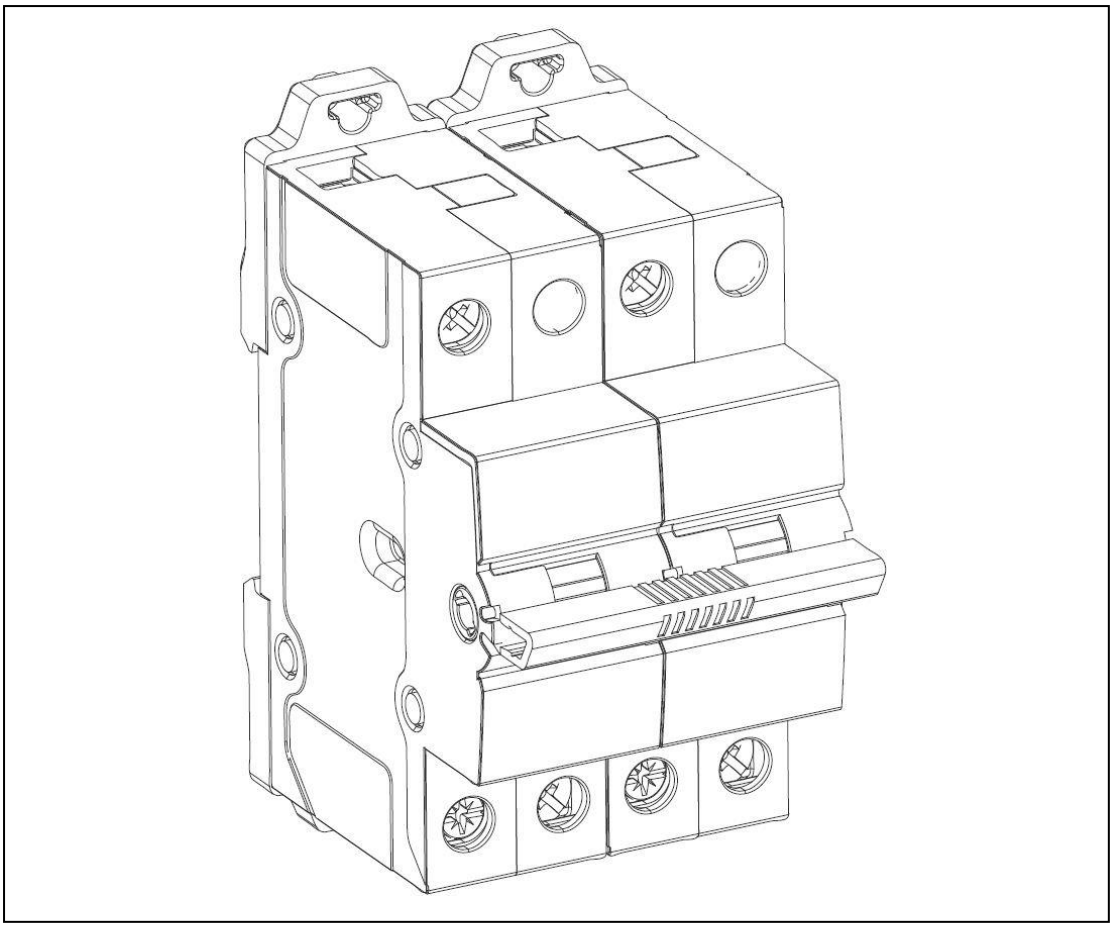
Product Environmental Profile

CHANGEOVER SWITCH

as referent product for :
All Changeover Switches of A9SCOxxx, R9SCOxxx, MX9CSxxx.

