Eve Double Plus

Environmental Product Declaration

Eve Double Plus, 3-phase, 2x type 2 socket, single feeder cable

Geographical Availability: This product is available for sale in the European market

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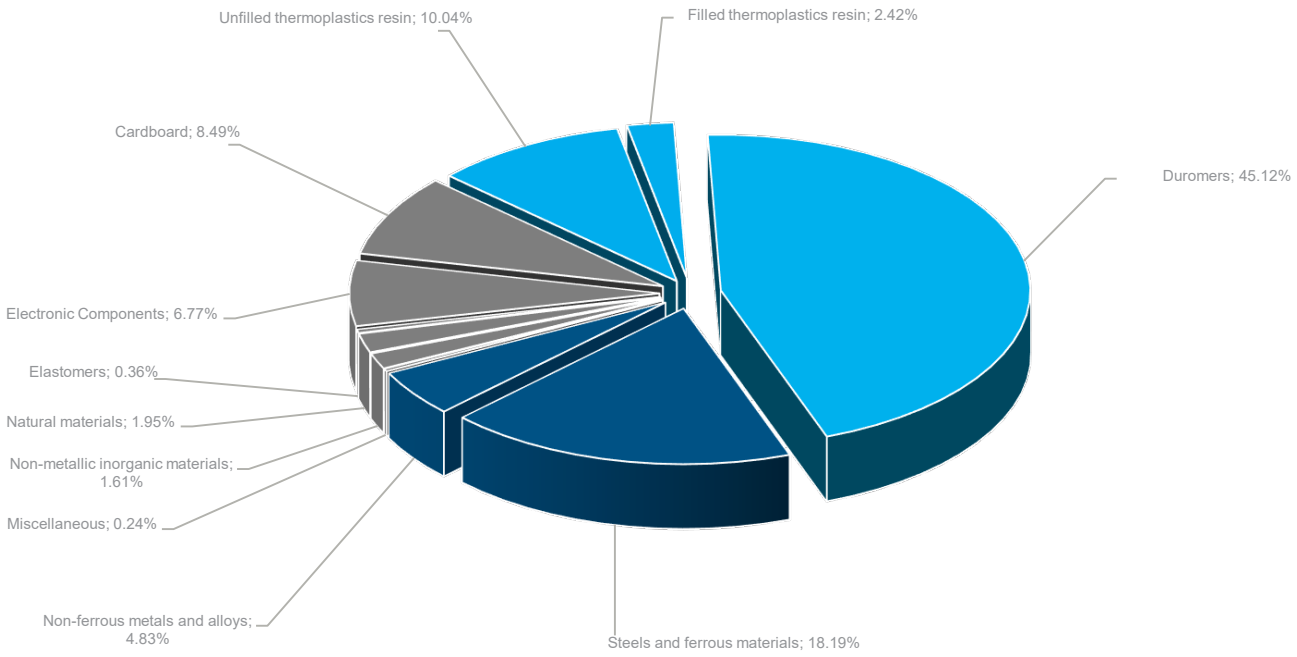
ACE-EPD-904463021V0-EN

01
General Information

Reference Product	Eve Double Plus, 3 phase, 2x type 2 socket enabling 1 feeder cable
Description of the product	The Eve Double Plus is a next-generation smart charging solution that combines advanced EV technology with a robust and durable design. Developed for high-traffic, semi-public environments such as offices, retail spaces, and hospitality venues, it delivers up to 2 × 22 kW through a range of outlet configurations and can be installed either on a wall or on a pole. It is also prepared for bidirectional charging (V2X) and hardware ready for ISO 15118-20. It supports a wide range of authentication methods, including Plug & Power, RFID, AutoCharge, and ISO 15118 Plug & Charge.
Functional Unit (FU)	Supply 1 kWh to one vehicle at the charging point in accordance with the reference use scenario. The reference scenario is described in chapter "4. Environmental Impact."

02
Constituent Materials

Reference mass product	20.62 kg including the product, its packaging and additional elements supplied with the product.



Plastics	57.57 %	Metals	23.02%	Other	19.41%

03
Additional Environmental Information

Manufacturing	Eve Double Plus is manufactured/assembled in our production facility in the Netherlands with an ISO 14001:2015-certified environmental management system. Details about conformity with ROHS and REACH regulated substances are available on Alfen's website.
End of life	Eve Double Plus is covered by the WEEE directive (2012/19/EU). Therefore, it must be properly processed before recovery or recycling. **Selective Treatment** For this product, the printed circuit boards larger than 10 cm^2 must be removed from the collected WEEE by an Authorized Treatment Facility (ATF). **Extended Producer Responsibility** This product is registered in the applicable Extended Producer Responsibility scheme to which Alfen is obliged to pay fees in line with WEEE directive (2012/19/EU) for collection and recycling of end-of-life products placed on the European Market.

