Environmental Product Declaration

In accordance with ISO 14025:2006, EN 15804:2012+A2:2019 / AC:2021 and c-PCR-018 Ventilation components (Adopted from NPCR 030:2021) for:

OZEO FLAT H2 ECOWATT RE

EPD of multiple products, based on a representative product. Products included:

- OZEO FLAT H2 ECOWATT RE
- OZEO FLAT H ECOWATT R8

From:

S&P Sistemas de Ventilación, S.L

Programme:	The International EPD® System, www.environdec.com
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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

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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
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Accountabilities for PCR, LCA and independent, third-party verification

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 published on 2024.04.30 and c-PCR-018 Ventilation components (Adopted from NPCR 030:2021).

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: Martí Roig Rabadà, *Product Sustainability Manager, Soler & Palau.*

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: Elisabet Amat Guasch (Greenize Projects) (eamat@greenize.es)

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:** S&P SISTEMAS DE VENTILACIÓN, SL; Calle Llevant, 4 - Polígono Industrial Llevant; 08150 Parets del Vallès (Barcelona).
- **Contact**: Martí Roig Rabadà (mroig@solerpalau.com), Product Sustainability Manager.
- **Description of the organisation:** Committed to improving indoor air quality and making it accessible to everyone, S&P develops highly energy-efficient, reliable, and durable ventilation solutions that benefit both our customers and the planet. Easy installation is a key pillar of our innovation, ensuring our products meet the needs of both users and installers. We also prioritize human well-being, which is why we are dedicated to designing exceptionally quiet equipment.

- **Product-related or management system-related certifications:** ISO 9001 (ES-257/2001) and ISO 14001 (ES-2001/0052).
- **Name and location of production site(s):** The product is manufactured in one site of the S&P SISTEMAS DE VENTILACIÓN, SL group, located in the province of Barcelona.

Soler&Palau Ventilation Group

Product information

- **Product name:** OZEO FLAT H2 ECOWATT RE.
- **Product identification:** The OZEO FLAT H/H2 ECOWATT R8/RE is Controlled Mechanical Ventilation unit, with low profile and low noise level, which ensures the permanent renewal of air in dwellings.
- **Product description:** Low-profile and low-noise Controlled Mechanical Ventilation unit, which ensures permanent air renewal in dwellings while improving the home's overall energy performance by reducing heating consumption, supported by an EC motor that ensures efficient energy use. Made of expanded polypropylene (EPP), it offers very low sound levels and minimal weight. Its flexible spigot configuration allows for easy installation and adaptation. It can be mounted in false ceilings or on walls.
- **UN CPC code:** Ventilation and air-conditioning equipment installation services (CPC 54632, version 2.1 dated 2015).
- **Geographical scope:** The product is manufactured in Spain. LCA downstream scenario considered is Europe, however product can be used globally.
- **Included products:** This EPD covers multiple products and is based on the OZEO FLAT H2 ECOWATT RE, chosen as the representative model due to its status as the best-selling in the range.

  The products included in this EPD are:

Product name	Weight (Kg)*
OZEO FLAT H2 ECOWATT RE	4,87
OZEO FLAT H ECOWATT R8	4,87