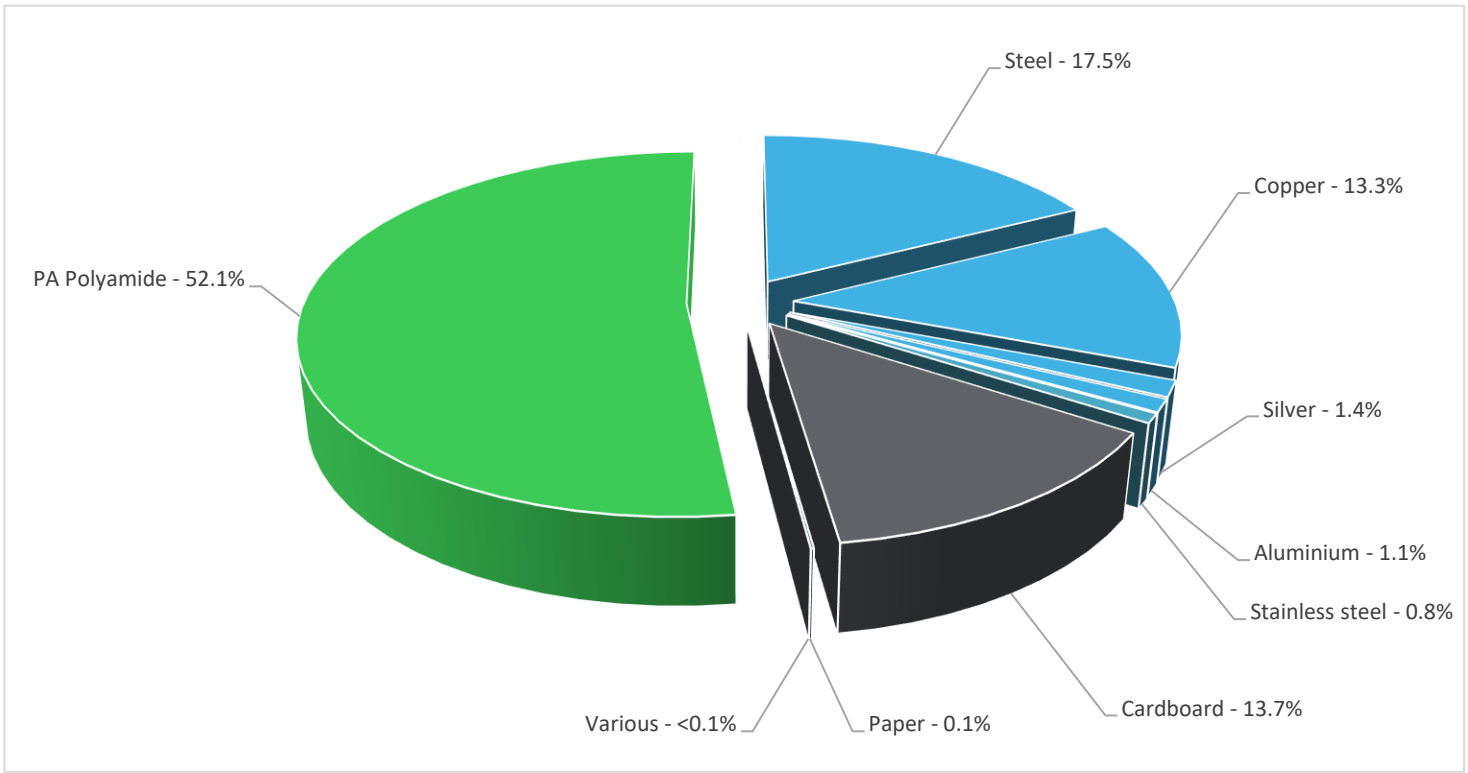


General information

Representative product	Acti9 Changeover Switch, 63A, 415V, 2P - A9SCO263
Description of the product	The 2 Pole Acti9 Changeover Switch provide the solution for low voltage distribution systems that need a continuous power supply and helps in switch over of supply for operational voltages upto 415V and available in 25A, 40A & 63A. It conforms to AS/NZS 60947.3, EN 60947-3 & IEC 60947-3.
Description of the range	The indicator values of this Acti9 Changeover Switch can be extrapolated for other ranges such as Resi9 and MAX9 Changeover Switches and other current ratings such as 25A, 40A, and 63A. The environmental impacts of this referenced product are representative of the impacts of the other ranges of products which are developed with a similar technology.
Functional unit	Ensure switchover of supply in 3 positions (I-0-II) with center OFF position during 20 years and turn off all or part of an installation by separating the installation or part of the installation of all electrical energy for safety reasons with a rated operational voltage Ue=415V and rated current In=63A. This is ensured in accordance with the following parameters: - Number of poles Np: 2 - Rated Insulation Voltage Ui=690V - Impulse Withstand Voltage Uimp = 6 kV - Utilization category AC-22 A - Ith = Rated current in continuous operation = 63A - Icw = Rated short time withstand current = 1260A for 1 sec - IP Class= IP40 Degree of protection against ingress of solid foreign objects and water with harmful effects in accordance with the standard IEC 60529.

