

# Product Environmental Profile

EasyPact EXE Vacuum Circuit Breaker (VCB) up to 17.5kV

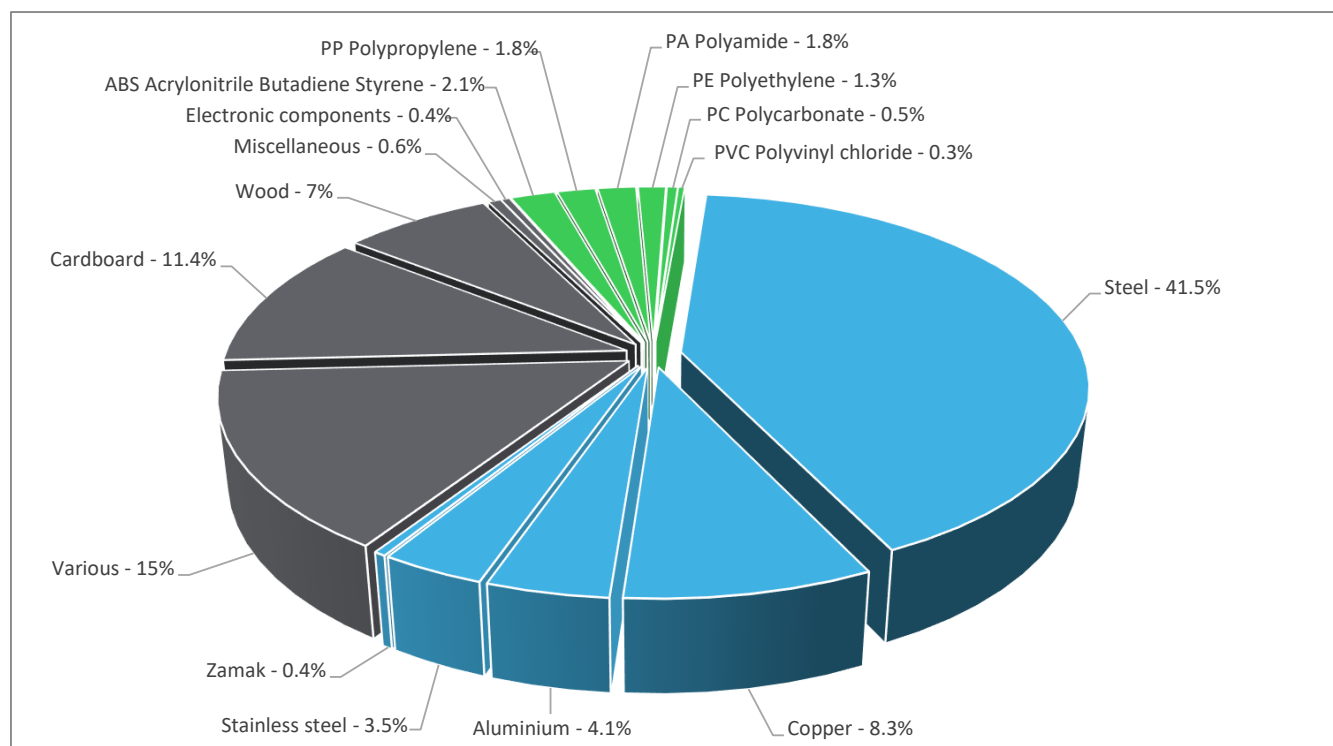


## General information

<b>Representative product</b>	EasyPact EXE VCB up to 17.5kV
<b>Description of the product</b>	The main purpose of the product is to distribute medium voltage electricity for 20 years, 24 hours per day.
<b>Functional unit</b>	Protect during 20 years the installation against overloads and short-circuits in circuit with assigned rated voltage $U_r$ and rated current $I_r$ . This protection is ensured in accordance with the following parameters: Number of poles = $N_p = 3$ Rated voltage = $U_r = 17.5$ kV Rated short-circuit breaking current = $I_{sc} = 31.5$ kA Rated current = $I_r = 1250$ A IP 4X as per IEC 60529 IK 07 as per IEC 62262

## Constituent materials

**Reference product mass** 97761 g including the product, its packaging and additional elements and accessories



Plastics	7.8%
Metals	57.8%
Others	34.4%

## Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) 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 EasyPact EXE VCB up to 17.5kV presents the following relevant environmental aspects

