Product Environmental Profile



Eaton 3P Ellipse 700-900 Series

Representative product	Eaton 3P Ellipse 900 USB FR (3P900UF) Product Category: Uninterruptible Power Supply (UPS) with energy storage
Description of the product	Eaton 3P Ellipse 900 USB FR has compact size requiring small installation space. The Eaton 3P Ellipse 900 USB FR has adjustable charging current and flexible battery configuration. The typical applications are in financial institutions, work station, network equipment, health care and telecom.
Product specifications	Power VA: 900VA UPS Configuration: Single phase, operating in normal mode. UPS performance classification: UPS - VI (Line Interactive) Technology of the energy storage system: Valve regulated lead acid batteries (VRLA) Product dimensions (H X W X D): 263*81*235 (mm) Mass of the equipment : 5.49E+00 kg (3.63E+00 kg + 1.025+00 kg) Power factor: 0.6 Reference service life (Years): 8
Homogeneous Environmental Families Covered	The PEP concerns product offerings from Eaton 3P Ellipse 900 USB FR as mentioned below:

Product Family	Product Number	Power (W)	Backup time (min)	UPS efficiency (%)	Packaging mass (kg)	Product mass (kg)
	Eaton 3P Ellipse 900 UPS FR 3P900UF (Reference – Declared unit)	540	1.5	98.05%	0.883	4.4

	Eaton 3P Ellipse 700-900 UPS series	Eaton 3P Ellipse 700 UPS FR 3P700UF (Homogenous 1)	420	1.5	97.6%	0.883	3.9
		Eaton 3P Ellipse 700 UPS DIN 3P700UD (Homogenous 2)	420	1.5	97.6%	0.883	3.9
		Eaton 3P Ellipse 700 UPS IEC 3P700UI (Homogenous 3)	420	1.5	97.6%	0.883	3.9
		Eaton 3P Ellipse 900 UPS DIN 3P900UD (Homogenous 4)	540	1.5	98.05%	0.883	4.4
		Eaton 3P Ellipse 900 UPS IEC 3P900UI (Homogenous 5)	540	1.5	98.05%	0.883	4.4
Functional unit	To ensure the supply of power without interruption to equipment with load of 100 watts for a RSL of 1 years, including a backup time capacity of 5 minutes during power shortages						
Declared unit	To ensure the supply of power without interruption to equipment with load of 540 watts for a RSL of 8 years, including a backup time capacity of 1.5 minutes (at full load condition) during power shortages						
Company information	Eaton Lianzheng Electronic (Shenzhen) Co., Ltd. No.4 Liufang Road, Block 67, Bao'an District, Shenzhen, Guangdong, P.R. China Email: productstewardship-es@eaton.com						

Constituent Materials of Reference Product:	5.64E+00 kg (with packaging)		
Materials	**Category PEP Material**	**Mass (kg)**	**Percentage (%)**
Others	Lead Acid Battery	2.50E+00	44.25%
Plastics	Polycarbonate	6.13E-01	10.85%
Others	Cardboard	4.84E-01	8.57%
Metals	Aluminium	3.73E-01	6.60%
Others	Wood	2.83E-01	5.01%
Others	PWB	2.63E-01	4.65%
Plastics	Switch	2.04E-01	3.61%
Metals	Connectors	1.41E-01	2.49%
Plastics	ABS (Acrylonitrile butadiene styrene)	1.08E-01	1.91%
Others	Paper	6.23E-02	1.10%
Others	Inductors	6.08E-02	1.08%
Plastics	Polystyrene	5.32E-02	0.94%
Others	Capacitors	4.43E-02	0.78%
Plastics	Polyethylene	4.14E-02	0.73%
Others	Relay	2.48E-02	0.44%
Others	Miscellaneous	3.93E-01	6.95%
Total		5.64E+00	100.0%

Substance Assessment

The representative product is compliant with the EU-RoHS Directive (2011/65/EU) by application of exemptions and the product contains lead (Pb) in batteries, copper alloy and electronics, which is listed as Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).