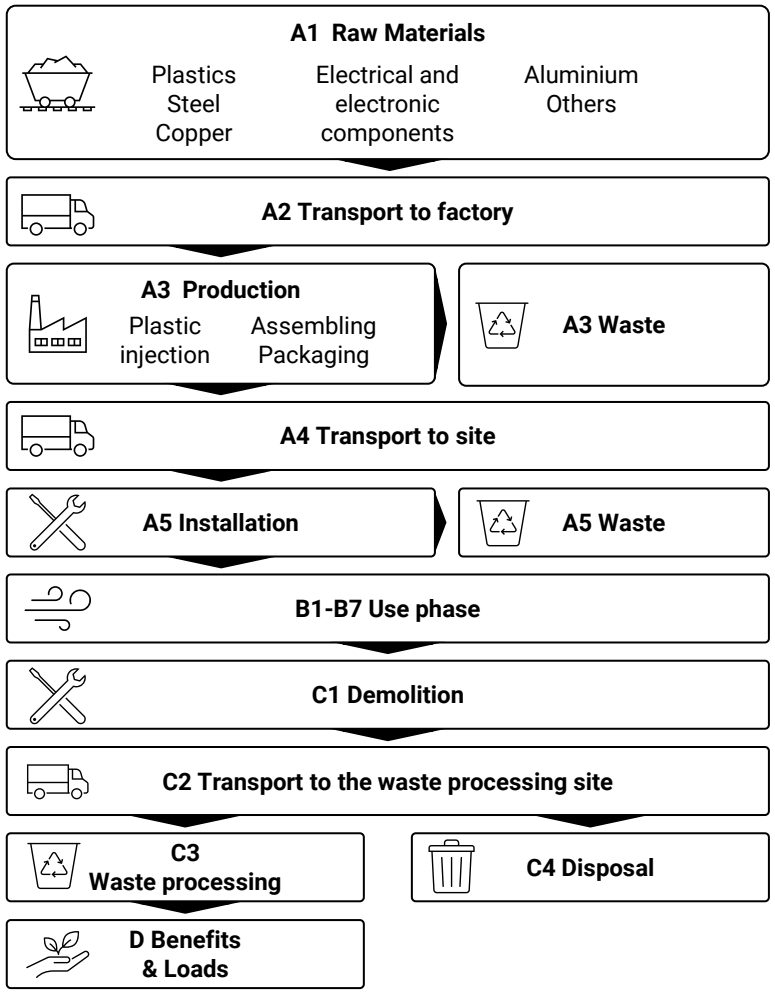
* Including packaging except wooden pallet and plastic film.

Both products have the same structure, differing only in electronics programming.

LCA information

- **Declared unit:** 1 unit of OZEO FLAT H2 ECOWATT RE.
- **Reference service life:** The product is maintained for 17 years. The period has been selected to seek present and future harmonization with other international environmental product declaration programs as for example PEP Ecopassport.
- **Technical service life:** 25 years.
- **Time representativeness:** All specific data related to the production plants and use, used for the study date from 2023.
- **Database(s) and LCA software used:** The primary inventory data has been obtained from S&P, corresponding to the references listed above, produced in 2023 at S&P production site in Barcelona province, Spain. The secondary data has been extracted from the Ecoinvent version 3.10.1 database, included in the OneClick LCA software and internationally recognized. Whenever possible, inventory data related to Spain has been selected; otherwise, data from Europe in general has been used.
- **Description of system boundaries:** Cradle to gate with options, modules A4-A5, modules B1-B7, modules C1–C4, and module D.
- **Cut-off rules:** In accordance with the provisions of the PCR 2019:14 construction products, version 1.3.4 and the standard UNE-EN 15804:2012+A2:2020, at least 95% of total inflows and outflows (mass and energy) per module have been included. The "polluter pays" principle has been applied. Additionally, the following processes have been excluded from the study scope:
  - Manufacture of equipment used in production.
  - Business trips.
  - Maintenance activities at the production plants.
  - Transportation of personnel to and within the plants.
  - Diffuse particle emissions during the transport and storage of raw materials.

- **System diagram:**



- **Hypothesis and considerations applied:**

  PRODUCT STAGE (A1-A3): Encompasses the manufacturing of raw materials, their transportation to the production facility, and all stages of the product manufacturing process.

  - **Raw materials supply (A1):** This stage includes the procurement of raw materials and pre-assembled components used in the product's manufacturing.
  - **Transport (A2):** This stage accounts for the transportation of raw materials and pre-assembled components from direct suppliers to S&P production site.
  - **Manufacturing (A3):** The product is manufactured and assembled almost entirely in-house. This stage covers plastic injection molding of some plastic components, full product assembly, and quality testing.

    Mass allocation has been applied to accurately determine the share of resources.

    Electricity used during the manufacturing process is backed by a certificate of origin issued by the National Commission on Markets and Competition (CNMC), guaranteeing that it is sourced entirely from renewable energy, specifically wind (16%), hydro (26%), and solar power (58%). The modelled energy mix for A3 module has an emission factor of 0,044 kg CO_{2eq}/kWh. The transformation losses have been included.

