# Environmental Product Declaration

In accordance with ISO 14025 and EN 15804: 2012 + A2: 2019 for

## ORCON F

## ORCON FB (Finland)

### All-round adhesive sealant for interior and exterior use

from

### pro clima – MOLL bauökologische Produkte GmbH




| | |
|---|---|
| Programme: | The International EPD® System, www.environdec.com |
| Programme operator: | EPD International AB<br>Box 21060<br>SE-10031 Stockholm, Sweden |
| EPD registration number: | EPD-IES-0016048 |
| Version date: | 2026-10-01 |
| Valid until: | 2029-09-16 |
| EPD type: | EPD of multiple products, based on worst-case results |

*An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com*

# General information

**Programme information**

Programme: The International EPD® System
Address: EPD International AB
Box 21060
SE-10031 Stockholm, Sweden
Website: www.environdec.com
E-mail: info@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 1.3.4.

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. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact

**Life Cycle Assessment (LCA)**

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

**Third-party verification**

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

☑ EPD verification by individual verifier
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 registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same 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 equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

# Company information

**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

**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 control 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.
- Highest ecological value.

**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.

**Name and location of production site(s)**
Manufacturer: pro clima / MOLL bauökologische Produkte GmbH
Location of manufacturing sites: Germany
The declared product is manufactured at two production sites in Germany under contract for pro clima / MOLL bauökologische Produkte GmbH. The cities are not disclosed in this public EPD for reasons of commercial confidentiality, as publication would reveal commercially sensitive supply chain information. The exact production sites are documented in the background report and have been made available to the independent verifier.
Final warehouse and quality control: pro clima / MOLL bauökologische Produkte GmbH, Schwetzingen, Germany

# Product information

**Product name**
ORCON F and ORCON FB

**Product identification**
All-round adhesive sealant for interior and exterior use, following the requirements of DIN 4108-11 ("Thermal insulation and energy economy in buildings – Method to determine the durability of bondings with adhesive tapes and adhesive masses for the establishment of airtight layers under climatic conditions representative for indoor environments"; 2018)

**Product description**
ORCON F and ORCON FB consist of a dispersion based on acrylic acid copolymers and ethanol. It is free from plasticisers and halogens.

**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**
ORCON F (cartridge: 310 ml): GTIN 4026639016270
ORCON F (foil tube: 600 ml): GTIN 4026639016287
ORCON FB for Finland (cartridge: 310 ml): GTIN 4026639247445
ORCON FB for Finland (foil tube: 600 ml): GTIN 4026639247452

This EPD declares the specific product – ORCON F in cartridge packaging – as the worst-case scenario, covering multiple GTINs and product variants. While all variants are essentially the same product, they differ only in their colour and packaging. These variations meet specific local market requirements, but do not alter the inherent environmental characteristics of the product, thus justifying a common EPD.

**Geographical Scope**
Global

**Applications**
Creation of airtight seals for vapour control and airtight membranes of all kinds, including all pro clima vapour control membranes and airtight membranes (e.g. pro clima INTELLO, INTELLO X, DB+, DASATOP and DA).
Creation of windtight seals for roofing underlay membranes of all kinds (PP, PET). Sealed joints with the pro clima SOLITEX MENTO series, SOLITEX QUANTHO, SOLITEX ADHERO or SOLITEX UM connect, for example, meet the requirements specified by the German ZVDH product data sheets.
Creation of windtight seals for breather membranes (e.g. pro clima SOLITEX FRONTA series).
Sealing overlaps and joints for trickle protection membranes.

**Properties**
Reliable adhesion even during frosty conditions: can be worked with above –10 °C (14 °F). Particularly durable: adhesion for 100 years, independently tested and confirmed. Ensures firm and permanently elastic adhesion. Ensures reliable joints: penetrates deep into the subsurface, remains elastic. Test winner in April 2012 with the German product-testing foundation 'Stiftung Warentest'. Construction in adherence with standards: for airtight sealing in accordance with DIN 4108-7, SIA 180 and RE 2020. Can be stored down to -20 °C (-4 °F). Material does not freeze in the tube. Excellent values in hazardous substance testing, has been tested according to the ISO 16000 evaluation scheme.