Additional Environmental Information	
Manufacturing	The reference product is assembled at an Eaton plant (LianZheng Electronic (ShenZhen) Co., Ltd.) holding management system certifications according to ISO 14001 standards.
Distribution	Eaton is committed to minimizing weight and volume of product and its associated packaging material with focus to optimize transport efficiency.
Installation	During installation of the product only standard tools are needed, which do not require any additional energy source and no waste other than the obsolete product packaging is generated during this step.
Use	Product consumes energy during useful life which is considered to be 8 years (as per actual designed life). During the reference service life of product, product doesn't require any maintenance.
End of life	Recyclability of product is equal to 47% based on the method described in IEC/TR 62635, Edition 1.0/2012-10 "Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment".

Environmental Impacts	
The calculation of the environmental impacts is the result of the Product's Life Cycle Analysis in accordance with ISO 14040/44, covering the entire lifecycle, i.e., "Cradle-to-Grave" including the following life cycle phases: production, distribution, installation, use and end of life. System modelling was carried out using the commercial LCA software EIME v6.2.3with database version CODDE-2024-04 - updated on 2024-06-04. Indicators Set used: PEF EF 3.1 (Compliance: PEP ed.4, EN15804+A2) v2.0	
Manufacturing Phase	Product is assembled and prepared for shipment at the Eaton facility, Lianzheng Electronic (Shenzhen) Co., Ltd. Energy model used: Europe, China, Global
Distribution Phase	Since Europe is the major market for the product, following transport scenario is considered for the product from Shenzhen, China Eaton plant to end user for this study. As per PCR 4, 19000km is considered by sea and 1000km by road.
Installation Phase	Product is installed in any European country. Hence, packaging waste treatment is considered in this phase considering country specific statistics as per PSR. Energy model used: Europe
Use Phase	Reference lifetime: 8 years Energy model used: Europe. Usage profile: It has an average energy efficiency of 98.05%. The methodology for the calculation of the electricity consumption is based on Uninterruptible Power Supplies (UPS) PSR.

Operating loads	25%	50%	75%	100%
Proportion of Time spent at	0.00	0.30	0.40	0.30

Total energy losses are calculated to be equal to 510.88 kWh over the 8 years.

End of life Phase	Product disposed according to European WEEE guidelines. Energy model used: Europe
Module-D	Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario. It expresses the net benefits and loads beyond the boundaries of the system and are not to be included in the life cycle totals.

All environmental impacts are calculated for the declared unit, then data should be divided by the Factor calculated with below formulas to get functional unit result.

Factor for use stage energy consumption B6:

$$\frac{Declared\ Unit\ Power\ (540W) * Declared\ Unit\ Lifetime\ (8\ year)}{100\ W * 1\ year} = \mathbf{43.2}$$

Factor for all other stages (excepted B6 of use stage):

$$\frac{Declared\ Unit\ Power\ (540\ W) * Declared\ Unit\ Lifetime\ (8\ year) * Declared\ Unit\ Backuptime\ (1.5\ min)}{100\ W * 1\ year * 5\ min} = \mathbf{12.96}$$

