Product Environmental Profile

SIMON 360 USB CHARGERS

Registration number	SIMO-00023-V01.02-EN	Drafting rules	PCR-ed4-EN-2021 09 06
		Supplemented by	PSR-0005-ed3-EN-2023 06 06
Verifier accreditation number	VH45	Information and reference documents	www.pep-ecopassport.org
Date of issue	May 2026	Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14025:2006

Internal		External	X	

The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)

PEP are complaint with XP CO08-100-1:2016 or EN 50693:2019

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

Document in compliance with ISO 14025:2006 “Environmental labels and declarations. Type III environmental declarations”

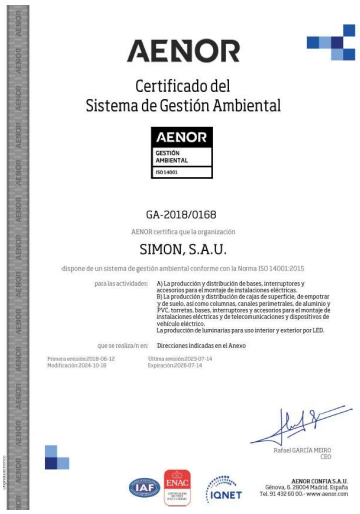
General information

Company information	SIMON S.A.U. Sancho de Ávila, 66 08018, Barcelona Website: www.simonelectric.com
Contact	Ana Belen Rodríguez Martínez, abrm@simon.es
Product description and homogeneous environmental family	Family of Simon 360 USB Chargers. All the products in the family are USB chargers with one or two Type-A and/or Type-C ports. The PEP would include a group of similar products, which all belong to the same product family.
Product standards	Dir. 2014/35/UE LVD; Dir. 2014/30/UE EMC; Dir. 2011/65/UE RoHS + post. Mod; Dir. 2009/125/EC ErP (Reg. UE 2019/1782). EN 50563:2011 + A1:2013; EN 62368-1:2020 + A11:2020; EN IEC 63000:2018; EN 61000-6-1:2019; EN 61000-6-3:2021.
Reference product	Combination of three parts to form the final socket: • Mechanism of USB charger 75432-39 • Cover of USB charger 36000296-190 • Outer plastic frame 36000610-190 Extrapolation coefficients will be calculated and applied for each stage of the life cycle to calculate the impacts of the other products of the family.
Functional unit	"Provide two USB charging ports (A and C). Designed to integrate fast USB charging into residential and commercial electrical installations, it enables simultaneous charging of mobile devices such as smartphones, tablets, and other electronic equipment. The product is designed for a reference service life of 10 years".
Reference flow	• Product with packaging: 200.17 g • Product without packaging: 147.86 g
Product category	Sockets – USB chargers
Reference lifetime	10 years
LCA software & Database	The environmental impact assessment has been carried out with Simapro 10.2.0.0 tool, and the background databases have been retrieved from Ecoinvent 3.11 libraries.

Constituent materials

Material		Weight (g)	Percentage (%)
Plastics 35.08%	Urea	55.50	27.73
	Polycarbonate	14.72	7.35
Electronic component 20.63%	Electronic component	41.30	20.63
Metals 18.15%	Steel	36.34	18.15
Packaging 26.13%	Cardboard	42.50	21.23
	Paper	9.16	4.57
	Plastic	0.65	0.32
Reference product		**147.86**	**73.87**
Packaging		**52.31**	**26.13**
TOTAL		**200.17**	**100.00**