**Technical specifications**

| Property | Regulation | Value |
|---|---|---|
| Typical consumption (bead width 5 mm ; 3/16") | N/A | 21.5 ml/m |
| Density | N/A | 1.023 g/cm³ |
| Colour | N/A | Green (ORCON F); beige (ORCON FB) |
| Elasticity | N/A | High elasticity |
| Bond durability, non-aged/aged | DIN 4108-11 / EN 17990 | Passed |
| Installation temperature | N/A | -10 °C to 50 °C ; 14 °F to 122 °F |
| Temperature resistance | N/A | Permanent -40 °C to 80 °C ; -40 °F to 176 °F |
| Storage | N/A | Down to -20 °C; -4 °F, cool and dry |

# LCA information

The EPD conducted is for the worst-case scenario of the specific product ORCON F (in cartridge packaging).

**Declared unit:** 1 kg of adhesive
**Conversion factor to mass:** not needed, as the declared unit is in kg
**Reference service life:** 50 years
**Time representativeness:** Based on yearly manufacturing data from 01/01/2020 until 31/12/2020.

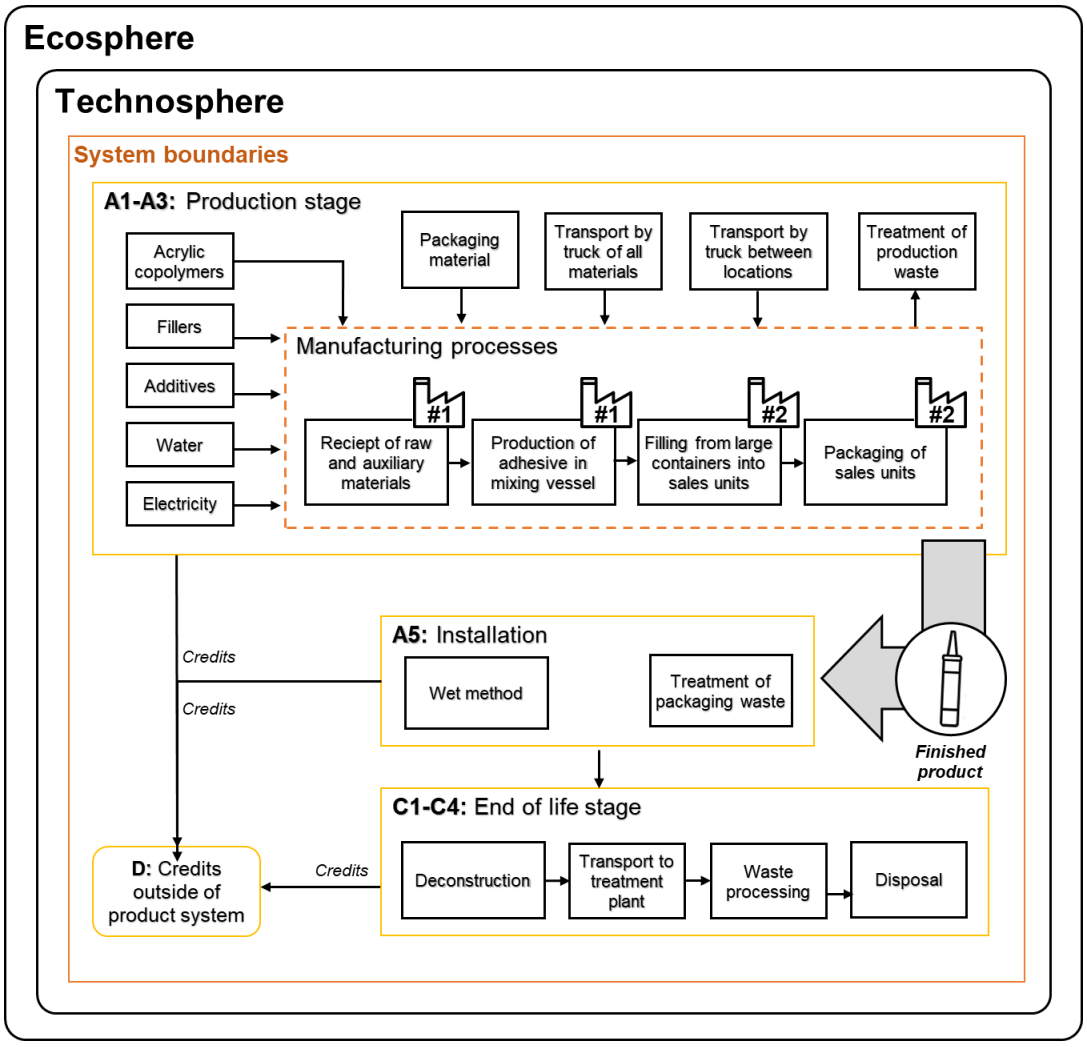
**Description of the manufacturing processes**
The ORCON F adhesive sealant is produced by blending its components in a batch process, adhering to precise temperature, pressure, and formulation guidelines. Once the adhesive is prepared, it is packaged into cartridges or foil tubes for individual sale and then shipped for further distribution.

