

# Product Environmental Profile

**Acti9 - Miniature Circuit Breaker - iC60N - 1P 16A curve B**

**Representative of all Miniature Circuit Breakers Acti9 - iC60N/H/L -  
1P/2P/3P/4P - 0.5A to 63A - B/C/D/K/Z/MA Curve**

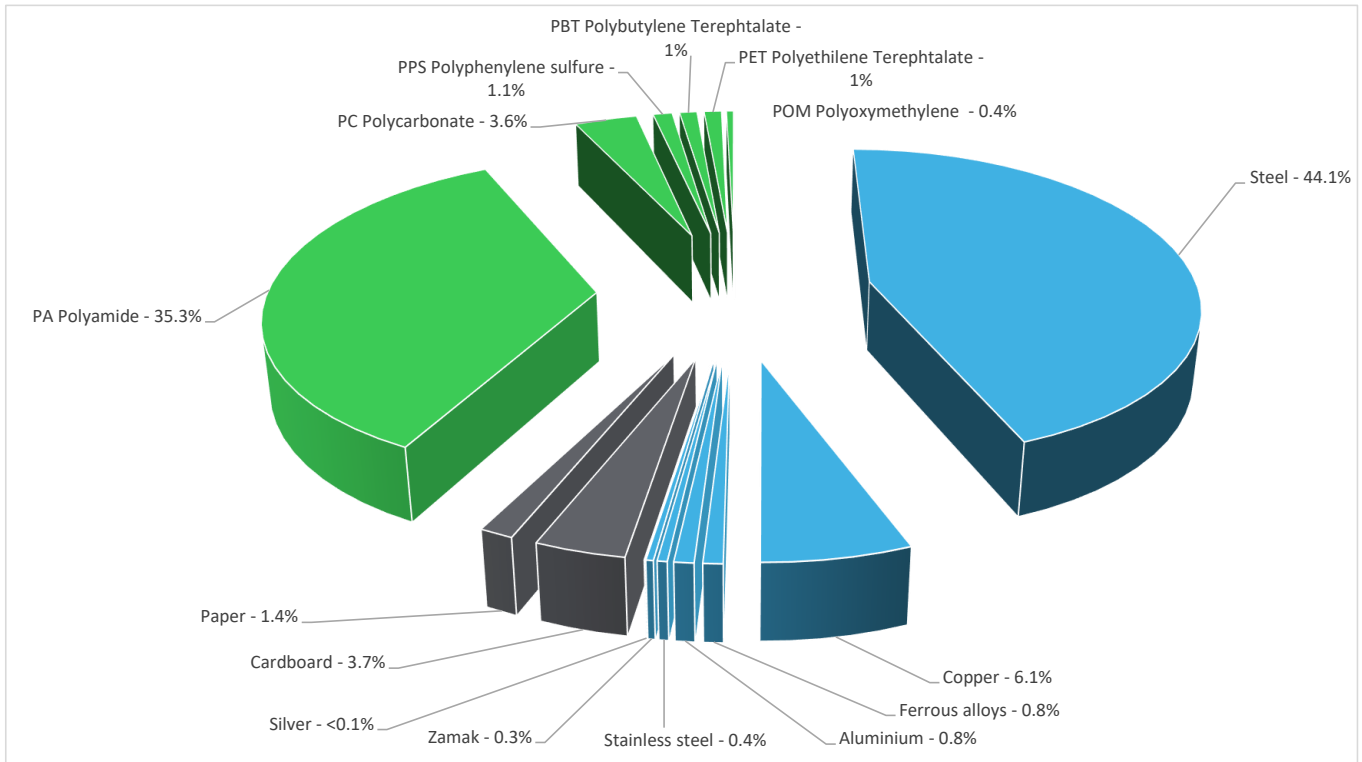


## General information

Reference product	Acti9 - Miniature Circuit Breaker - iC60N - 1P 16A curve B - A9F03116
Description of the product	Acti9 iC60 miniature circuit breakers are designed to ensure protection of low voltage installations against overloads and short-circuits. This product complies with industrial standard IEC/EN 60947-2 and residential standard IEC/EN 60898-1.
Description of the range	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.  Representative of all Miniature Circuit Breakers Acti9 - iC60N/H/L - 1P/2P/3P/4P - 0.5A to 63A - B/C/D/K/Z/MA Curve
Functional unit	Protect during 20 years the installation against overloads and short-circuits in circuit with assigned voltage 230/400V and rated current 16A. This protection is ensured in accordance with the following parameters: - Number of poles Np :1 - Rated breaking capacity Icn : 6K(6000A) - Tripping curve Cd : B - IP20

## Constituent materials

Reference product mass 119,6 g including the product, its packaging and additional elements and accessories