Description of life cycle stages

Manufacturing stage	Manufactured at Simon's facilities in Martorelles and Olot (Spain), certified to ISO 14001.  AENOR Certificado del Sistema de Gestión Ambiental AENOR GESTIÓN AMBIENTAL ISO 14001 GA-2018/0168 AENOR certifica que la organización SIMON, S.A.U. dispone de un sistema de gestión ambiental conforme con la Norma ISO 14001:2015 para las actividades: A) La producción y distribución de bases, interruptores y accesorios para ejecutar instalaciones eléctricas y de telecomunicaciones. B) La producción y distribución de cajas de superficie, de empotrar y de suelo, así como columnas, canales perimetrales, de aluminio y PVC, tomas, bases, interruptores y accesorios para el montaje de instalaciones eléctricas y de telecomunicaciones y dispositivos de vehículo eléctrico. La producción de luminarias para uso interior y exterior por LED. que se realiza/n en: Direcciones indicadas en el Anexo Primera emisión 2018-06-12 Última emisión 2023-07-14 Modificación 2024-10-08 Expiración 2026-07-14 Rafael GARCÍA MEIRO CEO IAF ENAC IQNET AENOR CONFIA S.A.U. Génova, 6. 28004 Madrid. España Tel. 91 432 60 00.- www.aenor.com
,Distribution stage	The products are distributed directly from Simon´s logistics platform to the distributors, where the installers (final customers) can purchase them.
Installation stage	The installation process is done manually, and it does not require any additional component or process apart from the product itself.
Use stage	The use scenario is defined by the corresponding PSR of PEP Ecopassport for this type of products: Reference lifetime (RLT): 10 years Load rate: 50% of In Use time rate: 30% RLT This product has no maintenance. The product quality is very high, and it can very easily last 10 years on the client's house. No additional electricity consumption is required for maintenance during the 10 years of use.
End-of-life stage	The reference product and the rest of the products of the family comply with Directive 2012/19/EU on the disposal of Waste Electrical and Electronic Equipment. The end-of-life scenario provided by standard EN 50693 has been used to simulate this stage.

Environmental impacts

Results of mandatory indicators per Functional Unit of the reference product:

Impact category	Unit	Total	Manufacturing stage (modules A1-A3)	Distribution stage (module A4)	Installation stage (module A5)	Module B6	Use stage (modules B1-B7)	End-of-life stage (modules C1-C4)	Benefits (module D)
Climate change - Total	kg CO_2 eq	6.50E+00	2.99E+00	2.32E-02	9.04E-02	3.24E+00	3.24E+00	1.54E-01	-9.78E-02
Climate change – Fossil	kg CO_2 eq	6.41E+00	3.06E+00	2.32E-02	4.27E-03	3.18E+00	3.18E+00	1.38E-01	-9.64E-02
Climate change – Biogenic	kg CO_2 eq	3.79E-02	-7.21E-02	4.89E-06	8.61E-02	8.68E-03	8.68E-03	1.52E-02	-9.94E-04
Climate change - Luluc	kg CO_2 eq	4.81E-02	6.50E-03	7.69E-06	1.42E-06	4.15E-02	4.15E-02	2.52E-05	-3.83E-04
Ozone depletion (OD)	kg CFC-11 eq	1.61E-07	8.99E-08	5.06E-10	6.30E-11	6.98E-08	6.98E-08	7.24E-10	-1.50E-09
Acidification of soil and water (A)	mol H^+ eq	6.52E-02	4.76E-02	7.45E-05	1.87E-05	1.74E-02	1.74E-02	1.72E-04	-4.12E-04
Freshwater eutrophication	kg P eq	5.49E-04	4.73E-04	1.70E-07	4.75E-08	7.57E-05	7.57E-05	9.42E-07	-6.26E-06
Marine aquatic eutrophication	kg N eq	7.87E-03	4.89E-03	2.48E-05	1.14E-05	2.88E-03	2.88E-03	6.99E-05	-1.25E-04
Terrestrial eutrophication	mol N eq	9.45E-02	6.06E-02	2.73E-04	7.40E-05	3.30E-02	3.30E-02	6.11E-04	-1.18E-03
Photochemical ozone creation (POCP)	kg NMVOC eq	3.44E-02	2.23E-02	1.13E-04	2.97E-05	1.18E-02	1.18E-02	2.17E-04	-3.55E-04
Depletion of abiotic resources – elements	kg Sb eq	1.37E-03	1.30E-03	7.83E-08	1.66E-08	7.22E-05	7.22E-05	1.71E-07	-6.74E-07
Depletion of abiotic resources – Fossil fuels	MJ	1.43E+02	4.33E+01	3.29E-01	5.00E-02	9.84E+01	9.84E+01	5.33E-01	-1.19E+00
Water use	m^3 eq. depriv.	4.26E+00	1.06E+00	1.28E-03	2.40E-04	3.19E+00	3.19E+00	-3.20E-03	-3.33E-02