**Database and LCA software used**
For the LCA model, the software system for holistic balancing (LCA for Experts) version 10.7 was used. Background data sets from the current version of the LCA for experts (GaBi) databases (Service pack 2023.2) were used entirely.

**Description of system boundaries**
b) Cradle to gate with options, modules C1–C4, module D and with optional modules (A1–A3 + C + D and additional modules). The additional module is A5.

- The biogenic C of the product packaging is balanced out in module A5
- Impacts of adhesive drying are included in module A5.
- Infrastructure and capital goods are excluded from the system boundaries.
- All processing steps and locations are balanced within the system boundaries.
- The LCI data manufacturing 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 C3, where the product reaches the end-of-waste status.
- All the LCI data in Modules A1-A5 corresponds to primary data collected from the manufacturing plant and contracted suppliers, including material and energy inputs, and waste and emission outputs.

System diagram




Each processing step within the system boundaries is marked with an icon and number (#1, #2, etc.), indicating the specific production site where it occurs. 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, referring to packaging for the mixing and transportation of the adhesive in different sizes of steel drums. The packaging for transportation of the product in large steel drums from the production site (Depicted as #1 in the system diagram) to the filling station (#2).
- 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 (#1). All materials are procured from providers within a distance of less than 1400 km.
- After the mixing batch vessel is completed, the adhesive is transported in large steel drums to the filling station (#2) for packing in the cartridges as individual sales units and then loaded on pallets. The transportation of raw materials for packaging, as well as the transportation of the large steel drums within Germany for filling, is modelled in Module A2.

**A3. Manufacturing**

- Manufacturing of the defined ORCON F foil adhesive occurs in Germany.
- The production of the adhesive is done by mixing the components in a batch system, under specific temperature, pressure and recipe. The adhesive is transported in steel drums to the filling station, where the cartridge packaging is printed, assembled with the nozzle and plunger, and subsequently filled with adhesive. 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. Resulting credits are assigned to module D.
- 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 taken into account in module A5.
- The incineration of packaging waste receives credits for electricity and thermal energy generation, which are allocated in Module D.
- The loss of mass of the adhesive during drying was taken into account in module A5. The environmental impacts of such vapor outputs were included in the LCA.

**C1-C4. End of Life**

- The adhesive is treated as waste in module C3 by means of incineration with energy recovery.
- Module C2 contains the environmental impact of transportation of the product to the waste treatment plant.
- Module C3 contains the necessary processes for waste treatment at the end of the product life cycle.
- The loads for waste treatment are mapped here until the end of the waste property is reached.
- Emissions are assigned to module C3. Resulting credits are assigned to module D.

**D. Reuse, recovery, recycling potential**

- This product has no considerable benefits due to recycling or/and reuse, but considerable benefits from energy recovery in End of Life.
- The value flows resulting from the treatment of production waste in module A3, packaging waste in module A5 and the product in module C3, which can potentially serve as material or energy input for a downstream product system in the form of the energy recovered from the waste-to-energy treatment and material recovery, are accounted for completely in module D as credits outside of product system.

**More information**

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

Electricity in A1-A3 accounts for less than 30% of the GWP-GHG results of modules A1-A3. 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 from the reference year 2020.

