

# Product Environmental Profile

## RESI9 RESIDUAL CURRENT BREAKER WITH OVERCURRENT PROTECTION

*as referent product for :  
all RCBO in RESI9 range*

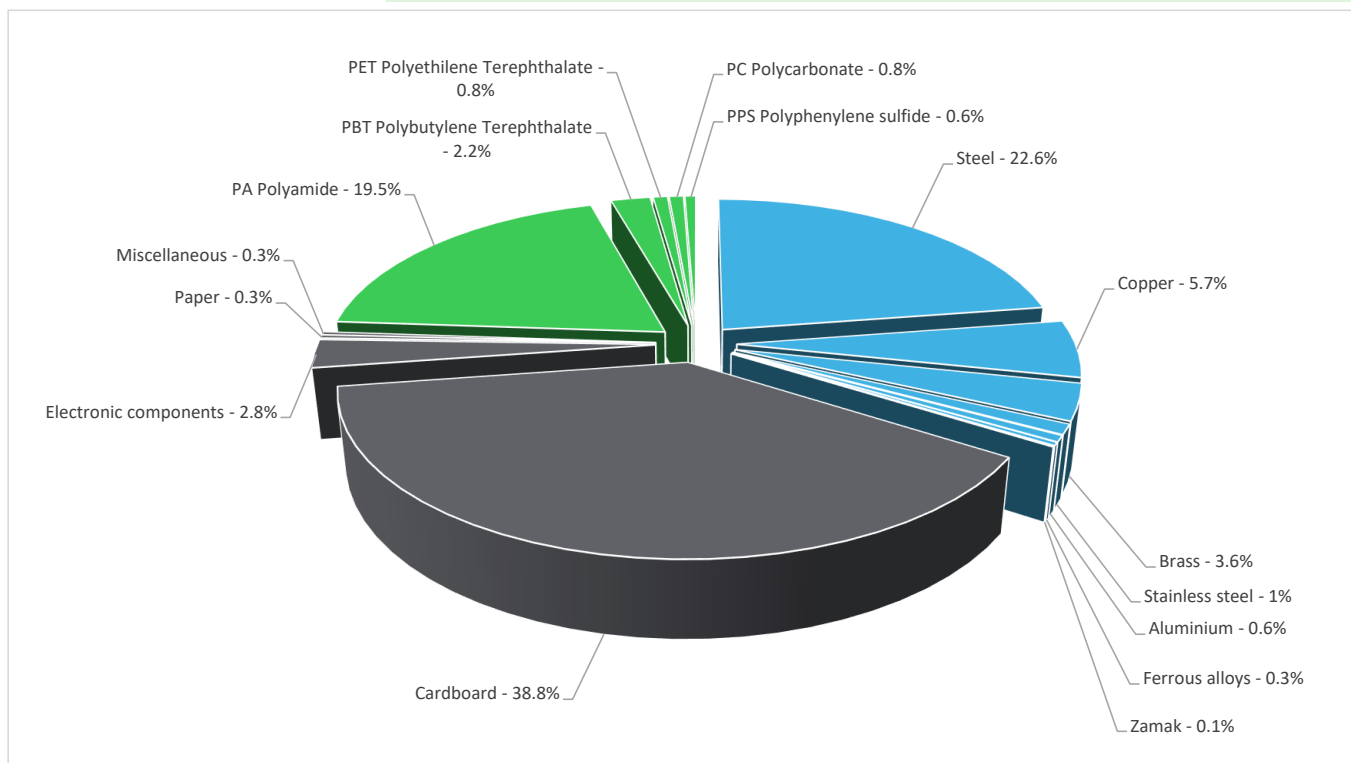


## General information

Reference product	RESI9 RESIDUAL CURRENT BREAKER WITH OVERCURRENT PROTECTION - R9D06616
Description of the product	The main purpose of RESI9 RCBO is to ensure protection of persons against electric shocks,overloads and short circuits.
Description of the range	The indicators values of this RESI9 RCBO can be extrapolated, based on the Mass and Energy values of the products, for other RESI9 RCBO Range of products ( whatever the earth type / finishing / colours / accessories included or not / ...). The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology.
Functional unit	Protect during 10 years the installation against overloads and short-circuits in circuit with assigned voltage 240V and rated current 16A. This protection is ensured in accordance with the following parameters: - Number of poles Np: 1P+N - Rated breaking capacity Icn: 6000A - Tripping curve Cd: C - Sensitivity S: 30mA - Type of differential protection Tp: AC It has an IP20 degree of protection (as per IEC 60529 standard) and becomes IP40 (as per IEC 62262 standard) once in modular enclosure. The product complies GB/T10963.1 & IEC 60898-1 standards.

## Constituent materials

Reference product mass 232 g including the product, its packaging.