    Water consumption during manufacturing is negligible, as the process uses a closed-loop system.

  CONSTRUCTION PROCESS STAGE (A4-A5): The construction process stage includes the transportation of the product to the installation site and the processes required for its installation.

  - **Transportation to site (A4):** Transportation to the installation site is calculated based on the product's sales distribution in 2024. The distance to the site is estimated according to the geographic location of sales. Since the product is sold globally, transportation is assumed to cover 679 km by lorries (16–32 metric tons, EURO6).
  - **Installation (A5):** The installation process has a negligible impact, as it is performed manually. However, the impact of the product packaging that is generated as a waste during this phase is accounted for. Recycling processes have been modeled based on EUROSTAT statistics.

  USE STAGE (B1- B7): Includes all impacts associated with the operation, maintenance, and repair of the product throughout its lifespan.

  - **Use, Maintenance, Repair, Replacement, and Refurbishment (B1-B5):** These submodules are considered negligible because the product does not generate additional impacts during its use, requires no maintenance, and is not expected to need repairs, replacements, or refurbishments during its operational life.
  - **Operational Energy Use (B6):** The operational energy consumption (B6) has been calculated at a typical and realistic operating point, corresponding to the energy consumed when supplying its reference flow rate at a reference pressure. The equipment is assumed to operate continuously (24 hours per day) for 17 years. The annual energy consumption of one unit under these conditions is 78,8 kWh. For more information on equipment consumption, please visit our website where you can find all the technical data.

    As the product is used across Europe, an average market dataset for European low voltage electricity is used. The emission factor for the used dataset is 0,33 $KgCO_{2eq}$/kWh.
  - **Operational Water Use (B7):** This submodule is negligible, as the product does not require water for its operation.

END OF LIFE STAGE (C1-C4): Includes all processes related to the product's disposal, such as deconstruction, transport, waste processing, and final disposal.

- **Deconstruction (C1):** Deconstruction impacts are assumed to be zero, as the equipment is manually removed from buildings.
- **Transport (C2):** A transport distance of 50 km has been assumed for waste from the product deinstallation point to the waste management facility. It is assumed that transport is conducted using freight lorries of 16-32 metric tons, EURO6 - Europe.
- **Waste processing and disposal (C3-C4):** Waste management has been modeled using a conservative and realistic scenario, although the recyclability potential of the equipment is higher than what is stated in the LCA.

  The percentages for recycling, incineration (with or without energy recovery), and landfill disposal have been defined based on the norm EN 50693.

  These are as follows for the entire equipment: 32% of the unit is recycled, 36% is incinerated (with or without energy recovery), and 32% of the equipment is landfilled.

BENEFITS AND LOADS (D): Accounts for the potential environmental benefits and loads associated with the reuse, recycling, or energy recovery of materials after the product's end-of-life. These benefits are reported beyond the system boundaries.

- **Benefits and loads (D):** To ensure a realistic and evidence-based approach in modeling the impacts of Module D, data points generated by OneClick LCA and based on ECOINVENT data have been used. The quantities imputed to the different datapoints correspond only to waste that does not go to landfill.

Material	End of Life Stage (C1-C4) Scenario	Benefits and Loads (D) Scenario
Steel	80% is recycled 20% is landfilled	Generation of steel scrap
Aluminium	70% is recycled 30% is landfilled	Generation of aluminium scrap
Copper	60% is recycled 40% is landfilled	Generation of copper scrap
Polypropylene	20% is recycled 40% is incinerated with energy recovery 40% is landfilled	Generation of recycled Polypropylene Energy recovery
Other Plastics	50% is incinerated with energy recovery 25% is incinerated without energy recovery 25% is landfilled	Energy recovery
Electric Components	100% is landfilled	-
Cardboard Paper	83% is recycled 8% is incinerated 9% is landfilled	Generation of recycled cardboard Energy recovery
Wood	32% is recycled 30% is incinerated 38% is landfilled	Generation of recycled wood Energy recovery

Soler&Palau encourages the proper management of equipment waste and aims to increase the recyclability rate at the end of its useful life, as the product's **recyclability potential can be up to 80%.**

Modules Declared

Module	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
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	X
Geography	GLO	GLO	ES	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Specific data used	6,3% (GWP-GHG)			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	0% (GWP-GHG)			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

The variation in GWP-GHG between the two models is 0% because both products have the same structure, differing only in electronics programming.

