# **Product Environmental Profile**

#### **Circuit Breaker EasyPact EZC100**











#### **General information**

Representative product	Circuit Breaker EasyPact EZC100 - EZC100N3100
Description of the product	The main purpose of the EasyPact 100 Circuit Breaker range is to protect an electrical circuit from damage caused by overload or short circuit
Functional unit	Protect during 20 years the installation against overloads and short-circuits in circuit with assigned voltage 690 V and rated current 100 A. This protection is ensured in accordance with the following parameters:  - Number of poles Np - 3P  - Rated breaking capacity Icn - 15KA  - Tripping curve Cd - TMTU

### Constituent materials

Reference product mass 820 g including the product, its packaging and additional elements and accessories PC Polycarbonate - 0,6% PPE Polyphenylene - 1,2% PE Polyethylene - 0,2% **Diverse Thermosetting** Plastics - 2% Steel - 26,6% PA Polyamide - 12% PES Polyethersulfone - 30% Copper - 11,5% Brass - 1,7% Stainless steel - 1,4% Zamak - 0,1% Silver - 0,1% Paper - 1,2% \( \text{ Cardboard - 5,7%} \) Various - 5,8% **Plastics** 46.0% Metals 41.4% Others 12.7%

## **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 <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>



The Circuit Breaker EasyPact EZC100 presents the following relevent environmental aspects						
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified					
	Weight and volume of the packaging optimized, based on the European Union's packaging directive					
Distribution	Packaging weight is 57.2 g, consisting of Cardboard (83%), Paper(17%)					
	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 optimized to decrease the amount of waste and allow recovery of the product components and materials					
End of life	No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process.					
	Recyclability potential:  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	Circuit-breakers						
Installation elements	No special components needed	No special components needed					
Use scenario	Load rate: 50% of In Use time rate: 30% of RLT						
Geographical representativeness	Europe						
Technological representativeness	The main purpose of the EasyPact 100 Circuit Breaker range is to protect an electrical circuit from damage caused by overload or short circuit						
	Manufacturing	Installation	Use	End of life			
Energy model used	Manufacturing Plant Location; Thailand	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 Circuit Break				,100 - EZC 1001	43100		
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	8.26E-04	8.09E-04	0*	0*	1.68E-05	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	8.35E-01	2.83E-02	6.37E-04	0*	8.06E-01	2.38E-04
Contribution to water eutrophication	kg PO <sub>4</sub> 3- eq	5.30E-02	3.98E-03	1.47E-04	1.34E-04	4.86E-02	6.93E-05
Contribution to global warming	kg CO <sub>2</sub> eq	2.01E+02	7.50E+00	1.41E-01	7.41E-02	1.93E+02	1.39E-01
Contribution to ozone layer depletion	kg CFC11 eq	1.31E-05	5.20E-07	0*	0*	1.26E-05	5.48E-09
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	4.71E-02	2.75E-03	4.59E-05	1.76E-05	4.43E-02	2.46E-05
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	7.00E+02	0*	0*	0*	7.00E+02	0*
Total Primary Energy	MJ	3.97E+03	1.12E+02	1.98E+00	0*	3.86E+03	1.15E+00
mineral the soil and water wa		ribution to (		Contribution to hotochemical oxidation	Net use of freshwater		

Optional indicators	Circuit Breaker EasyPact EZC100 - EZC100N3100						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	2.30E+03	1.09E+02	1.97E+00	0*	2.19E+03	1.05E+00
Contribution to air pollution	m³	9.57E+03	1.24E+03	6.23E+00	0*	8.31E+03	8.35E+00
Contribution to water pollution	m³	8.78E+03	7.76E+02	2.31E+01	3.59E+00	7.97E+03	1.04E+01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1.04E-01	1.04E-01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	4.93E+02	2.33E+00	0*	0*	4.91E+02	0*
Total use of non-renewable primary energy resources	MJ	3.48E+03	1.09E+02	1.98E+00	0*	3.37E+03	1.15E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	4.92E+02	1.29E+00	0*	0*	4.91E+02	0*
Use of renewable primary energy resources used as raw material	MJ	1.04E+00	1.04E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	3.47E+03	1.01E+02	1.98E+00	0*	3.37E+03	1.15E+00
Use of non renewable primary energy resources used as raw material	MJ	8.57E+00	8.57E+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	1.68E+01	1.55E+01	0*	0*	1.01E-01	1.25E+00
Non hazardous waste disposed	kg	7.23E+02	2.50E+00	0*	0*	7.20E+02	0*
Radioactive waste disposed	kg	4.83E-01	1.59E-03	0*	0*	4.81E-01	0*

Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	3.96E-01	8.26E-02	0*	0*	0*	3.14E-01
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2.16E-02	0*	0*	0*	0*	2.16E-02
Exported Energy	MJ	5.55E-03	1.70E-05	0*	5.54E-03	0*	0*

<sup>\*</sup> represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.7.0.3, 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 :	SCHN-00399-V01.01-EN	Drafting rules	PCR-ed3-EN-2015 04 02		
Verifier accreditation N°	VH33	Supplemented by	PSR-0005-ed2-EN-2016 03 29		
Date of issue	09/2018	Information and reference documents	www.pep-ecopassport.org		
		Validity period	5 years		
Independent verification of the declaration and data, in compliance with ISO 14025: 2010					

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

Published by Schneider Electric

SCHN-00399-V01.01-EN © 2017 - Schneider Electric - All rights reserved 09/2018