Plastics	42.40%
Metals	52.50%
Others	5.10%

## 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**

End Of Life	Recyclability potential:	<b>54%</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'DEEEE recyclability and recoverability calculation method" was taken. If no data was found a conservative assumption was used (0% recyclability).
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**Environmental impacts**

Reference service life time	20 years		
Product category	Circuit-breakers		
Installation elements	The packaging disposal is accounted for in the installation phase.		
Use scenario	Load rate: 50% of 16A (In) Use time rate: 30% of 20 years (RLT)		
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		
Geographical representativeness	Europe		
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity Mix; Production mix; Low voltage; BG	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27
			[C1 - C4]
			Electricity Mix; Production mix; Low voltage; UE-27

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			Acti9 - Miniature Circuit Breaker - iC60N - 1P 16A curve B - A9F03116					Loads and Benefits [D]
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	
Contribution to climate change	kg CO2 eq	1.41E+01	8.35E-01	1.56E-02	1.04E-02	1.29E+01	3.28E-01	-2.59E-01
Contribution to climate change-fossil	kg CO2 eq	1.41E+01	8.25E-01	1.56E-02	9.91E-03	1.29E+01	3.26E-01	-2.56E-01
Contribution to climate change-biogenic	kg CO2 eq	2.90E-02	9.74E-03	0*	4.61E-04	1.72E-02	1.57E-03	-2.74E-03
Contribution to climate change-land use and land use change	kg CO2 eq	2.55E-08	0*	0*	0*	0*	2.55E-08	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	2.87E-07	2.29E-07	0*	6.86E-10	5.53E-08	1.83E-09	-3.96E-08
Contribution to acidification	mol H+ eq	8.02E-02	5.53E-03	1.01E-04	4.12E-05	7.38E-02	7.86E-04	-2.65E-03
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	1.02E-04	1.20E-05	0*	7.49E-08	3.54E-05	5.44E-05	-5.39E-07
Contribution to eutrophication marine	kg N eq	9.39E-03	8.18E-04	4.72E-05	1.09E-05	8.38E-03	1.40E-04	-1.65E-04
Contribution to eutrophication, terrestrial	mol N eq	1.37E-01	8.98E-03	5.18E-04	8.23E-05	1.26E-01	1.62E-03	-1.87E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	3.03E-02	2.69E-03	1.31E-04	2.20E-05	2.69E-02	5.12E-04	-7.04E-04
Contribution to resource use, minerals and metals	kg Sb eq	1.33E-04	1.30E-04	0*	0*	9.36E-07	1.54E-06	-7.60E-05
Contribution to resource use, fossils	MJ	3.56E+02	1.41E+01	2.18E-01	1.08E-01	3.29E+02	1.18E+01	-5.42E+00
Contribution to water use	m3 eq	4.82E-01	0*	5.93E-05	4.43E-03	4.57E-01	1.13E-01	-1.58E-01

Additional indicators for the French regulation are available as well

Inventory flows Indicators			Acti9 - Miniature Circuit Breaker - iC60N - 1P 16A curve B - A9F03116					
Inventory flows	Unit	Total	Manufact.	Distribution	Installation	Use	End of Life	Loads and Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	6.35E+01	1.98E-01	0*	7.75E-03	6.32E+01	3.82E-02	-1.12E-02
Contribution to use of renewable primary energy resources used as raw material	MJ	1.18E-01	1.18E-01	0*	0*	0*	0*	-1.11E-01
Contribution to total use of renewable primary energy resources	MJ	6.36E+01	3.16E-01	0*	7.75E-03	6.32E+01	3.82E-02	-1.22E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	3.54E+02	1.28E+01	2.18E-01	1.08E-01	3.29E+02	1.18E+01	-5.42E+00
Contribution to use of non renewable primary energy resources used as raw material	MJ	1.34E+00	1.34E+00	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	3.56E+02	1.41E+01	2.18E-01	1.08E-01	3.29E+02	1.18E+01	-5.42E+00
Contribution to use of secondary material	kg	0.00E+00	0*	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	1.12E-02	0*	1.38E-06	1.03E-04	1.06E-02	2.63E-03	-3.68E-03
Contribution to hazardous waste disposed	kg	7.31E+00	6.95E+00	0*	0*	2.41E-01	1.19E-01	-6.12E+00
Contribution to non hazardous waste disposed	kg	2.60E+00	6.47E-01	5.48E-04	3.37E-02	1.86E+00	5.49E-02	-3.53E-01
Contribution to radioactive waste disposed	kg	6.81E-04	2.84E-04	3.90E-07	4.53E-06	3.89E-04	2.82E-06	-1.03E-04
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	6.90E-02	0*	0*	5.70E-03	0*	6.33E-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 and according to the EF3.0 method calculation.

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>

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.

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Verifier accreditation N°	VH48	Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	10/2023	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 14025 : 2010			
Internal                      External    X			
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 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »			



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