cartridge, 5 l bucket and 10 l bucket), adhesive colour, and the presence or absence of reinforcing fibres, while the underlying adhesive formulation and manufacturing process remain unchanged. The core product composition shows only minor variation, with adhesive content ranging from 0.743–0.748 kg, additives from 0.152–0.163 kg, and water from 0.156–0.170 kg per declared unit.

The greatest compositional differences occur in the packaging materials, particularly cardboard (0.001–0.109 kg) and polypropylene (0.007–0.042 kg), reflecting the different packaging systems used across the product group. Despite these differences, the total environmental impacts remain closely aligned, with deviations across all assessed impact categories ranging from -8% to +6% relative to the declared representative product. This confirms that packaging differences have only a limited influence on the overall environmental profile and supports the use of a single representative EPD for the complete product group.

	Min	Max
TRACI 2.2, Acidification Air	-7%	0%
TRACI 2.2, Ecotoxicity (recommended and interim)	-1%	2%
TRACI 2.2, Ecotoxicity (recommended)	-2%	2%
TRACI 2.2, Eutrophication – freshwater	-3%	6%
TRACI 2.2, Eutrophication – marine	-8%	3%
TRACI 2.2, Global Warming Air, excl. biogenic CO ₂	-2%	5%
TRACI 2.2, Global Warming Air, incl. biogenic CO ₂	-2%	5%
TRACI 2.2, Human Health Particulate Air	-4%	0%
TRACI 2.2, Ozone Depletion Air	-1%	0%
TRACI 2.2, Photochemical Oxidation Formation	-6%	2%
TRACI 2.2, Human toxicity, cancer (recommended and interim)	-1%	1%
TRACI 2.2, Human toxicity, cancer (recommended)	-2%	0%
TRACI 2.2, Human toxicity, non-canc. (recommended and interim)	-2%	1%
TRACI 2.2, Human toxicity, non-canc. (recommended)	0%	0%
MAX	0%	6%
Min	-8%	0%

Abbreviations

CAS No.	Chemical Abstracts Service Number
CEN	European Committee for Standardization
CFC-11 eq.	Chlorofluorocarbon-11 Equivalents
CO ₂ eq.	Carbon Dioxide Equivalents
EF 3.1	Environmental Footprint 3.1 characterization factors
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EU	Europe
GLO	Global
GPI	General Programme Instructions
ISO	International Organization for Standardization
kg	Kilogram
kg C	Kilograms of Carbon
kg CO ₂ eq.	Kilograms of Carbon Dioxide Equivalent
LCA	Life Cycle Assessment
LCI	Life Cycle Inventory
m ³	Cubic Meter
MJ	Megajoule
MNR	Module Not Relevant
N eq.	Nitrogen Equivalents
ND	Not Declared
NMVOC	Non-Methane Volatile Organic Compounds
P eq.	Phosphorus Equivalents
PCR	Product Category Rules
RSL	Reference service life
Sb eq.	Antimony Equivalents
SVHC	Substances of Very High Concern
Environmental impact indicators (EN 15804)	
GWP	Global Warming Potential
GWP-GHG	Global Warming Potential for greenhouse gases (kg CO ₂ eq.)
EP	Eutrophication Potential
GWP-total	Total Global Warming Potential(kg CO ₂ eq.)
GWP-fossil	Global Warming Potential from fossil (kg CO ₂ eq.)
GWP-biogenic	Global Warming Potential biogenic (kg CO ₂ eq.)
GWP-luluc	Global Warming Potential land use and land use change (kg CO ₂ eq.)
ODP	Ozone Depletion Potential (kg CFC-11 eq.)
AP	Acidification potential,(mol H ⁺ eq.)
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.)
ADPF	Abiotic depletion potential for fossil resources (MJ)
WDP	Water Deprivation Potential (m ³)
PERE	Renewable primary energy (excluding as raw materials) (MJ)
PERM	Renewable primary energy used as raw materials (MJ)
PERT	Total renewable primary energy (MJ)
PENRE	Non-renewable primary energy (excluding as raw materials) (MJ)
PENRM	Non-renewable primary energy 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 (m3)
HWD	Hazardous waste disposed (kg)
NHWD	Non-hazardous waste disposed (kg)
RWD	Radioactive waste disposed (kg)
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)

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Version history

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