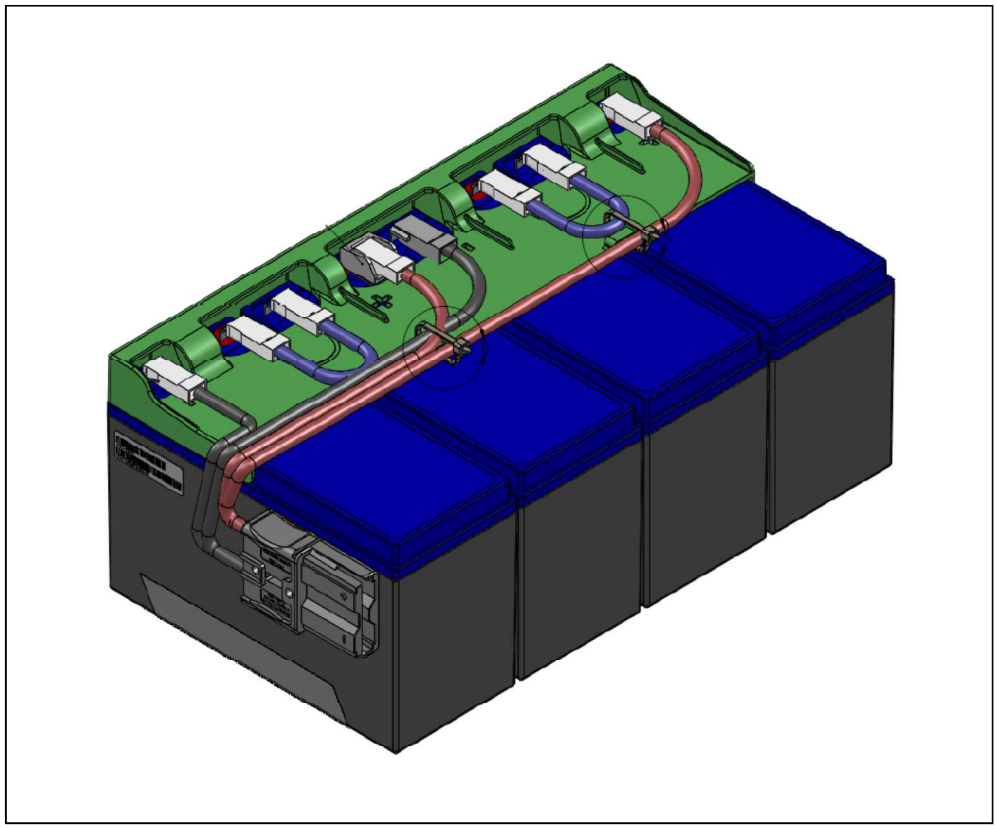
Product Environmental Profile

Smart-UPS Li-Ion Replacement Battery Cartridge (RBC)