Results of inventory flows indicators & indicators describing the use of secondary materials for the reference product:

Impact category	Unit	Total	Manufacturing stage (modules A1-A3)	Distribution stage (module A4)	Installation stage (module A5)	Module B6	Use stage (modules B1-B7)	End-of-life stage (modules C1-C4)	Benefits (module D)
PERE	MJ	4.89E+01	9.68E+00	5.19E-03	6.77E-01	3.88E+01	3.88E+01	2.11E-02	-3.63E-01
PERM	MJ	0.00E+00	6.76E-01	0.00E+00	-6.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	4.89E+01	1.04E+01	5.19E-03	1.70E-03	3.88E+01	3.88E+01	2.11E-02	-3.63E-01
PENRE	MJ	1.42E+02	4.21E+01	3.29E-01	5.00E-02	9.84E+01	9.84E+01	1.68E+00	-1.19E+00
PENRM	MJ	0.00E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.15E+00	0.00E+00
PENRT	MJ	1.42E+02	4.33E+01	3.29E-01	5.00E-02	9.84E+01	9.84E+01	5.33E-01	-1.19E+00
SM	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
RSF	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
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
FW	m^3	8.34E-02	3.30E-02	4.11E-05	-6.99E-06	5.00E-02	5.00E-02	-1.49E-06	-1.03E-03

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: Freshwater use

Results of waste category indicators and output flow indicators for the reference product:

Impact category	Unit	Total	Manufacturing stage (modules A1-A3)	Distribution stage (module A4)	Installation stage (module A5)	Module B6	Use stage (modules B1-B7)	End-of-life stage (modules C1-C4)	Benefits (module D)
Hazardous waste disposed	kg	7.29E-04	3.85E-04	2.24E-06	3.56E-07	3.38E-04	3.38E-04	3.46E-06	-8.52E-06
Non-hazardous waste disposed	kg	7.36E-01	2.18E-01	1.58E-02	6.26E-03	4.04E-01	4.04E-01	9.27E-02	-1.25E-02
Radioactive waste disposed	kg	8.80E-04	7.52E-05	9.68E-08	3.69E-08	8.05E-04	8.05E-04	3.76E-07	-1.65E-06
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
Material for recycling	kg	1.12E-01	4.07E-02	0.00E+00	4.26E-02	0.00E+00	0.00E+00	2.91E-02	0.00E+00
Materials for energy recovery	kg	6.68E-02	2.51E-03	0.00E+00	4.89E-03	0.00E+00	0.00E+00	5.94E-02	0.00E+00
Exported energy, electricity	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
Exported energy, thermal	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

Results of biogenic carbon for the reference product:

-Indicator	Unit	Quantity
Biogenic carbon content of the product	Kg of C	0.00E+00
Biogenic carbon content of the packaging	kg of C	2.17E-02

Extrapolation rules

Extrapolation factors have been calculated to apply the results of the reference product to the other products in the Simon 360 USB Chargers family. These factors are based on the main environmental aspects of each life cycle stage, as all products in the family use the same materials and manufacturing process

Simon 360 USB Chargers have three parts: the USB charger mechanism, the cover, and the outer plastic frame. All mechanisms and covers are single mechanisms with different colors. The frames can vary in color and size (from 1 to 4 elements). Based on this, the manufacturing extrapolation factors are defined as follows

$$Total\ impact\ of\ the\ \text{USB charger} =$$

$$(N * Impact\ of\ the\ mechanism) + (N * Impact\ of\ the\ cover) + Impact\ of\ the\ outer\ frame$$

In which N is the number of socket mechanisms of the final product, which must match the number of elements in the frames.