04
Environmental Impact

Reference Service lifetime (RL)	10 years
System Boundary	The following LCA stages and modules have been modelled and declared: **Raw Material Supply (A1)** The supply of raw materials was modelled, including all significant components and assemblies such as electrical components, plastics, metals, packaging, and auxiliary materials. **Transport (A2)** Transport of materials and components from supplier manufacturing sites to the Alfen production facilities was modelled. Transport impacts were calculated based on tonne-kilometres (tkm). **Manufacturing (A3)** Manufacturing processes at facilities located in the Netherlands were modeled, including energy use and generation of manufacturing-related packaging waste. **Transport (A4)** Transport of the product to the installation site was modelled in accordance with PCR-ed4-EN-2021-09-06, section 2.5.3. **Installation (A5)** Installation activities were modeled, including treatment of product packaging waste. Energy use during installation was considered negligible. **Operational Energy Use (B6)** Operational energy use was modeled based on energy losses and intrinsic consumption during the reference use scenario for private or semi-public use AC charging stations. **Transport (C2)** Transport of the product to end-of-life treatment facilities was modelled in accordance with PCR-ed4-EN-2021-09-06, section 2.5.3. >>

04
Environmental Impact

System Boundary	>> **Waste Processing (C3)** End-of-life waste processing was modeled, including manual depollution and recovery of economically valuable materials. Impacts from recycling and energy recovery processes were included. **Disposal (C4)** Final disposal of non-recoverable waste fractions was modeled using landfilling and incineration without energy recovery.
Cut-off criteria	All significant and major raw materials and energy flows were included. For unit processes with insufficient data, input flows contributing less than 1 % of the total mass or primary energy use were excluded. The cumulative contribution of all excluded inputs within each life cycle module does not exceed 5 % of the total mass and energy use. All exclusions have been documented, of which none apply for hazardous materials and substances.
Use scenario	Product category: PSR-0018-ed1.1-EN-2024 01 31 - 2.1.2. Private or semi-public station - 2.1.2.2. AC Wallbox Average daily travel: 43 km per day, of which 90% is charged at private stations. Number of charging sessions: 2 per week. Effective charge time: 1.2 hours at 22 kW Average time plugged in per charging session = 12 hours Average amount of electricity supplied per charging session for a given charging point over the station's reference lifetime (RL) based on a vehicle consumption of 20kWh per 100 km: 28,251 kWh.
Geographical Representativeness	Europe
Technological Representativeness	Based on the specifications and technology described in the product's data sheet, detailing the charger's current design and functionality.
Energy model used	Manufacturing: Supplier-specific or region-specific electricity mixes are applied where available to reflect the actual energy context of upstream production. Assembly (final product): Electricity Mix; Production mix; Low voltage; NL Use: Electricity Mix; Production mix; Low voltage; NL. Decarbonization Consideration: The model incorporates the progressive decarbonization of the electricity grid over a 10-year period. End of life: Electricity Mix; Production Mix, Low Voltage; EU27

Impacts are calculated for the reference product and expressed per functional unit of 1 kWh.
Environmental impact per functional unit = Environmental impact of the reference product / (28,251 kWh x 2 charging points)

Eve Double Plus, 3 phase, 2x type 2 socket

Mandatory Environmental Impact Indicators	Unit	Total	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B6)	End of life (C2-C4)
Climate change - total (GWP-t)[1]	kg CO2 eq	8.80E-03	3.75E-03	2.00E-05	4.96E-05	4.41E-03	5.65E-04
Climate change - fossil (GWP-f)	kg CO2 eq	1.32E-02	3.80E-03	2.00E-05	4.55E-06	8.83E-03	5.62E-04
Climate change - biogenic (GWP-b)[2]	kg CO2 eq	0.00E+00	-4.87E-05	0.00E+00	4.50E-05	0.00E+00	3.71E-06
Climate change - land use and LU change (GWP-luluc)	kg CO2 eq	1.05E-05	5.86E-06	6.71E-09	2.73E-09	4.58E-06	5.41E-08
Ozone depletion (ODP)	kg CFC11 eq	5.12E-10	2.95E-10	4.35E-13	4.30E-14	2.16E-10	7.63E-13
Acidification (AP)	mol H+ eq	5.80E-05	2.96E-05	4.28E-08	1.48E-08	2.80E-05	2.93E-07
Eutrophication, freshwater (EP-fw)	kg P eq	1.38E-06	9.14E-07	1.48E-10	9.70E-11	4.64E-07	1.29E-09
Eutrophication, marine (EP-m)	kg N eq	1.05E-05	4.66E-06	1.01E-08	5.27E-09	5.72E-06	1.09E-07
Eutrophication, terrestrial (EP-t)	mol N eq	1.24E-04	5.27E-05	1.11E-07	5.10E-08	7.03E-05	1.08E-06
Photochemical ozone formation (POCP)	kg NMVOC eq	3.75E-05	1.68E-05	6.78E-08	1.84E-08	2.04E-05	3.19E-07
Resource use, minerals and metals (ADP-mm)	kg Sb eq	9.98E-07	8.82E-07	6.85E-11	1.82E-11	1.16E-07	2.55E-10
Resource use, fossils (ADP-f)	MJ	1.80E-01	5.53E-02	2.81E-04	4.02E-05	1.24E-01	6.23E-04
Water use (WDP)	m3-world eq	2.95E-03	1.31E-03	1.33E-06	4.50E-07	1.61E-03	1.84E-05