Content information

None of the components present in the final product and included in the “Candidate List of Substances of Extreme Concert in the authorization procedure” of the REACH regulation has a percentage higher than 0,1%.

The wooden pallet is allocated among the units placed on it during transport, considering only a single-use cycle.

Plastic film is allocated at the factory level based on product weight.

Product components	Reference Product Weight, kg	Post-consumer material, weight-%	Biogenic material, weight, kg C/kg
Steel	1,37	0%	-
Aluminium	0,08	0%	-
Copper	0,07	0%	-
Plastics	2,38	0%	-
Electrical and electronic components	0,30	0%	-
TOTAL	**4,20**	**0%**	-

Packaging materials	Reference Product Weight, kg	Weight-% (versus the reference product)	Weight biogenic carbon, kg C/kg
Cardboard	0,63	15%	0,55
Paper	0,04	1%	0,55
Wood	0,78	18%	0,45
Plastic film	0,00	0%	-
TOTAL	**1,45**	**34%**	**0,50**

Results of the environmental performance indicators

Mandatory impact category indicators according to EN 15804

A declared unit of one unit of OZEO FLAT H2 ECOWATT RE with a weight of 4,87 kg is considered. The impact assessment is based on EF3.1. The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks. Usage of results from A1-A3 without considering the results of module C is not encouraged. When comparing results from different Environmental Product Declarations (EPDs), exercise caution due to varying methodologies and inherent uncertainties across programs.

Results per declared unit																
Indicator	**Unit**	**A1 - A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	Kg $CO_{2eq.}$	2,62E+01	6,28E-01	7,33E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,39E+02	0,00E+00	0,00E+00	3,99E-02	2,66E+00	4,20E-01	-3,53E+00
GWP-biogenic	Kg $CO_{2eq.}$	-2,35E+00	1,26E-04	2,35E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,84E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,75E-02
GWP-luluc	Kg $CO_{2eq.}$	7,87E-02	2,25E-04	5,47E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,35E+00	0,00E+00	0,00E+00	1,43E-05	8,27E-05	3,94E-05	-3,85E-03
GWP-total	Kg $CO_{2eq.}$	2,39E+01	6,28E-01	2,43E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,41E+02	0,00E+00	0,00E+00	3,99E-02	2,66E+00	4,20E-01	-3,52E+00
ODP	kg $CFC11_{eq.}$	6,34E-07	1,25E-08	6,91E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,08E-06	0,00E+00	0,00E+00	7,94E-10	1,01E-09	5,36E-10	-5,94E-08
AP	mol $H^{+}_{eq.}$	1,75E-01	1,31E-03	2,35E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,58E+00	0,00E+00	0,00E+00	8,30E-05	8,37E-04	2,40E-04	-2,30E-02
EP-freshwater	kg $P_{eq.}$	1,54E-02	4,23E-05	1,27E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,08E-01	0,00E+00	0,00E+00	2,69E-06	2,86E-05	9,09E-06	-7,46E-03
EP-marine	kg $N_{eq.}$	1,01E-01	3,14E-04	3,12E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,05E-01	0,00E+00	0,00E+00	1,99E-05	3,41E-04	5,09E-04	-4,80E-03
EP-terrestrial	mol $N_{eq.}$	3,11E-01	3,38E-03	8,44E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,63E+00	0,00E+00	0,00E+00	2,15E-04	3,14E-03	8,64E-04	-6,38E-02
POCP	kg $NMVOC_{eq.}$	1,31E-01	2,17E-03	3,01E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,19E+00	0,00E+00	0,00E+00	1,38E-04	8,39E-04	2,76E-04	-1,86E-02
ADP-minerals&metals*	kg $Sb_{eq.}$	2,54E-03	2,09E-06	2,35E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,92E-03	0,00E+00	0,00E+00	1,33E-07	2,25E-06	1,88E-07	-1,42E-04
ADP-fossil*	MJ	4,31E+02	8,83E+00	6,08E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,02E+04	0,00E+00	0,00E+00	5,61E-01	8,86E-01	5,25E-01	-6,18E+01
WDP*	m^3	9,84E+00	4,39E-02	1,68E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,78E+02	0,00E+00	0,00E+00	2,79E-03	1,06E-01	2,58E-02	-6,58E-01

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.