**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 | 5.5% | | | | | | | | | | | | | | | | |
| Variation – products | -25.9% | | | | | | | | | | | | | | | | |
| Variation – sites | 0% | | | | | | | | | | | | | | | | |

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

# Content information

| Product components | Weight, kg | Post-consumer material, weight-% | Biogenic material, weight-% and kg C/kg |
|---|---|---|---|
| Acrylic copolymers | 0.788 | 0.0% | 0.0%- 0 kg C/kg |
| Fillers | 0.038 | 0.0% | 0.0%- 0 kg C/kg |
| Additives | 0.119 | 0.0% | 0.0%- 0 kg C/kg |
| Water | 0.056 | 0.0% | 0.0%- 0 kg C/kg |
| Total product | 1.000 | 0.0% | 0.0%- 0 kg C/kg |
| **Packaging materials** | **Weight. kg** | **Weight-% (relative to the product)** | **Weight biogenic carbon, kg C/kg** |
| Plastic parts (HDPE) | 0.187 | 14.2% | 0 kg C/kg |
| Cardboard | 0.068 | 5.2% | 0.028 kg C/kg |
| Film (PE) | 0.001 | 0.1% | 0 kg C/kg |
| Pallet | 0.064 | 4.8% | 0.028 kg C/kg |
| Total packaging | 0.320 | 24.3% | 0.056 kg C/kg |
| **TOTAL Product with packaging** | **1.320** | **100%** | |

The biogenic carbon content of product and packaging is 0.205 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 |

# Environmental information

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks. According to the EN 15804 standard, the characterization factors of EU-JRC must be applied. The characterization factors are available at the following internet connection: http://eplca.jrc.ec.europa.eu/LCDN/developerEF.xhtml
Disclaimer: The use of the results of modules A1-A3 is discouraged without considering the results of modules C1-C4

**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. | 2.04E+00 | 6.11E-01 | 0.00E+00 | 4.56E-03 | 1.20E+00 | 0.00E+00 | -7.41E-01 |
| GWP-biogenic | kg $CO_2$ eq. | -2.09E-01 | 2.09E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| GWP-luluc | kg $CO_2$ eq. | 1.03E-01 | 1.81E-05 | 0.00E+00 | 4.22E-05 | 6.76E-06 | 0.00E+00 | -5.28E-05 |
| GWP-total | kg $CO_2$ eq. | 1.93E+00 | 8.20E-01 | 0.00E+00 | 4.61E-03 | 1.20E+00 | 0.00E+00 | -7.41E-01 |
| ODP | kg CFC 11 eq. | 8.63E-08 | 2.91E-14 | 0.00E+00 | 5.92E-16 | 1.11E-13 | 0.00E+00 | -5.38E-12 |
| AP | mol $H^+$ eq. | 6.10E-03 | 6.33E-05 | 0.00E+00 | 7.70E-06 | 2.44E-04 | 0.00E+00 | -9.97E-04 |
| EP-freshwater | kg P eq. | 2.20E-05 | 1.38E-08 | 0.00E+00 | 1.66E-08 | 4.17E-08 | 0.00E+00 | -1.14E-06 |
| EP-marine | kg N eq. | 2.87E-03 | 1.38E-05 | 0.00E+00 | 3.02E-06 | 8.42E-05 | 0.00E+00 | -2.73E-04 |
| EP-terrestrial | mol N eq. | 2.01E-02 | 2.97E-04 | 0.00E+00 | 3.47E-05 | 1.13E-03 | 0.00E+00 | -2.89E-03 |
| POCP | kg NMVOC eq. | 5.74E-03 | 6.40E-02 | 0.00E+00 | 6.88E-06 | 2.25E-04 | 0.00E+00 | -7.90E-04 |
| ADP-minerals & metals* | kg Sb eq. | 3.62E-06 | 3.94E-10 | 0.00E+00 | 3.02E-10 | 1.00E-09 | 0.00E+00 | -3.83E-07 |
| ADP-fossil* | MJ | 5.41E+01 | 9.82E-02 | 0.00E+00 | 6.20E-02 | 2.87E-01 | 0.00E+00 | -1.32E+01 |
| WDP | $m^3$ | 4.93E-01 | 5.62E-02 | 0.00E+00 | 5.50E-05 | 1.25E-01 | 0.00E+00 | -6.81E-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.