Constituent materials

Reference product mass	270 g	including the product, its packaging and additional elements and accessories



Plastics	52.1%
Metals	34.1%
Others	13.8%

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

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

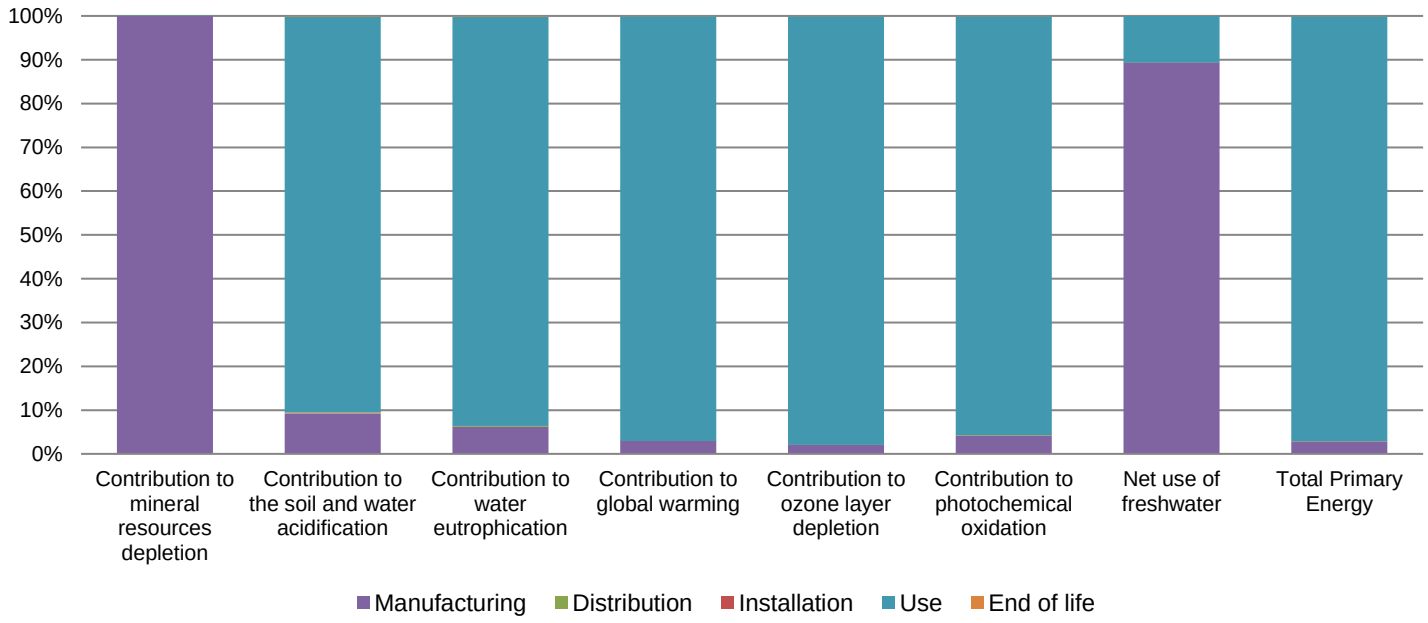
The Acti9 Changeover Switch, 63A, 415V, 2P presents the following relevent environmental aspects	
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 38.4 g, consisting of Cardboard (99%) and Paper (1%) Packaging recycled materials is 85% of total packaging mass. Product distribution optimised by setting up local distribution centres
Installation	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).
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: **35%** 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	Switches
Installation elements	This product does not requrie any special components during installation
Use scenario	Load rate = 50% of 63A (In) i.e 5.5446*0.5*0.5 = 1.386W for 50% load if we use 5.5446W as 100% Use time rate = 30% of the RLT (20 Years)
Geographical representativeness	Australia & Egypt
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.