* EPD International 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.

Additional mandatory and voluntary impact category indicators

Results per declared unit																
Indicator	**Unit**	**A1 - A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG (1)	Kg $CO_{2eq.}$	2,63E+01	6,28E-01	7,34E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,40E+02	0,00E+00	0,00E+00	3,99E-02	2,66E+00	4,20E-01	-3,53E+00
PM	Disease inc.	1,55E-06	4,62E-08	3,91E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,20E-06	0,00E+00	0,00E+00	2,94E-09	8,46E-09	3,07E-09	-2,58E-07
IRP (2)	kBq U-235_{eq}	3,28E+00	1,14E-02	2,48E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,82E+02	0,00E+00	0,00E+00	7,24E-04	3,42E-03	2,30E-03	-5,25E-01
ETP-fw (3)	CTUe	5,26E+02	1,17E+00	9,21E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E+03	0,00E+00	0,00E+00	7,47E-02	2,03E+00	5,43E+00	-7,33E+01
HTP-c (3)	CTUh	2,05E-08	1,05E-10	3,16E-11	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-07	0,00E+00	0,00E+00	6,70E-12	1,66E-10	3,82E-11	-1,04E-10
HTP-nc (3)	CTUh	7,90E-07	5,59E-09	1,68E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,69E-06	0,00E+00	0,00E+00	3,55E-10	6,80E-09	2,52E-09	5,10E-08
SQP (3)	Pt	3,10E+02	5,34E+00	5,30E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,27E+03	0,00E+00	0,00E+00	3,39E-01	1,17E+00	6,90E-01	-1,86E+01

Acronyms: **GWP-fossil = GWP-GHG**: Global warming potential-Greenhouse gas; **PM**= particulate matter; **IRP** =Ionizing radiation, human health; **ETP-fw**=Ecotoxicity tap water-organic; **HTP-c**= human health, carcinogenic effects; **HTP-nc**= human health , non-carcinogenic 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.

2)This impact category refers to the eventual impacts of low amounts of ionizing radiation on human health from the nuclear fuel cycle. It does not consider the effects due to possible nuclear accidents or occupational exposure due to possible nuclear accidents or occupational exposure due to radon or from some construction materials.

3)The results of this environmental impact category must be used wisely, as the uncertainties in the results are elevated and the results are elevated and the experience with this parameter is limited.

Resource use indicators

Results per declared unit																
Indicator	**Unit**	**A1 - A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	3,76E+01	1,55E-01	-2,22E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,80E+03	0,00E+00	0,00E+00	9,83E-03	9,44E-02	3,38E-02	-8,05E+00
PERM	MJ	2,05E+01	0,00E+00	-2,05E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	5,81E+01	1,55E-01	-4,26E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,80E+03	0,00E+00	0,00E+00	9,83E-03	9,44E-02	3,38E-02	-8,05E+00
PENRE	MJ	3,41E+02	8,83E+00	-1,21E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,02E+04	0,00E+00	0,00E+00	5,62E-01	-5,30E+01	-3,77E+01	-6,54E+01
PENRM	MJ	8,23E+01	0,00E+00	-1,58E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-5,15E+01	-2,93E+01	1,57E+01
PENRT	MJ	4,23E+02	8,83E+00	-1,70E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,02E+04	0,00E+00	0,00E+00	5,62E-01	-1,04E+02	-6,69E+01	-4,97E+01
SM	kg	1,08E+00	4,10E-03	6,46E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,69E+00	0,00E+00	0,00E+00	2,61E-04	2,11E-03	2,02E-04	1,14E+00
RSF	MJ	4,60E-01	5,18E-05	4,85E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,35E-02	0,00E+00	0,00E+00	3,30E-06	3,53E-05	1,21E-05	-4,84E-04
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	2,52E-01	1,20E-03	-1,13E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,82E+00	0,00E+00	0,00E+00	7,65E-05	1,36E-03	-2,80E-03	-5,98E-02

Acronyms: PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water.