Plastics	23.90%
Metals	33.90%
Others	42.20%

## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website  
<https://www.se.com/ww/en/work/support/green-premium/>

## Additional environmental information

<b>End Of Life</b>	Recyclability potential:	<b>55%</b>	Recyclability rate has been calculated based on REEECYLAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the "ECO'DEEE recyclability and recoverability calculation method" was taken. If no data was found a conservative assumption was used (0% recyclability).
--------------------	--------------------------	------------	--

## Environmental impacts

<b>Reference service life time</b>	10 years			
<b>Product category</b>	Circuit-breakers			
<b>Installation elements</b>	No special components needed			
<b>Use scenario</b>	Full load is 3.84 W power losses. The product is used 30% of the time ( see PSR ) with a power use of 0.96 W for 10 years.			
<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>Geographical representativeness</b>	New Zealand			
<b>Energy model used</b>	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Production mix; Low voltage; CN	Electricity mix; AC; consumption mix, at consumer; 230V; NZ	Electricity mix; AC; consumption mix, at consumer; 230V; NZ	Electricity mix; AC; consumption mix, at consumer; 230V; NZ

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

Mandatory Indicators		RESI9 RESIDUAL CURRENT BREAKER WITH OVERCURRENT PROTECTION - R9D06616						
Impact indicators	Unit	Total	Manufacturing [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to climate change	kg CO2 eq	8.89E+00	1.55E+00	3.86E-01	1.65E-01	6.42E+00	3.69E-01	-1.02E+00
Contribution to climate change-fossil	kg CO2 eq	8.86E+00	1.54E+00	3.86E-01	1.58E-01	6.42E+00	3.66E-01	-1.01E+00
Contribution to climate change-biogenic	kg CO2 eq	2.56E-02	1.50E-02	0*	7.34E-03	0*	3.29E-03	-1.04E-02
Contribution to climate change-land use and land use change	kg CO2 eq	4.71E-08	2.44E-09	0*	0*	0*	4.47E-08	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	7.18E-07	3.01E-07	3.41E-07	1.09E-08	6.24E-08	3.29E-09	-1.60E-07
Contribution to acidification	mol H+ eq	4.31E-02	1.56E-02	1.69E-03	6.56E-04	2.38E-02	1.32E-03	-7.93E-03
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	1.11E-04	1.44E-05	4.52E-08	1.19E-06	1.30E-07	9.55E-05	-2.51E-06
Contribution to eutrophication marine	kg N eq	7.05E-03	2.36E-03	7.80E-04	1.74E-04	3.34E-03	3.98E-04	-6.30E-04
Contribution to eutrophication, terrestrial	mol N eq	7.42E-02	2.55E-02	8.45E-03	1.31E-03	3.67E-02	2.15E-03	-7.03E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	2.40E-02	7.71E-03	2.76E-03	3.50E-04	1.25E-02	6.77E-04	-2.52E-03
Contribution to resource use, minerals and metals	kg Sb eq	2.51E-04	2.48E-04	0*	0*	3.19E-07	2.69E-06	-2.46E-04
Contribution to resource use, fossils	MJ	8.75E+01	2.30E+01	4.69E+00	1.72E+00	4.43E+01	1.38E+01	-1.99E+01
Contribution to water use	m3 eq	4.51E+00	1.27E-01	1.96E-02	7.06E-02	1.79E-01	4.11E+00	-4.91E-01

Additional indicators for the French regulation are available as well

Inventory flows Indicators		RESI9 RESIDUAL CURRENT BREAKER WITH OVERCURRENT PROTECTION - R9D06616						
Inventory flows	Unit	Total	Manufact. [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	7.95E+01	1.83E-01	0*	1.23E-01	7.91E+01	8.24E-02	2.25E-02
Contribution to use of renewable primary energy resources used as raw material	MJ	5.52E-01	5.52E-01	0*	0*	0*	0*	-4.98E-01
Contribution to total use of renewable primary energy resources	MJ	8.00E+01	7.35E-01	0*	1.23E-01	7.91E+01	8.24E-02	-4.75E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	8.60E+01	2.16E+01	4.69E+00	1.72E+00	4.43E+01	1.38E+01	-1.99E+01
Contribution to use of non renewable primary energy resources used as raw material	MJ	1.46E+00	1.46E+00	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	8.75E+01	2.30E+01	4.69E+00	1.72E+00	4.43E+01	1.38E+01	-1.99E+01
Contribution to use of secondary material	kg	7.05E-02	7.05E-02	0*	0*	0*	0*	0.00E+00
Contribution to use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to net use of freshwater	m³	1.16E-01	2.95E-03	4.56E-04	1.64E-03	4.16E-03	1.07E-01	-1.14E-02
Contribution to hazardous waste disposed	kg	9.23E+00	8.97E+00	0*	1.95E-03	1.13E-01	1.44E-01	-1.96E+01
Contribution to non hazardous waste disposed	kg	2.69E+00	1.50E+00	3.93E-04	5.38E-01	5.95E-01	5.23E-02	-1.54E+00
Contribution to radioactive waste disposed	kg	6.85E-04	4.88E-04	7.67E-05	7.22E-05	4.49E-05	2.70E-06	-4.91E-04
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	1.71E-01	3.17E-03	0*	9.08E-02	0*	7.74E-02	0.00E+00
Contribution to materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to biogenic carbon content of the product	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to biogenic carbon content of the associated packaging	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00

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

Life cycle assessment performed with EIME version v5.9.4, database version 2022-01 in compliance with ISO14044.

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

The majority of environmental indicators are most significantly impacted by the Use phase.

ADPe is the hotspots in the manufacturing phase that is most affected by Electronic parts (30.0%).

Interpretation file can be seen in cell number D101

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

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 :	ENVPEP2210005_V1	Drafting rules	PEP-PCR-ed4-2021 09 06
Date of issue	06/2023	Supplemented by	PSR-0005-ed2-2016 03 29
		Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14021 : 2016			
Internal	X	External	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)			
PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019			
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. Type II environmental declarations »			

Schneider Electric Industries SAS  
 Country Customer Care Center  
<http://www.schneider-electric.com/contact>  
 35, rue Joseph Monier  
 CS 30323  
 F- 92500 Rueil Malmaison Cedex  
 RCS Nanterre 954 503 439  
 Capital social 928 298 512 €