## 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. | 2.14E+00 | 6.11E-01 | 0.00E+00 | 4.61E-03 | 1.20E+00 | 0.00E+00 | -7.41E-01 |
| PM | Disease incidence | ND | ND | ND | ND | ND | ND | ND |
| IRP | 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 = Global warming potential - Greenhouse gases; PM = Particulate matter emissions; IRP = 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 to Soil quality | | | | | | | |

[1] The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

## Use of resources

| Results per functional or declared unit | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Indicator | Unit | Tot. A1-A3 | A5 | C1 | C2 | C3 | C4 | D |
| PERE | MJ | 8.84E+00 | 2.32E+00 | 0.00E+00 | 4.51E-03 | 6.92E-02 | 0.00E+00 | -3.67E+00 |
| PERM | MJ | 2.30E+00 | -2.30E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | MJ | 1.11E+01 | 2.03E-02 | 0.00E+00 | 4.51E-03 | 6.92E-02 | 0.00E+00 | -3.67E+00 |
| PENRE | MJ | 2.23E+01 | 8.27E+00 | 0.00E+00 | 6.22E-02 | 2.40E+01 | 0.00E+00 | -1.32E+01 |
| PENRM | MJ | 3.19E+01 | -8.17E+00 | 0.00E+00 | 0.00E+00 | -2.37E+01 | 0.00E+00 | 0.00E+00 |
| PENRT | MJ | 5.41E+01 | 9.84E-02 | 0.00E+00 | 6.22E-02 | 2.88E-01 | 0.00E+00 | -1.32E+01 |
| SM | kg | 8.97E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.41E-02 |
| 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 | $m^3$ | 1.60E-02 | 1.32E-03 | 0.00E+00 | 4.94E-06 | 2.93E-03 | 0.00E+00 | -8.91E-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 | | | | | | | |

The indicator value for PENRM in C3 is negative. as the non-renewable primary energy resources used as raw materials leave the product system

## Waste production and output flows

Waste production

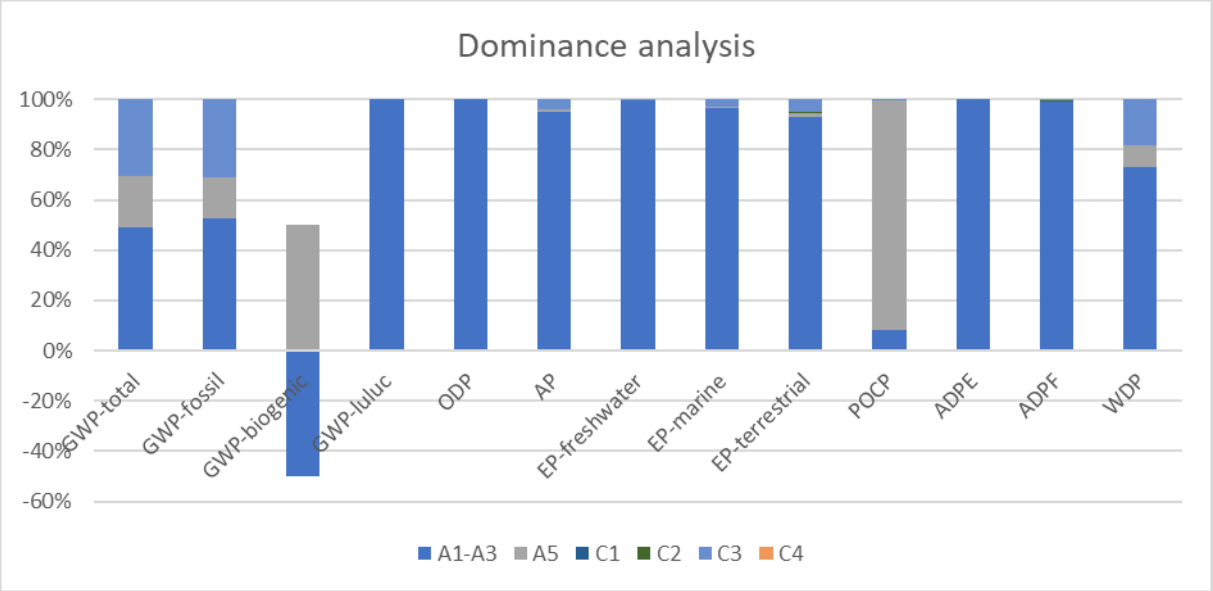
| Results per functional or declared unit | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Indicator | Unit | Tot. A1-A3 | A5 | C1 | C2 | C3 | C4 | D |
| Hazardous waste disposed | kg | 2.71E-05 | 1.71E-12 | 0.00E+00 | 1.93E-13 | 8.40E-12 | 0.00E+00 | -5.05E-09 |
| Non-hazardous waste disposed | kg | 4.82E-02 | 2.42E-03 | 0.00E+00 | 9.49E-06 | 4.12E-02 | 0.00E+00 | 8.58E-04 |
| Radioactive waste disposed | kg | 9.86E-04 | 4.41E-06 | 0.00E+00 | 1.16E-07 | 1.51E-05 | 0.00E+00 | -9.66E-04 |