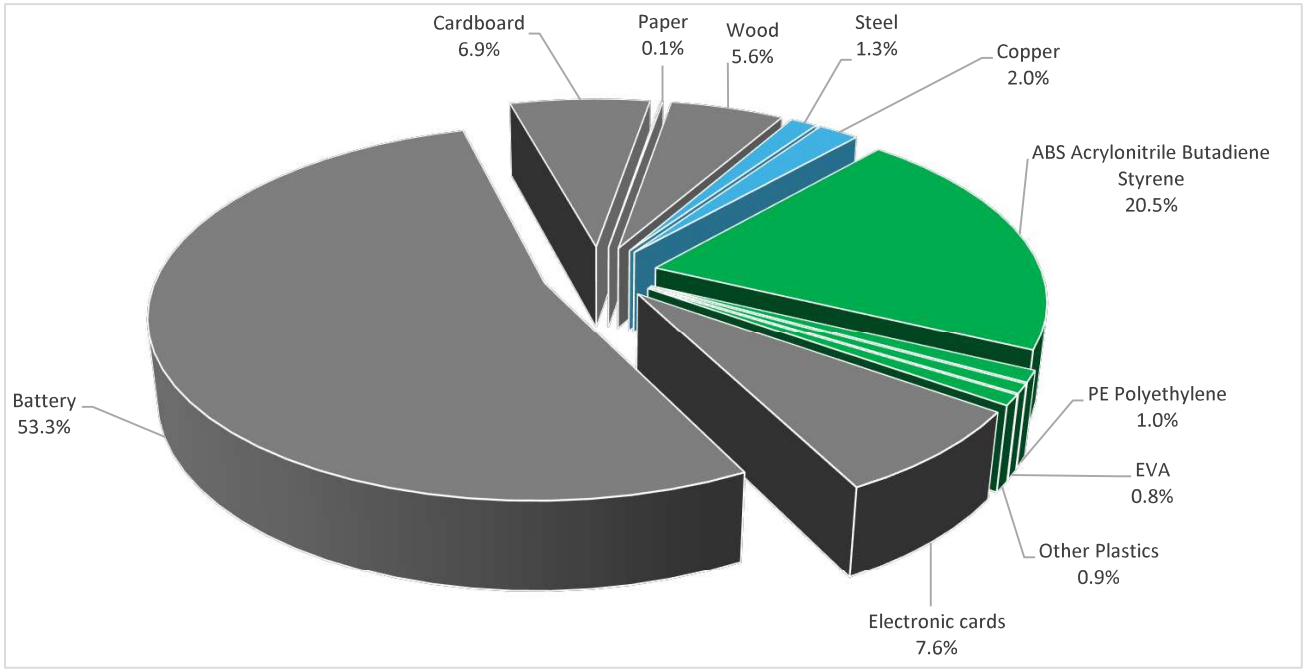


General information

Representative product	Smart-UPS Li-Ion Replacement Battery Cartridge (RBC) - 911-9017
Description of the product	The Li-Ion Replacement Battery Cartridge (RBC) is the replacement battery pack for the Smart-UPS series for servers, voice / data networks, medical labs, and light industrial applications.
Description of the range	911-9017, 911-0018, 911-0019, 911-7010
Functional unit	Provision of 240 Battery Volt-Amp-Hours of power protection during 5 years of operation.

Constituent materials

Reference product mass	4594 g including the product, its packaging and additional elements and accessories



Plastics	23.2%
Metals	3.3%
Others	73.5%

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 EU Directive 2015/863) and do not contain, or only contain in the authorised proportions",", lead, mercury, cadmium, hexavalent chromium, flame retardants (polybrominated biphenyls"," - PBB, polybrominated diphenyl ethers - PBDE) or phthalates (Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP)) as mentioned in the Directives.

The battery pack(s) within this product range are designed to conform with the requirements of the Battery and Accumulator Directive (European Directive 2006/66/EC of 26 September 2006) and do not contain, or only contain in authorized proportions, the regulated substances lead (Pb), mercury (Hg) and cadmium (Cd) as mentioned in the Directive. Additionally, the lithium ion battery pack contained within this product has been tested in accordance with UN38.3 and a UN38.3.5 Test Summary Report is available.

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

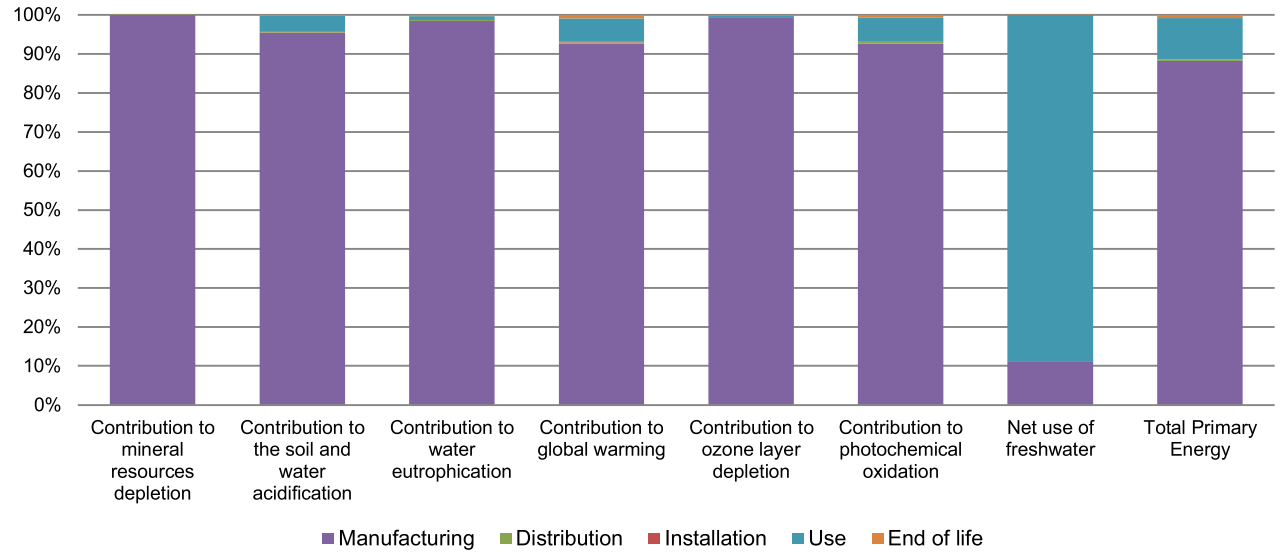
The Smart-UPS Li-Ion Replacement Battery Cartridge (RBC) presents the following relevent environmental aspects	
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 652.2 g, consisting of cardboard (48%), wood (39%), plastic (12%), paper (1%) Product distribution optimised by setting up local distribution centres
Installation	The Smart-UPS Li-Ion RBC does not require any special installation materials or operations.
Use	The product does not require special maintenance operations.
End of life	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials This product contains Li-Ion batteries (2416g), Printed Circuit Boards>10cm2 (342g) that should be separated from the stream of waste so as to optimize end-of-life treatment. 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 Recyclability potential: **33%** 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).