Environmental Impact for Functional Unit

Environmental Impact Indicators: Mandatory

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 - Use	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Climate change - total	kg CO2 eq.	7.92E+00	2.69E+00	1.30E-01	9.02E-02	4.72E+00	2.95E-01	5.54E-01	4.17E+00	-2.54E-01
Climate change - fossil fuels	kg CO2 eq.	7.91E+00	2.72E+00	1.30E-01	5.19E-02	4.71E+00	2.90E-01	5.54E-01	4.16E+00	-4.17E-01
Climate change - biogenics	kg CO2 eq.	1.47E-02	-3.64E-02	0.00E+00	3.83E-02	7.67E-03	5.19E-03	9.24E-07	7.67E-03	1.63E-01
Climate change - land use and land use transformation	kg CO2 eq.	6.39E-05	6.39E-05	0.00E+00	0.00E+00	0.00E+00	4.35E-10	0.00E+00	0.00E+00	0.00E+00
Ozone depletion	kg eq. CFC-11	7.34E-07	5.16E-07	1.71E-10	9.31E-10	1.92E-07	2.50E-08	1.72E-07	2.02E-08	-5.21E-08
Acidification (AP)	mole of H+ eq.	5.78E-02	2.42E-02	4.31E-03	1.44E-04	2.74E-02	1.73E-03	6.09E-03	2.14E-02	-7.36E-03
Freshwater eutrophication	kg P eq.	2.41E-05	8.12E-06	4.49E-08	5.66E-07	1.37E-05	1.67E-06	2.69E-06	1.10E-05	-4.53E-04
Marine aquatic eutrophication	kg of N eq.	7.20E-03	2.37E-03	1.03E-03	5.49E-05	3.35E-03	4.00E-04	7.47E-04	2.60E-03	-6.19E-04
Terrestrial eutrophication	mole of N eq.	8.96E-02	2.55E-02	1.13E-02	4.18E-04	5.00E-02	2.35E-03	8.25E-03	4.18E-02	-6.49E-03
Photochemical ozone formation	kg of NMVOC eq.	2.40E-02	9.37E-03	2.90E-03	9.48E-05	1.09E-02	7.22E-04	2.70E-03	8.19E-03	-1.88E-03
Depletion of abiotic resources - elements	kg eq. Sb	2.11E-03	1.26E-03	4.67E-09	5.37E-10	8.50E-04	4.69E-08	8.49E-04	1.47E-06	-1.40E-05
Depletion of abiotic resources - fossil fuels	MJ	1.73E+02	4.95E+01	1.65E+00	4.53E-01	1.18E+02	3.50E+00	1.23E+01	1.05E+02	-6.66E+00
Water scarcity	m3 of eq. deprivation worldwide	5.84E+00	9.21E-01	4.31E-04	1.02E-02	5.55E-01	4.36E+00	2.36E-01	3.19E-01	-3.74E+01

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Inventory Flow Indicators: Mandatory

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 only – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	2.87E+01	6.47E-01	2.12E-03	2.00E-01	2.79E+01	2.49E-02	1.80E-02	2.78E+01	1.73E-01
Use of renewable primary energy resources used as raw materials	MJ	1.24E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.61E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	3.00E+01	1.89E+00	2.12E-03	2.00E-01	2.79E+01	2.49E-02	1.80E-02	2.78E+01	-2.44E+00
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	1.69E+02	4.63E+01	1.65E+00	4.53E-01	1.17E+02	3.50E+00	1.20E+01	1.05E+02	-6.59E+00
Use of non-renewable primary energy resources used as raw materials	MJ	3.57E+00	3.24E+00	0.00E+00	0.00E+00	3.28E-01	0.00E+00	3.28E-01	0.00E+00	-7.25E-02
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1.73E+02	4.95E+01	1.65E+00	4.53E-01	1.18E+02	3.50E+00	1.23E+01	1.05E+02	-6.66E+00
Use of secondary materials	kg	4.14E-05	4.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.10E-03
Use of renewable secondary fuels	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
Use of non-renewable secondary fuels	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
Net use of fresh water	m3	1.54E-01	2.15E-02	1.00E-05	2.37E-04	1.30E-02	1.19E-01	5.50E-03	7.50E-03	-8.75E-01
Hazardous waste disposed of	kg	3.98E+00	2.87E+00	0.00E+00	1.01E-03	4.23E-01	6.82E-01	2.41E-01	1.83E-01	-4.69E-02
Non-hazardous waste disposed of	kg	2.28E+00	1.27E+00	4.00E-03	3.84E-02	8.08E-01	1.63E-01	1.04E-01	7.04E-01	-6.58E-01
Radioactive waste disposed of	kg	4.56E-04	2.53E-04	2.78E-06	2.86E-06	1.82E-04	1.51E-05	2.03E-05	1.62E-04	-4.97E-04
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
Materials for recycling	kg	4.90E-02	1.49E-10	0.00E+00	1.11E-02	0.00E+00	3.78E-02	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	1.20E-02	8.95E-03	0.00E+00	0.00E+00	0.00E+00	3.05E-03	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ by energy vector	9.77E-04	1.05E-04	0.00E+00	0.00E+00	0.00E+00	8.71E-04	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the product	kg of C.	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
Biogenic carbon content of the associated packaging	kg of C.	1.53E-02	1.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Environmental Impact Indicators: Optional

