

Product Environmental Profile

APC Symmetra LX UPS

APC Symmetra LX Uninterrupted Power Supplies provides emergency back-up power to prevent downtime and data loss.





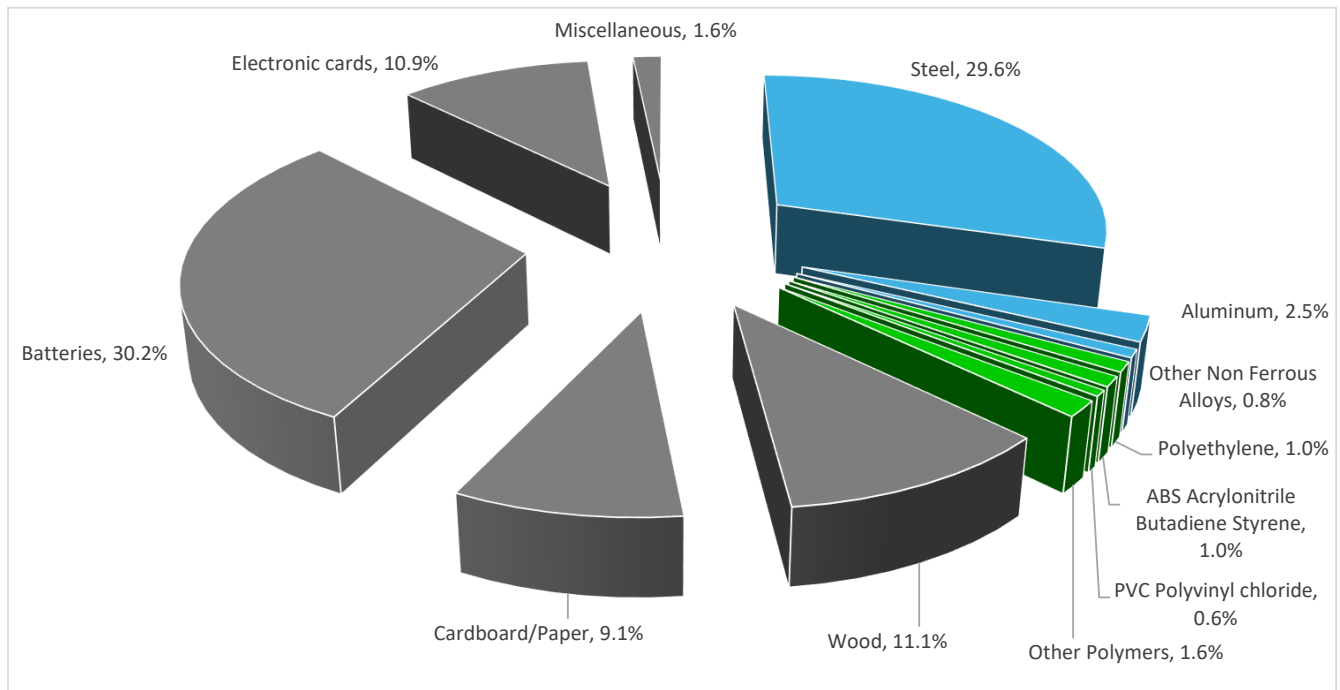
General information

Representative product	APC Symmetra LX UPS - SYA16K16RMP
Description of the product	Single-phase, double-conversion UPS ensuring your crucial servers, equipment racks, and network devices stay powered and active during outages and brownouts.
Description of the range	<p>APC Symmetra LX Uninterrupted Power Supplies provides emergency back-up power to prevent downtime and data loss.</p> <p>The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.</p>
Functional unit	To protect the load of 12,800W against input power failure during 15 years and provide a backup time of at least 6 minutes in case of a power outage.