Extrapolation coefficients:

Reference code	N: Number of mechanisms	Manufacturing stage (A1-A3)	Distribution stage (A4)	Installation stage (A5)	Use stage (B1-B7)	End-of-life stage (C1-C4)	Benefits (D)
MECHANISM OF THE USB CHARGER							
7511296-039	**1**	**9.55E-01**	**9.55E-01**	**9.55E-01**	**1.00E+00**	**9.55E-01**	**9.55E-01**
7500297-039	1	9.55E-01	9.55E-01	9.55E-01	1.00E+00	9.55E-01	9.55E-01
7500383-039	1	9.55E-01	9.55E-01	9.55E-01	1.00E+00	9.55E-01	9.55E-01
7500299-039	1	9.55E-01	9.55E-01	9.55E-01	1.00E+00	9.55E-01	9.55E-01
COVER OF THE USB CHARGER							
36000296-190	**1**	**1.06E-02**	**1.06E-02**	**1.06E-02**	**0.00E+00**	**1.06E-02**	**1.06E-02**
36000296-098	1	1.06E-02	1.06E-02	1.06E-02	0.00E+00	1.06E-02	1.06E-02
36000296-099	1	1.06E-02	1.06E-02	1.06E-02	0.00E+00	1.06E-02	1.06E-02
36000076-190	1	1.06E-02	1.06E-02	1.06E-02	0.00E+00	1.06E-02	1.06E-02
36000076-098	1	1.06E-02	1.06E-02	1.06E-02	0.00E+00	1.06E-02	1.06E-02
36000076-099	1	1.06E-02	1.06E-02	1.06E-02	0.00E+00	1.06E-02	1.06E-02
36000299-190	1	1.06E-02	1.06E-02	1.06E-02	0.00E+00	1.06E-02	1.06E-02
36000299-098	1	1.06E-02	1.06E-02	1.06E-02	0.00E+00	1.06E-02	1.06E-02
36000299-099	1	1.06E-02	1.06E-02	1.06E-02	0.00E+00	1.06E-02	1.06E-02
OUTER PLASTIC FRAME							
36000610-190	**1**	**3.43E-02**	**3.43E-02**	**3.43E-02**	**0.00E+00**	**3.43E-02**	**3.43E-02**
36000610-098	1	3.43E-02	3.43E-02	3.43E-02	0.00E+00	3.43E-02	3.43E-02
36000610-099	1	3.43E-02	3.43E-02	3.43E-02	0.00E+00	3.43E-02	3.43E-02
36000620-190	2	4.04E-02	4.04E-02	1.47E-02	0.00E+00	4.62E-02	4.04E-02
36000620-098	2	4.04E-02	4.04E-02	1.47E-02	0.00E+00	4.62E-02	4.04E-02
36000620-099	2	4.04E-02	4.04E-02	1.47E-02	0.00E+00	4.62E-02	4.04E-02
36000630-190	3	5.35E-02	5.35E-02	1.47E-02	0.00E+00	6.23E-02	5.35E-02
36000630-098	3	5.35E-02	5.35E-02	1.47E-02	0.00E+00	6.23E-02	5.35E-02

Reference code	N: Number of mechanisms	Manufacturing stage (A1-A3)	Distribution stage (A4)	Installation stage (A5)	Use stage (B1-B7)	End-of-life stage (C1-C4)	Benefits (D)
36000630-099	3	5.35E-02	5.35E-02	1.47E-02	0.00E+00	6.23E-02	5.35E-02
36000640-190	4	6.19E-02	6.19E-02	2.83E-02	0.00E+00	6.96E-02	6.19E-02
36000640-098	4	6.19E-02	6.19E-02	2.83E-02	0.00E+00	6.96E-02	6.19E-02
36000640-099	4	6.19E-02	6.19E-02	2.83E-02	0.00E+00	6.96E-02	6.19E-02

** The reference product is highlighted.*