Optional Environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 only – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Emission of fine particles	incidence of diseases	3.70E-07	1.33E-07	2.28E-08	8.60E-10	2.04E-07	9.14E-09	3.21E-08	1.72E-07	-3.01E-08
Ionizing radiation, human health	kBq of U235 eq.	2.14E+02	2.06E+02	2.71E-04	1.62E+00	6.02E+00	3.19E-02	3.21E-02	5.99E+00	-2.11E-01
Ecotoxicity, fresh water	CTUe	5.29E+02	1.72E+01	7.80E-02	5.61E-01	2.61E+02	2.50E+02	2.53E+02	7.87E+00	-6.03E+00
Human toxicity, cancer effects	CTUh	1.86E-08	8.44E-09	1.95E-12	4.51E-09	5.15E-09	5.40E-10	4.62E-09	5.24E-10	-2.12E-08
Human toxicity, non-cancer effects	CTUh	1.85E-06	9.52E-07	4.31E-11	1.58E-10	8.92E-07	3.28E-09	8.79E-07	1.25E-08	-5.52E-08
Impacts related to land use/soil quality	-	3.43E-01	1.82E-01	0.00E+00	1.09E-04	1.15E-01	4.58E-02	0.00E+00	1.15E-01	-3.91E-01
Total use of primary energy during the life cycle	MJ	2.03E+02	5.14E+01	1.66E+00	6.52E-01	1.45E+02	3.52E+00	1.23E+01	1.33E+02	-9.10E+00

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Environmental Impact considering for Declared Unit

Environmental Impact Indicators: Mandatory

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 – Use	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Climate change - total	kg CO2 eq.	2.29E+02	3.48E+01	1.75E+00	1.17E+00	1.87E+02	3.82E+00	7.18E+00	1.80E+02	-3.30E+00
Climate change - fossil fuels	kg CO2 eq.	2.28E+02	3.53E+01	1.75E+00	6.73E-01	1.87E+02	3.76E+00	7.18E+00	1.80E+02	-5.41E+00
Climate change - biogenics	kg CO2 eq.	4.23E-01	-4.72E-01	0.00E+00	4.96E-01	3.31E-01	6.73E-02	1.20E-05	3.31E-01	2.12E+00
Climate change - land use and land use transformation	kg CO2 eq.	8.28E-04	8.28E-04	0.00E+00	0.00E+00	0.00E+00	5.63E-09	0.00E+00	0.00E+00	0.00E+00
Ozone depletion	kg eq. CFC-11	1.01E-05	6.68E-06	2.29E-09	1.21E-08	3.10E-06	3.24E-07	2.23E-06	8.73E-07	-6.75E-07
Acidification (AP)	mole of H+ eq.	1.40E+00	3.14E-01	5.79E-02	1.86E-03	1.00E+00	2.24E-02	7.89E-02	9.23E-01	-9.54E-02
Freshwater eutrophication	kg P eq.	6.44E-04	1.05E-04	6.03E-07	7.34E-06	5.09E-04	2.17E-05	3.49E-05	4.74E-04	-5.88E-03
Marine aquatic eutrophication	kg of N eq.	1.72E-01	3.07E-02	1.38E-02	7.11E-04	1.22E-01	5.18E-03	9.68E-03	1.12E-01	-8.03E-03
Terrestrial eutrophication	mole of N eq.	2.43E+00	3.31E-01	1.51E-01	5.42E-03	1.91E+00	3.05E-02	1.07E-01	1.81E+00	-8.41E-02
Photochemical ozone formation	kg of NMVOC eq.	5.56E-01	1.21E-01	3.89E-02	1.23E-03	3.89E-01	9.36E-03	3.50E-02	3.54E-01	-2.44E-02
Depletion of abiotic resources - elements	kg eq. Sb	2.74E-02	1.63E-02	6.27E-08	6.96E-09	1.11E-02	6.08E-07	1.10E-02	6.37E-05	-1.81E-04
Depletion of abiotic resources - fossil fuels	MJ	5.42E+03	6.41E+02	2.22E+01	5.87E+00	4.70E+03	4.54E+01	1.59E+02	4.55E+03	-8.64E+01
Water scarcity	m3 of eq.. deprivation worldwide	8.54E+01	1.19E+01	5.79E-03	1.32E-01	1.69E+01	5.65E+01	3.06E+00	1.38E+01	-4.85E+02