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Mandatory Environmental Impact Indicators	Unit	Total	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B6)	End of life (C2-C4)
Resource use indicators							
Energy, primary, renewable, excluding materials (PERE)	MJ	8.50E-04	8.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Energy, primary, renewable, materials (PERM)	MJ	3.36E-03	3.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Energy, primary, renewable (PERT)	MJ	5.65E-02	6.15E-03	4.67E-06	5.13E-06	5.03E-02	4.23E-05
Energy, primary, non-renewable, excluding materials (PENRE)	MJ	9.68E-03	9.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Energy, primary, non-renewable, materials (PENRM)	MJ	3.65E-04	3.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Energy, primary, non-renewable (PENRT)	MJ	1.92E-01	5.85E-02	2.99E-04	4.25E-05	1.33E-01	6.67E-04
Indicators describing the use of secondary materials, water, and energy resources							
Secondary material (SM)[3]	kg	1.19E-05	1.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Secondary fuel, renewable (RSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Secondary fuel, non-renewable (NRSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Water, fresh water use (FW)	m3	1.09E-04	4.22E-05	4.09E-08	2.04E-08	6.58E-05	4.13E-07
Waste category indicators							
Waste, hazardous (HWD)	kg	1.71E-03	1.70E-03	1.93E-09	2.27E-10	8.62E-07	3.92E-09
Waste, non-hazardous (NHWD)	kg	1.06E-03	4.02E-04	1.38E-05	2.18E-06	5.68E-04	7.75E-05
Waste, radioactive (RWD)	kg	5.39E-07	2.41E-07	8.44E-11	1.32E-10	2.97E-07	7.16E-10
Output flow indicators							
Components for re-use (CRU)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling (MFR)	kg	1.26E-04	2.08E-05	0.00E+00	2.69E-05	0.00E+00	7.86E-05
Materials for energy recovery (MER)	kg	1.10E-04	3.69E-06	0.00E+00	3.11E-06	0.00E+00	1.03E-04
Exported energy, electric (EEE)	MJ	5.69E-04	9.07E-06	0.00E+00	9.21E-06	0.00E+00	5.51E-04
Exported energy, thermal (EET)	MJ	1.41E-03	2.24E-05	0.00E+00	2.28E-05	0.00E+00	1.36E-03
Other indicators							
Biogenic carbon content of the product	kg of C	1.75E-06	1.75E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the packaging	kg of C	7.20E-06	7.20E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00

"Reading example: 1.0 E-03 = 1.0*103 = 0.001"

[1] Indicators have been adjusted based on the assumed linear reduction in electricity grid intensity from 2025 to 2050, aligning with the net-zero commitments of the countries where our products are sold.

[2] Indicator has been manually adjusted to reflect biogenic CO2-eq uptake from carbon sequestration and release from biomass, assumed to compensate to net zero emissions and methane assumed to be non-significant according to NEN-EN 15804+A2

[3] Indicator has been manually adjusted using supplier-specific data, only not third party verified and no generic database data. Packaging and internal production scrap are excluded.

Life cycle assessment was performed using the Ecochain LCA software, Ecoinvent version 3.11 database in compliance with ISO14040/ISO14044. The biogenic carbon content was calculated in accordance with EN15804+A2.

Data of issue	02/04/2026	
Drafting Rules	PEP-PCR-ed4-2021 09 06	
Supplemented by	PSR-0018-ed1.1-EN-2024 01 31	
Information and reference documents	www.pep-ecopassport.org	
Validity Period	5 years	
Independent Verification of the data and declaration conducted by an environmental specialist, in compliance with ISO 14025: 2010	■ Internal	☐ External

This PEP has been developed in alignment with the requirements of EN 50693:2019.

The elements of the present PEP cannot be compared with elements from another program.

This document is prepared in accordance with ISO 14025: 2010 « Environmental labels and declarations. Type III environmental declarations », based on self-declared and non-verified PEP.

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