Environmental impacts

Reference life time	5 years			
Installation elements	Transport and disposal of packaging are accounted for during installation. No special installation components needed.			
Use scenario	Weighted average loss of 0.52W.			
Geographical representativeness	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: EU-27, CN, BR, US, SG	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	**Smart-UPS Li-Ion Replacement Battery Cartridge (RBC) - 911-9017**						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	4.43E-02	4.43E-02	0*	0*	0*	0*
Contribution to the soil and water acidification	kg SO_2 eq	1.13E+00	1.08E+00	2.71E-03	2.41E-04	4.65E-02	2.76E-03
Contribution to water eutrophication	kg PO_4^{3-} eq	2.78E-01	2.74E-01	6.23E-04	1.16E-04	2.81E-03	8.07E-04
Contribution to global warming	kg CO_2 eq	1.86E+02	1.72E+02	5.93E-01	2.94E-01	1.12E+01	1.67E+00
Contribution to ozone layer depletion	kg CFC11 eq	1.20E-04	1.19E-04	0*	0*	7.27E-07	1.77E-07
Contribution to photochemical oxidation	kg C_2H_4 eq	4.27E-02	3.96E-02	1.93E-04	6.98E-05	2.56E-03	3.23E-04
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	4.56E+01	5.10E+00	0*	0*	4.05E+01	0*

Total Primary Energy	MJ	2.11E+03	1.86E+03	8.38E+00	6.04E-01	2.23E+02	1.70E+01



Optional indicators		Smart-UPS Li-Ion Replacement Battery Cartridge (RBC) - 911-9017					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1.41E+03	1.26E+03	8.33E+00	5.69E-01	1.27E+02	1.19E+01
Contribution to air pollution	m³	1.61E+04	1.54E+04	2.52E+01	7.89E+00	4.80E+02	1.69E+02
Contribution to water pollution	m³	2.06E+04	2.00E+04	9.75E+01	6.44E+00	4.60E+02	1.07E+02
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1.55E-02	1.55E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1.16E+02	8.80E+01	0*	0*	2.83E+01	1.42E-02
Total use of non-renewable primary energy resources	MJ	1.99E+03	1.77E+03	8.37E+00	5.96E-01	1.95E+02	1.70E+01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.05E+02	7.64E+01	1.12E-02	0*	2.83E+01	1.42E-02
Use of renewable primary energy resources used as raw material	MJ	1.16E+01	1.16E+01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.93E+03	1.71E+03	8.37E+00	5.96E-01	1.95E+02	1.70E+01
Use of non renewable primary energy resources used as raw material	MJ	6.23E+01	6.23E+01	0*	0*	0*	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	1.05E+03	1.04E+03	0*	0*	0*	9.29E+00
Non hazardous waste disposed	kg	2.40E+02	1.97E+02	0*	2.69E-01	4.16E+01	4.08E-01
Radioactive waste disposed	kg	1.69E-01	1.41E-01	0*	0*	2.78E-02	1.15E-04
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.86E+00	1.61E-01	0*	4.12E-01	0*	1.28E+00
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1.96E-01	0*	0*	0*	0*	1.96E-01
Exported Energy	MJ	1.75E-01	1.64E-02	0*	1.58E-01	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.8.1, database version 2018-11 in compliance with ISO14044.

The manufacturing 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 proportionally 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 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).

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.

Registration number :		*Drafting rules*	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH08		
Date of issue	04/2019	*Information and reference documents*	
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010			
Internal	X External		
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)			
PEP are compliant with XP C08-100-1 :2014			
The elements of the present PEP cannot be compared with elements from another program.			
Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »			

Schneider Electric Industries SAS

Country Customer Care Center
http://www.schneider-electric.com/contact

35, rue Joseph Monier

CS 30323

F- 92506 Rueil Malmaison Cedex

RCS Nanterre 954 503 439
Capital social 896 313 776 €

www.schneider-electric.com

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