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Inventory Flow Indicators: Mandatory

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 only – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	1.21E+03	8.38E+00	2.85E-02	2.59E+00	1.20E+03	3.22E-01	2.34E-01	1.20E+03	2.24E+00
Use of renewable primary energy resources used as raw materials	MJ	1.61E+01	1.61E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.38E+01
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1.23E+03	2.45E+01	2.85E-02	2.59E+00	1.20E+03	3.22E-01	2.34E-01	1.20E+03	-3.16E+01

Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	5.37E+03	5.99E+02	2.22E+01	5.87E+00	4.70E+03	4.54E+01	1.55E+02	4.55E+03		-8.54E+01
Use of non-renewable primary energy resources used as raw materials	MJ	4.62E+01	4.20E+01	0.00E+00	0.00E+00	4.25E+00	0.00E+00	4.25E+00	0.00E+00		-9.39E-01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	5.42E+03	6.41E+02	2.22E+01	5.87E+00	4.70E+03	4.54E+01	1.59E+02	4.55E+03		-8.64E+01
Use of secondary materials	kg	5.37E-04	5.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		-9.21E-02
Use of renewable secondary fuels	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
Use of non-renewable secondary fuels	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
Net use of fresh water	m3	2.22E+00	2.78E-01	1.35E-04	3.08E-03	3.95E-01	1.54E+00	7.13E-02	3.24E-01		-1.13E+01
Hazardous waste disposed of	kg	5.71E+01	3.72E+01	0.00E+00	1.30E-02	1.10E+01	8.84E+00	3.12E+00	7.89E+00		-6.08E-01
Non-hazardous waste disposed of	kg	5.08E+01	1.64E+01	5.37E-02	4.98E-01	3.18E+01	2.12E+00	1.35E+00	3.04E+01		-8.52E+00
Radioactive waste disposed of	kg	1.08E-02	3.28E-03	3.74E-05	3.71E-05	7.24E-03	1.95E-04	2.63E-04	6.98E-03		-6.44E-03
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
Materials for recycling	kg	6.35E-01	1.94E-09	0.00E+00	1.44E-01	0.00E+00	4.90E-01	0.00E+00	0.00E+00		0.00E+00
Materials for energy recovery	kg	1.56E-01	1.16E-01	0.00E+00	0.00E+00	0.00E+00	3.95E-02	0.00E+00	0.00E+00		0.00E+00
Exported energy	MJ by energy vector	1.27E-02	1.37E-03	0.00E+00	0.00E+00	0.00E+00	1.13E-02	0.00E+00	0.00E+00		0.00E+00
Biogenic carbon content of the product	kg of C.	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
Biogenic carbon content of the associated packaging	kg of C.	1.98E-01	1.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Environmental Impact Indicators: Optional

Optional Environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 only – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Emission of fine particles	incidence of diseases	9.99E-06	1.72E-06	3.07E-07	1.12E-08	7.84E-06	1.18E-07	4.16E-07	7.43E-06	-3.90E-07
Ionizing radiation, human health	kBq of U235 eq.	2.95E+03	2.67E+03	3.64E-03	2.09E+01	2.59E+02	4.13E-01	4.16E-01	2.59E+02	-2.74E+00
Ecotoxicity, fresh water	CTUe	7.10E+03	2.24E+02	1.05E+00	7.27E+00	3.62E+03	3.25E+03	3.28E+03	3.40E+02	-7.82E+01
Human toxicity, cancer effects	CTUh	2.58E-07	1.09E-07	2.62E-11	5.85E-08	8.26E-08	6.99E-09	5.99E-08	2.26E-08	-2.75E-07
Human toxicity, non-cancer effects	CTUh	2.43E-05	1.23E-05	5.79E-10	2.04E-09	1.19E-05	4.25E-08	1.14E-05	5.41E-07	-7.16E-07
Impacts related to land use/soil quality	-	7.93E+00	2.35E+00	0.00E+00	1.41E-03	4.98E+00	5.94E-01	0.00E+00	4.98E+00	-5.07E+00