Constituent materials

Reference product mass	340460 g including the product, its packaging and additional elements and accessories
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Plastics	4.2%
Metals	32.9%
Others	62.9%



Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 8 June 2011) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive

As the products of the range are designed in accordance with the RoHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website

<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>



Additional environmental information

The APC Symmetra LX UPS presents the following relevant environmental aspects

Design	APC Symmetra LX UPS features a modular design that allows for serviceability and reduced maintenance requirements thanks to field-replaceable modules. Designed at a Schneider Electric Design Center that utilizes a design process that conforms to the requirements of the IEC 62430 "Environmentally Conscious Design for Electrical and Electronic Products" standard.
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 73456 g, consisting of wood (51.7%), cardboard (41.4%), plastics (6.1%), paper (0.4%) and desiccant (0.4%)
Installation	The product does not require any special installation materials or operations. Installation is to be performed by qualified personnel.
Use	Product maintenance requires monitoring and replacement of components as needed. This consists of the replacement of the batteries twice and replacement of all four power supply modules once. The power modules contain all the replaceable parts that are not batteries, such as fans and filtering PCBs, but they are specifically designed so that the modules will only need to be replaced once during the products lifetime.
End of life	<p>End of life optimized to decrease the amount of waste and allow recovery of the product components and materials</p> <p>This product contains lead acid batteries (103056g), lithium ion coin batteries (6g), electronic cards (7919g (PCB only) + 34719g (board components) = 42638g), electrolytic capacitors (2315g) that should be separated from the stream of waste so as to optimize end-of-life treatment.</p> <p>The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</p> <p>Recyclability potential: 66% Based on "ECO'DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).</p>