Waste indicators

Results per declared unit																
Indicator	**Unit**	**A1 - A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	3,58E+00	1,28E-02	6,38E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,58E+01	0,00E+00	0,00E+00	8,16E-04	3,36E-02	7,28E-03	-8,12E-01
Non-hazardous waste disposed	kg	1,18E+02	2,71E-01	2,20E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,00E+03	0,00E+00	0,00E+00	1,72E-02	1,27E+00	4,63E+00	4,10E+00
Radioactive waste disposed	kg	2,75E-03	2,83E-06	6,26E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,24E-02	0,00E+00	0,00E+00	1,80E-07	8,61E-07	5,63E-07	-1,34E-04

Output flow indicators

Results per declared unit																
Indicator	**Unit**	**A1 - A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	8,17E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,57E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	9,32E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,16E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	6,76E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,12E+00	0,00E+00	0,00E+00

Additional environmental information

Below are the impacts of the OZEO FLAT H2 ECOWATT RE module B6 (220-240V 50) RE when the product is functioning according to the defined scenario in different European countries. The dataset used corresponds to low-voltage electricity (market activity).

Results per declared unit - B6								
Indicator	**Unit**	**SPAIN**	**FRANCE**	**GERMANY**	**BELGIUM**	**NORWAY**	**ITALY**	**GREAT BRITAIN**
GWP-fossil	Kg $CO_{2eq.}$	2,75E+02	1,17E+02	5,22E+02	2,75E+02	3,21E+01	4,74E+02	3,49E+02
GWP-biogenic	Kg $CO_{2eq.}$	6,81E-01	2,09E-01	2,63E+00	4,02E-01	5,56E-01	1,94E+00	2,04E-01
GWP-luluc	Kg $CO_{2eq.}$	3,61E+00	1,17E-01	1,07E+00	7,37E-01	1,50E-01	1,02E-01	4,34E-01
GWP-total	Kg $CO_{2eq.}$	2,78E+02	1,18E+02	5,26E+02	2,76E+02	3,28E+01	4,75E+02	3,49E+02
ODP	kg $CFC11_{eq.}$	5,60E-06	4,14E-06	6,69E-06	1,17E-05	8,66E-07	1,09E-05	1,77E-05
AP	mol $H^{+}_{eq.}$	1,51E+00	8,16E-01	1,51E+00	8,72E-01	4,44E-01	2,00E+00	1,29E+00
EP-freshwater	kg $P_{eq.}$	6,53E-02	4,89E-02	7,14E-01	6,08E-02	3,39E-02	1,06E-01	6,24E-02
EP-marine	kg $N_{eq.}$	2,69E-01	1,55E-01	3,88E-01	1,82E-01	3,86E-02	2,98E-01	2,80E-01
EP-terrestrial	mol $N_{eq.}$	2,83E+00	1,29E+00	2,87E+00	1,86E+00	4,71E-01	3,25E+00	3,24E+00
POCP	kg $NMVOC_{eq.}$	1,01E+00	4,42E-01	9,23E-01	5,91E-01	1,43E-01	1,39E+00	9,06E-01
ADP-minerals&metals*	kg $Sb_{eq.}$	5,96E-03	5,63E-03	6,64E-03	6,30E-03	5,10E-03	5,96E-03	5,91E-03
ADP-fossil*	MJ	9,06E+03	1,52E+04	8,16E+03	1,09E+04	3,88E+02	7,59E+03	9,45E+03
WDP*	m^3	1,78E+02	1,92E+02	1,36E+02	1,28E+02	1,68E+03	2,91E+02	9,34E+01

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.

* EPD International 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.

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