Total use of primary energy during the life cycle	MJ	6.65E+03	6.66E+02	2.22E+01	8.46E+00	5.91E+03	4.57E+01	1.60E+02	5.75E+03	-1.18E+02

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

To evaluate the environmental impact of other product covered by this PEP, apply the following conversion factors to the Environmental Impact shown above. The extrapolation factors are calculated based on the PSR 10 section 3.6.:

Conversion Factors for Manufacturing, Distribution, Installation, Use and End-of-Life Phase for all environmental impact of declared unit:

Product Number	Manufacturing	Distribution	Installation	Use-B6	End of Life	Module D
Eaton 3P Ellipse 900 USB FR (Reference – Declared unit)	1.00	1.00	1.00	1.00	1.00	1.00
Eaton 3P Ellipse 700 USB FR	0.91	0.91	1.00	0.96	0.89	0.91
Eaton 3P Ellipse 700 USB DIN	0.91	0.91	1.00	0.96	0.89	0.91
Eaton 3P Ellipse 700 USB IEC	0.91	0.91	1.00	0.96	0.89	0.91
Eaton 3P Ellipse 900 USB DIN	1.00	1.00	1.00	1.00	1.00	1.00
Eaton 3P Ellipse 900 USB IEC	1.00	1.00	1.00	1.00	1.00	1.00

Above extrapolation factor needs to be multiplied to declared unit environmental impacts. To get functional unit impacts, the declared unit results of specific product number need to be divided by below factors calculated as per PSR10 section 3.1.3:

Product No.	FU factor for Use B6	FU factor for other phases (Excluding B6)
Eaton 3P Ellipse 900 USB FR (Reference – Declared unit)	43.2	12.96
Eaton 3P Ellipse 700 USB FR	33.6	10.08
Eaton 3P Ellipse 700 USB DIN	33.6	10.08
Eaton 3P Ellipse 700 USB IEC	33.6	10.08
Eaton 3P Ellipse 900 USB DIN	43.2	12.96
Eaton 3P Ellipse 900 USB IEC	43.2	12.96

Typical load data for Eaton 3P Ellipse 700-900 series is as given below:

Product Family	Product Number	Power for typical load(W)	Backup time for typical load (min)
Eaton 3P Ellipse 700-900 series	Eaton 3P Ellipse 900 UPS FR 3P900UF	260	8.6
	Eaton 3P Ellipse 700 UPS FR 3P700UF	210	7.5
	Eaton 3P Ellipse 700 UPS DIN 3P700UD	210	7.5
	Eaton 3P Ellipse 700 UPS IEC 3P700UI	210	7.5
	Eaton 3P Ellipse 900 UPS DIN 3P900UD	260	8.6
	Eaton 3P Ellipse 900 UPS IEC 3P900UI	260	8.6

Power rating, efficiency and power loss (kWh) for full load for Eaton 3P Ellipse 700-900 series is as given below:

Product Number	Power rating	Efficiency	Power losses (kWh)
Eaton 3P Ellipse 900 UPS FR 3P900UF (Reference – Declared unit)	540	98.05%	510.88
Eaton 3P Ellipse 700 UPS FR 3P700UF	420	97.6%	494.48
Eaton 3P Ellipse 700 UPS DIN 3P700UD	420	97.6%	494.48
Eaton 3P Ellipse 700 UPS IEC 3P700UI	420	97.6%	494.48
Eaton 3P Ellipse 900 UPS DIN 3P900UD	540	98.05%	510.88
Eaton 3P Ellipse 900 UPS IEC 3P900UI	540	98.05%	510.88

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