Product Environmental Profile

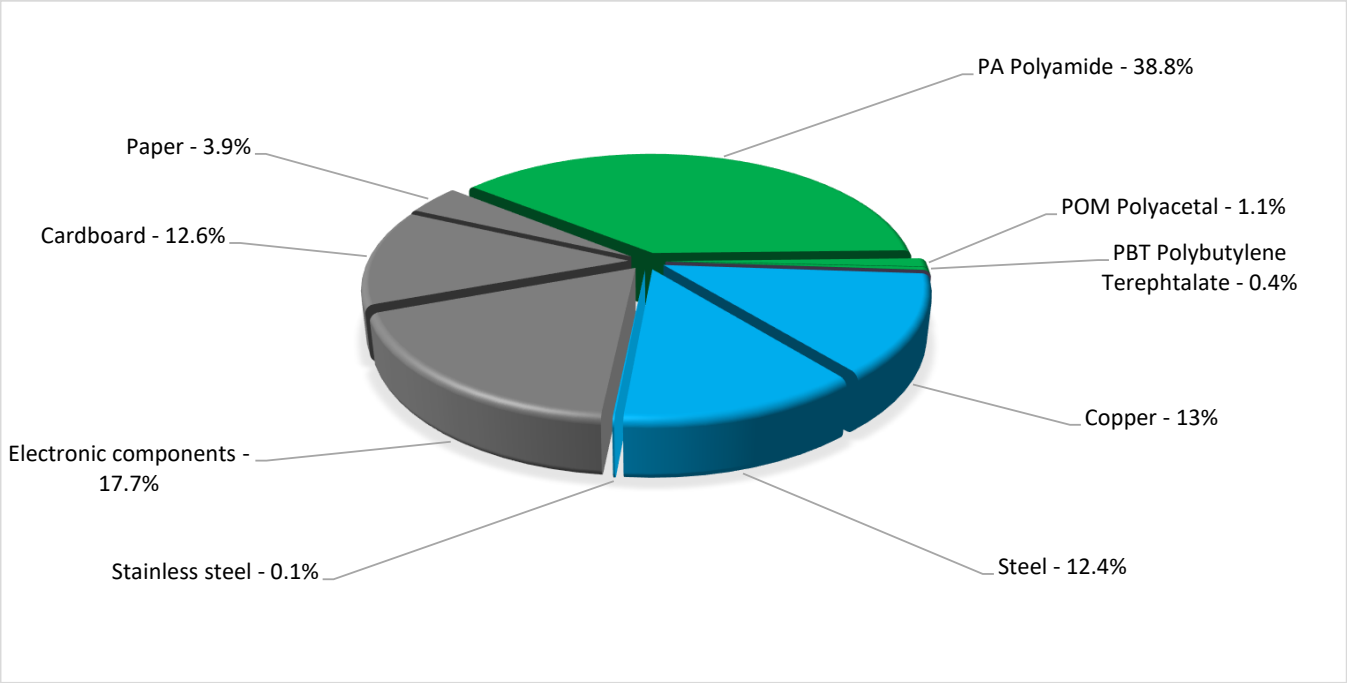
Easy9 Surge Arrestor

General information

Representative product	Easy9 Surge Arrestor - EZ9L33120
Description of the product	The main purpose of the Easy 9 SPD is to protect low voltage power distribution system and equipment in from transient over voltage and discharge surge current.
Functional unit	Protect during 20 years against direct or indirect effects of lightning or against transient overvoltages electrical equipements connected to electrical networks in accordance with IEC 61643-11. - Number of poles 1P - Maximum discharge current 20000A - Maximum continuous operating voltage 270V

Constituent materials

Reference product mass	129 g	including the product, its packaging and additional elements and accessories



Plastics	40.3%
Metals	25.5%
Others	34.2%

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), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate– BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP as mentioned in the 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