Output flows

| Results per functional or declared unit | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Indicator | Unit | Tot. A1-A3 | A5 | C1 | C2 | C3 | C4 | D |
| 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 |
| Material for recycling | kg | 6.27E-02 | 7.06E-02 | 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 | 5.22E-02 | 1.30E+00 | 0.00E+00 | 0.00E+00 | 1.88E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, thermal | MJ | 1.20E-01 | 2.31E+00 | 0.00E+00 | 0.00E+00 | 3.39E+00 | 0.00E+00 | 0.00E+00 |

# Interpretation

The following dominance analysis show the individual impact categories and explore them in depth.




The environmental impacts were analysed using the example of global warming potential (GWP total) to identify the responsible sources along the life cycle. Modules A1-A3 (48.8%) has dominant influence followed by Module C3 (30.3%) and module A5 (20.7%) on GWP total. In modules A1-A3 the extraction of the adhesive and the polyethylene, in module C3, the incineration of the adhesive, and in module A5 the incineration of the polyethylene packaging is the main responsibility.

Transportation of raw materials to and between the manufacturing sites (A2) and disposal transportation of the product in EoL (C2) are not very relevant in terms of GWP. The negative contribution to biogenic GWP in A1-A3 and the positive contribution in A5 can be explained by the use of wooden and cardboard packaging, in which biogenic carbon is bound.

The extraction of the adhesive has the largest contribution to the impacts of the indicators GWP luluc, ODP, AP, EP, ADPF and WDP, the steel drum for ADPE, the ethanol evaporation for POCP and the incineration of the adhesive for GWP fossil.

The data quality of the relevant generic datasets used is classified as very good, good or satisfactory. Relevant data sets are defined as data sets that together account for at least 80% of the absolute impact of each core indicator included in the EPD across the declared modules with the exception of Module D.

The variation of the environmental impact indicator results for modules A to C between the included products and the declared worst-case is up to 27.3%:

| Highest variations between the declared worst-case product and the included products | | |
|---|---|---|
| Indicator | Unit | For modules A to C |
| GWP-fossil | % | -26.6 |
| GWP-biogenic | % | 0.0 |
| GWP-luluc | % | -0.1 |
| GWP-total | % | -25.9 |
| ODP | % | 0.0 |
| AP | % | -8.2 |
| EP-freshwater | % | -1.8 |
| EP-marine | % | -6.4 |
| EP-terrestrial | % | -10.1 |
| POCP | % | -1.1 |
| ADP-minerals & metals | % | -0.3 |
| ADP-fossil | % | -27.3 |
| WDP | % | -12.4 |

# References

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# Version history

**Version 1, 2024-09-16**

- Original Version of the EPD

**Version 2, 2025-08-18**

- Differences versus the previously published version:
  - Updated subtitle of EPD on the cover page and in the EPD from "all-round joint adhesive for interior and exterior use" to "All-round adhesive sealant for interior and exterior use".
  - Added revision date.
  - Revised text under organization description: “high-performance vapour control (instead of check) and airtightness membranes”.
  - Incorporated ORCON FB (Finland) into the product information chapter and provided a rationale for its inclusion.
  - Shortened the Applications paragraph.
  - Added ORCON FB and Regulations column to the technical specifications table.
  - Included the EN 17990:2025 norm in the references.
  - Corrected the title of the DIN 4108-7:2011-01 norm in the references.

**Version 3, 2026-10-01**

- Differences versus the previously published version:
  - Correction to the section “Name and location of production site(s)”.

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EPD-0002-16/09/2024

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