	Manufacturing	Installation	Use	End of life
Energy model used	Manufacturing Plant Location : India	Electricity mix; AC; consumption mix, at consumer; 240V; AU	Electricity mix; AC; consumption mix, at consumer; 240V; AU	Electricity mix; AC; consumption mix, at consumer; 240V; AU
		Electricity mix; AC; consumption mix, at consumer; 220V; EG	Electricity mix; AC; consumption mix, at consumer; 220V; EG	Electricity mix; AC; consumption mix, at consumer; 220V; EG

Compulsory indicators	Acti9 Changeover Switch, 63A, 415V, 2P - A9SCO263						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	3.43E-03	3.43E-03	0*	0*	0*	0*
Contribution to the soil and water acidification	kg SO_2 eq	6.24E-02	5.76E-03	1.59E-04	8.66E-06	5.64E-02	7.37E-05
Contribution to water eutrophication	kg PO_4^{3-} eq	1.60E-02	9.87E-04	3.66E-05	2.10E-06	1.49E-02	2.18E-05
Contribution to global warming	kg CO_2 eq	6.35E+01	1.85E+00	3.48E-02	0*	6.16E+01	4.45E-02
Contribution to ozone layer depletion	kg CFC11 eq	5.92E-06	1.24E-07	0*	0*	5.80E-06	1.71E-09
Contribution to photochemical oxidation	kg C_2H_4 eq	9.67E-03	3.98E-04	1.14E-05	0*	9.25E-03	7.58E-06
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	5.26E-01	4.70E-01	0*	0*	5.60E-02	0*
Total Primary Energy	MJ	7.81E+02	2.21E+01	4.93E-01	0*	7.58E+02	3.53E-01



Optional indicators	Acti9 Changeover Switch, 63A, 415V, 2P - A9SCO263						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	7.11E+02	1.28E+01	4.89E-01	0*	6.98E+02	2.84E-01
Contribution to air pollution	m³	5.52E+03	4.15E+02	1.48E+00	0*	5.10E+03	2.58E+00
Contribution to water pollution	m³	3.15E+03	5.40E+01	5.73E+00	0*	3.09E+03	3.24E+00
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	4.18E-02	4.18E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3.71E+01	1.17E+00	0*	0*	3.59E+01	0*
Total use of non-renewable primary energy resources	MJ	7.44E+02	2.09E+01	4.92E-01	0*	7.22E+02	3.53E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3.70E+01	1.05E+00	0*	0*	3.59E+01	0*
Use of renewable primary energy resources used as raw material	MJ	1.20E-01	1.20E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7.41E+02	1.80E+01	4.92E-01	0*	7.22E+02	3.53E-01
Use of non renewable primary energy resources used as raw material	MJ	2.88E+00	2.88E+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	1.92E+01	1.74E+01	0*	0*	1.37E+00	3.95E-01
Non hazardous waste disposed	kg	8.34E+00	1.24E+00	1.24E-03	0*	7.10E+00	1.08E-03
Radioactive waste disposed	kg	2.44E-03	5.71E-04	8.82E-07	0*	1.86E-03	1.72E-06
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.51E-01	2.76E-02	0*	3.82E-02	0*	8.49E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	7.23E-03	0*	0*	0*	0*	7.23E-03
Exported Energy	MJ	1.21E-04	1.14E-05	0*	1.10E-04	0*	0*

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

Life cycle assessment performed with EIME version 5.9.4, database version 2020-12 in compliance with ISO14044.

The Manufacturing phase is impacting on Indicator of Abiotic depletion (elements, ultimate reserves) (ADPe for EN15804) and Net use of freshwater (NUFW).The Use phase is impacting on indicators of Acidification potential of soil and water (total average for Europe) (A for PEP), Eutrophication (fate not incl.) (EP for EN15804), Global warming (GWP100) (GWP for EN15804), Ozone layer depletion ODP steady state (ODP for EN15804), Photochemical oxidation (high NOx) (POCP for EN15804) & Total Primary Energy (TPE).

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	ENVPEP2112003_V1	*Drafting rules*	PCR-ed3-EN-2015 04 02
Date of issue	12/2022	*Supplemented by*	PSR-0005-ed2-EN-2016 03 29
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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