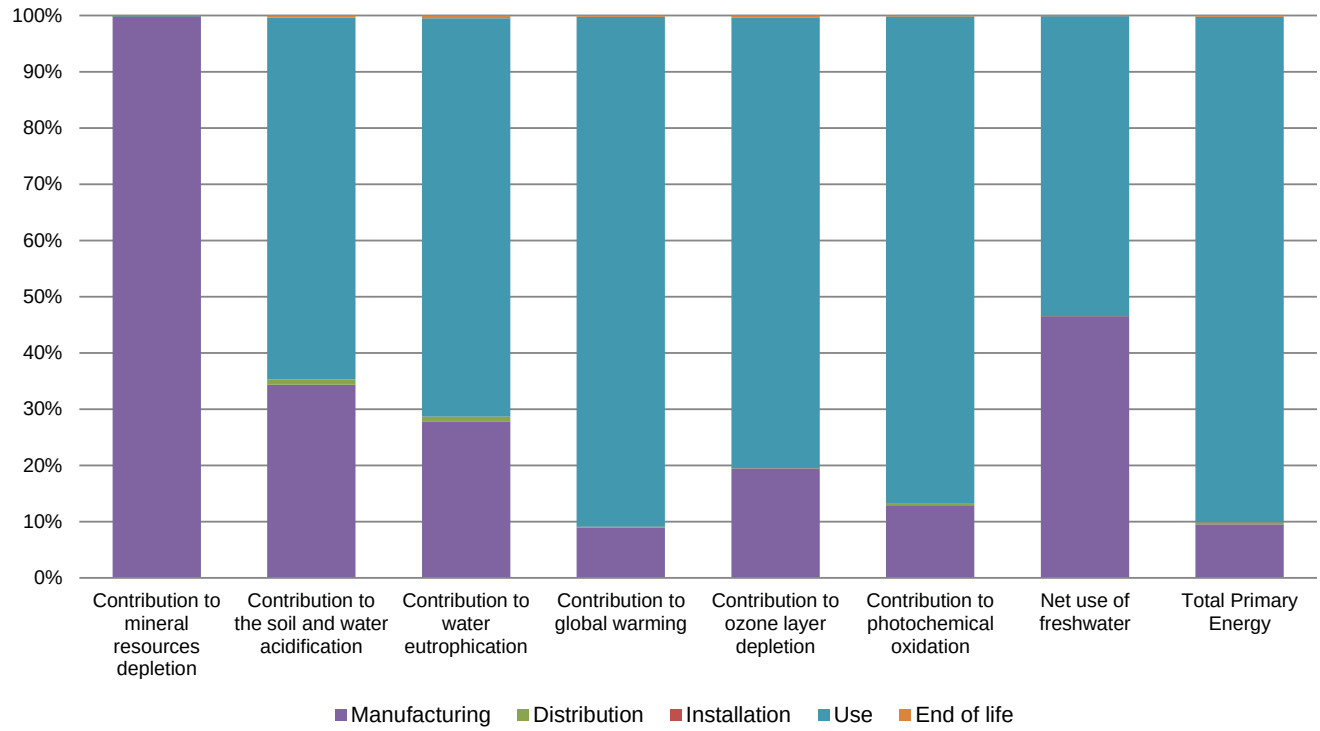
Additional environmental information

The Easy9 Surge Arrestor 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 20.9 g, consisting of Cardboard (76.4%) & Paper (23.6%) Product distribution optimised by setting up local distribution centres
Installation	Ref EZ9L33120 does not require any installation 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 No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process. Recyclability potential: **27%** 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	20 years			
Product category	Surge arresters and Surge protective devices type 1, 2 or 3 connected to low voltage power systems			
Installation elements	No special components needed			
Use scenario	Load factor : 100% of Ic Use rate: 100 % of the RLT			
Geographical representativeness	Russia			
Technological representativeness	The Modules of technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are similar and representative of the actual type of technologies used to make the product in production.			
Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Energy model used: China	Electricity mix; AC; consumption mix, at consumer; 220V; RU	Electricity mix; AC; consumption mix, at consumer; 220V; RU	Electricity mix; AC; consumption mix, at consumer; 220V; RU

Compulsory indicators	Easy9 Surge Arrestor - EZ9L33120						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	4.67E-05	4.67E-05	0*	0*	7.70E-08	0*
Contribution to the soil and water acidification	kg SO_2 eq	8.27E-03	2.84E-03	7.60E-05	4.72E-06	5.32E-03	3.26E-05
Contribution to water eutrophication	kg PO_4^{3-} eq	1.97E-03	5.47E-04	1.75E-05	1.15E-06	1.40E-03	9.24E-06
Contribution to global warming	kg CO_2 eq	8.28E+00	7.36E-01	1.66E-02	1.13E-03	7.51E+00	1.78E-02
Contribution to ozone layer depletion	kg CFC11 eq	2.46E-07	4.80E-08	3.37E-11	0*	1.97E-07	7.77E-10
Contribution to photochemical oxidation	kg C_2H_4 eq	1.67E-03	2.16E-04	5.42E-06	3.53E-07	1.44E-03	3.36E-06
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.46E-02	6.79E-03	1.49E-06	0*	7.78E-03	1.50E-05
Total Primary Energy	MJ	6.99E+01	6.67E+00	2.35E-01	1.48E-02	6.29E+01	1.57E-01



Optional indicators		Easy9 Surge Arrestor - EZ9L33120					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	5.38E+01	3.98E+00	2.34E-01	1.47E-02	4.95E+01	1.26E-01
Contribution to air pollution	m³	5.10E+02	1.21E+02	7.08E-01	0*	3.87E+02	1.14E+00
Contribution to water pollution	m³	5.72E+02	3.53E+02	2.74E+00	1.72E-01	2.14E+02	1.39E+00
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1.03E-02	1.03E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1.12E+01	3.69E-01	0*	0*	1.08E+01	0*
Total use of non-renewable primary energy resources	MJ	5.88E+01	6.30E+00	2.35E-01	1.48E-02	5.20E+01	1.57E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.08E+01	0*	0*	0*	1.08E+01	0*
Use of renewable primary energy resources used as raw material	MJ	4.02E-01	4.02E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	5.71E+01	4.63E+00	2.35E-01	1.48E-02	5.20E+01	1.57E-01
Use of non renewable primary energy resources used as raw material	MJ	1.67E+00	1.67E+00	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	2.23E+00	1.94E+00	0*	0*	1.09E-01	1.84E-01
Non hazardous waste disposed	kg	1.28E+00	6.92E-01	5.91E-04	1.54E-04	5.88E-01	4.79E-04
Radioactive waste disposed	kg	3.19E-04	2.14E-04	4.21E-07	0*	1.04E-04	7.69E-07
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	6.04E-02	1.04E-02	0*	2.08E-02	0*	2.91E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2.56E-03	0*	0*	0*	0*	2.56E-03
Exported Energy	MJ	6.62E-05	6.22E-06	0*	6.00E-05	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 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).

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	ENVPEP1508002_V2	*Drafting rules*	PCR-ed3-EN-2015 04 02
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Validity period	5 years	*Information and reference documents*	www.pep-ecopassport.org

Independent verification of the declaration and data

Internal X External

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

Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »

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