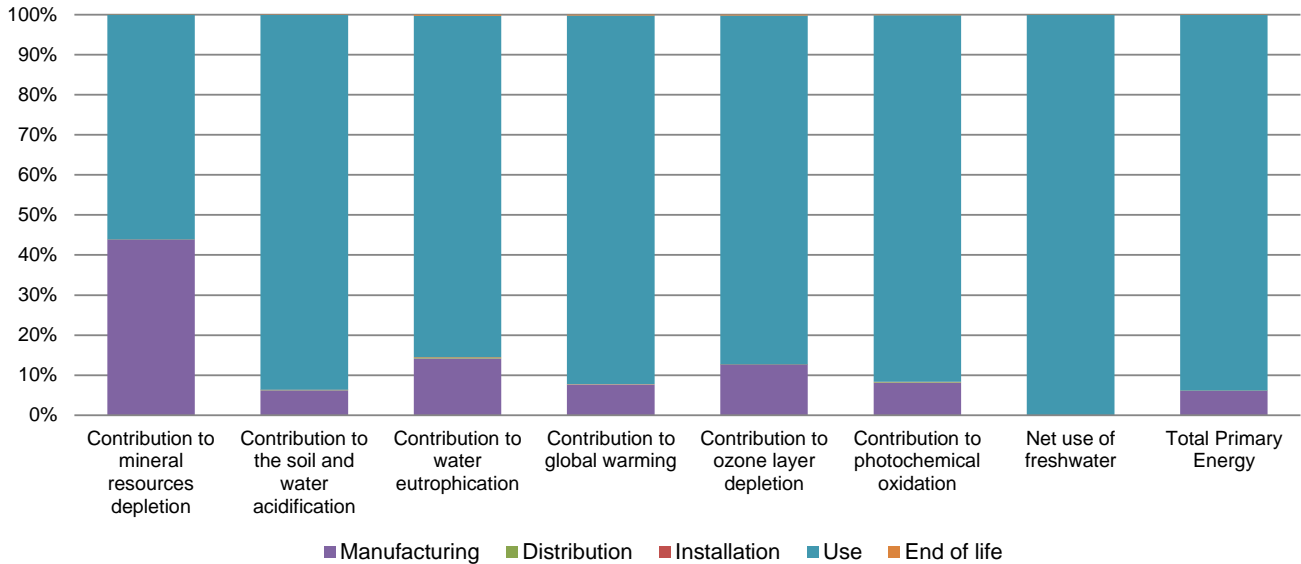


Environmental impacts

Reference life time	15 years			
Installation elements	Transportation and disposal of packaging are accounted for during installation. No special installation components needed.			
Use scenario	Power consumption is consistent with the PSR0010 where the product operates at 25% load 25% of the time, 50% load 50% of the time and 75% load 25% of the time. The average power consumption wattage is 0.806 kW			
Geographical representativeness	The product can be used in all regions, but the majority of the product is deployed in Europe			
Technological representativeness	The means of material production, processing and transport modeled are representative of the technologies used in production.			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: Philippines	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators		APC Symmetra LX UPS - SYA16K16RMP					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1.95E+00	8.56E-01	0*	0*	1.09E+00	0*
Contribution to the soil and water acidification	kg SO ₂ eq	2.46E+02	1.54E+01	2.01E-01	2.95E-02	2.30E+02	1.58E-01
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	1.78E+01	2.53E+00	4.62E-02	1.36E-02	1.52E+01	5.04E-02
Contribution to global warming	kg CO ₂ eq	5.99E+04	4.56E+03	4.39E+01	4.25E+01	5.52E+04	1.15E+02
Contribution to ozone layer depletion	kg CFC11 eq	4.38E-03	5.57E-04	0*	0*	3.82E-03	9.35E-06
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	1.40E+01	1.14E+00	1.43E-02	9.95E-03	1.28E+01	1.76E-02

Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.88E+05	2.66E+01	0*	0*	1.88E+05	0*
Total Primary Energy	MJ	1.16E+06	7.00E+04	6.21E+02	0*	1.08E+06	9.12E+02



Optional indicators	APC Symmetra LX UPS - SYA16K16RMP						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	6.86E+05	5.39E+04	6.17E+02	8.25E+01	6.31E+05	1.23E+03
Contribution to air pollution	m³	3.90E+06	7.58E+05	1.87E+03	1.07E+03	3.13E+06	8.53E+03
Contribution to water pollution	m³	3.26E+06	5.31E+05	7.22E+03	7.38E+02	2.71E+06	6.83E+03
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	5.77E+01	3.99E+01	0*	0*	1.78E+01	0*
Total use of renewable primary energy resources	MJ	1.37E+05	2.76E+03	0*	0*	1.34E+05	0*
Total use of non-renewable primary energy resources	MJ	1.02E+06	6.73E+04	6.20E+02	0*	9.51E+05	9.11E+02
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.34E+05	1.36E+03	0*	0*	1.33E+05	0*
Use of renewable primary energy resources used as raw material	MJ	2.76E+03	1.40E+03	0*	0*	1.36E+03	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.02E+06	6.62E+04	6.20E+02	0*	9.50E+05	9.11E+02
Use of non renewable primary energy resources used as raw material	MJ	2.04E+03	1.08E+03	0*	0*	9.58E+02	0*
Use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Waste categories	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Hazardous waste disposed	kg	2.41E+03	8.89E+02	0*	0*	1.01E+03	5.09E+02
Non hazardous waste disposed	kg	1.96E+05	1.08E+03	0*	3.44E+01	1.94E+05	0*
Radioactive waste disposed	kg	1.30E+02	5.46E-01	0*	0*	1.30E+02	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	4.71E+02	1.64E+01	0*	4.28E+01	2.36E+02	1.75E+02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	3.20E+01	0*	0*	0*	1.32E+01	1.88E+01
Exported Energy	MJ	4.68E+01	2.46E+00	0*	2.37E+01	2.07E+01	0*

* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.7.0.2 , database version 2016-11 in compliance with ISO14044.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).


According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

The environmental indicators of other products in this family may be proportional extrapolated, by life cycle phase, based on the ratio of the amount of a key parameter of the product, over the amount of that key parameter within the reference product. Proportionality rules are based on the following key parameters for impacts by lifecycle phase: Manufacturing phase impacts - mass of the lead acid batteries and mass of the product excluding packaging.* Distribution phase impacts - total mass of product (including packaging). Installation phase impacts - mass of packaging. Use phase impacts - product lifetime energy consumption**. End of Life impacts - the product mass (excluding packaging).

*For the manufacturing phase the impact is to be multiplied by the average of the first and second parameter ratios.

** For the Use phase the abiotic depletion category is a function of the replacement part mass. For all others it is a function of the product energy use.

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

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		<i>Validity period</i>	5 years
<i>Independent verification of the declaration and data, in compliance with ISO 14025 : 2010</i>			
Internal	X	External	
<i>The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)</i>			
<i>PEP are compliant with XP C08-100-1 :2014</i>			
<i>The elements of the present PEP cannot be compared with elements from another program.</i>			
<i>Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »</i>			
			

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