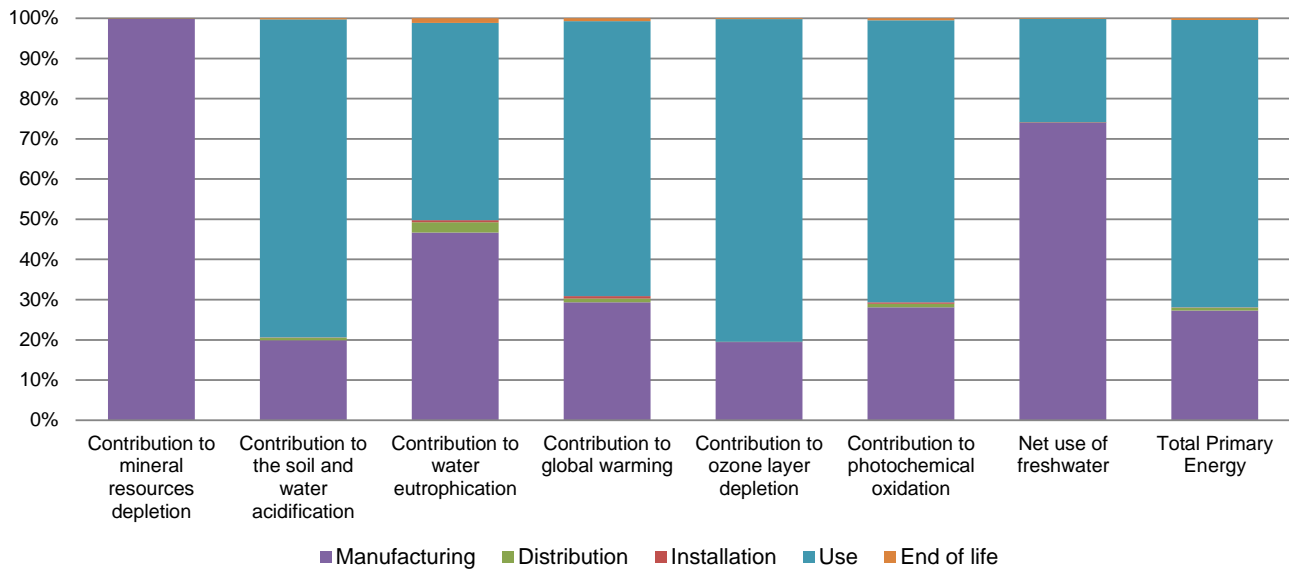
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 18842.1 g, consisting of Cardboard (57.8%), Wood (35.3%), PE Polyethylene (6.8%) and Paper (0.1%) Product distribution optimised by setting up local distribution centres
<b>Installation</b>	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).
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials This product contains Electronic: 10.862g 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 <a href="http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page">http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</a> Recyclability potential: <b>69%</b> 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

<b>Reference life time</b>	20 years			
<b>Product category</b>	Circuit-breakers			
<b>Installation elements</b>	No special installation components need during installation phase, but transport of packaging to disposal, and disposal of packaging accounted for during installation.			
<b>Use scenario</b>	The product is in active mode 30% of the time with a power use of 29.29W and in stand-by mode 70% of the time with a power use of 0W, for 20 years			
<b>Geographical representativeness</b>	Global			
<b>Technological representativeness</b>	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.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Manufacturing Plant: France	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators		EasyPact EXE VCB up to 17.5kV					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	3.30E-02	3.29E-02	0*	0*	2.76E-05	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	5.80E+00	1.15E+00	3.84E-02	4.40E-03	4.58E+00	1.51E-02
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	3.50E-01	1.63E-01	8.85E-03	1.91E-03	1.72E-01	3.91E-03
Contribution to global warming	kg CO <sub>2</sub> eq	8.87E+02	2.60E+02	8.41E+00	5.20E+00	6.06E+02	6.59E+00
Contribution to ozone layer depletion	kg CFC11 eq	1.83E-04	3.57E-05	0*	0*	1.47E-04	3.30E-07
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	3.09E-01	8.68E-02	2.74E-03	1.23E-03	2.17E-01	1.60E-03

Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	6.14E+00	4.55E+00	7.53E-04	1.37E-03	1.58E+00	6.47E-03
Total Primary Energy	MJ	1.72E+04	4.69E+03	1.19E+02	1.11E+01	1.23E+04	7.46E+01



Optional indicators	EasyPact EXE VCB up to 17.5kV						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	8.75E+03	2.32E+03	1.18E+02	1.06E+01	6.25E+03	5.99E+01
Contribution to air pollution	m <sup>3</sup>	1.05E+05	7.80E+04	3.58E+02	1.36E+02	2.60E+04	5.33E+02
Contribution to water pollution	m <sup>3</sup>	4.67E+04	1.92E+04	1.38E+03	1.20E+02	2.54E+04	6.10E+02
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	9.44E+00	9.44E+00	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1.14E+03	2.61E+02	1.59E-01	1.34E-01	8.79E+02	0*
Total use of non-renewable primary energy resources	MJ	1.60E+04	4.43E+03	1.19E+02	1.10E+01	1.14E+04	7.45E+01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	9.64E+02	8.50E+01	1.59E-01	1.34E-01	8.79E+02	0*
Use of renewable primary energy resources used as raw material	MJ	1.76E+02	1.76E+02	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.58E+04	4.16E+03	1.19E+02	1.10E+01	1.14E+04	7.45E+01
Use of non renewable primary energy resources used as raw material	MJ	2.72E+02	2.72E+02	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	2.48E+03	2.41E+03	0*	0*	0*	6.72E+01
Non hazardous waste disposed	kg	2.52E+03	2.52E+02	2.99E-01	4.28E+00	2.27E+03	0*
Radioactive waste disposed	kg	1.94E+00	8.97E-02	2.13E-04	0*	1.85E+00	3.57E-04
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	4.84E+01	4.55E+00	0*	8.75E+00	0*	3.51E+01
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	5.97E-01	0*	0*	0*	0*	5.97E-01
Exported Energy	MJ	3.07E+00	2.89E-01	0*	2.78E+00	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 Manufacturing phase is impacting on Indicators of Abiotic depletion (elements, ultimate reserves) (ADPe) & Net use of freshwater. The Manufacturing phase & Use phase are impacting equally on Indicators of Eutrophication (fate not incl.) (EP) & Global warming (GWP100) (GWP). And the use phase is the life cycle phase which has the greatest impact on the rest 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.*

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<i>Date of issue</i>	03/2021	<i>Information and reference documents</i>	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		<i>Validity period</i>	5 years
<i>Independent verification of the declaration and data, in compliance with ISO 14025 : 2010</i>			
Internal	External	X	
<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 :2016</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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