

# Product Environmental Profile

Acti9 iPRU 40r 40kA 3P+N 350V SPD

Acti9

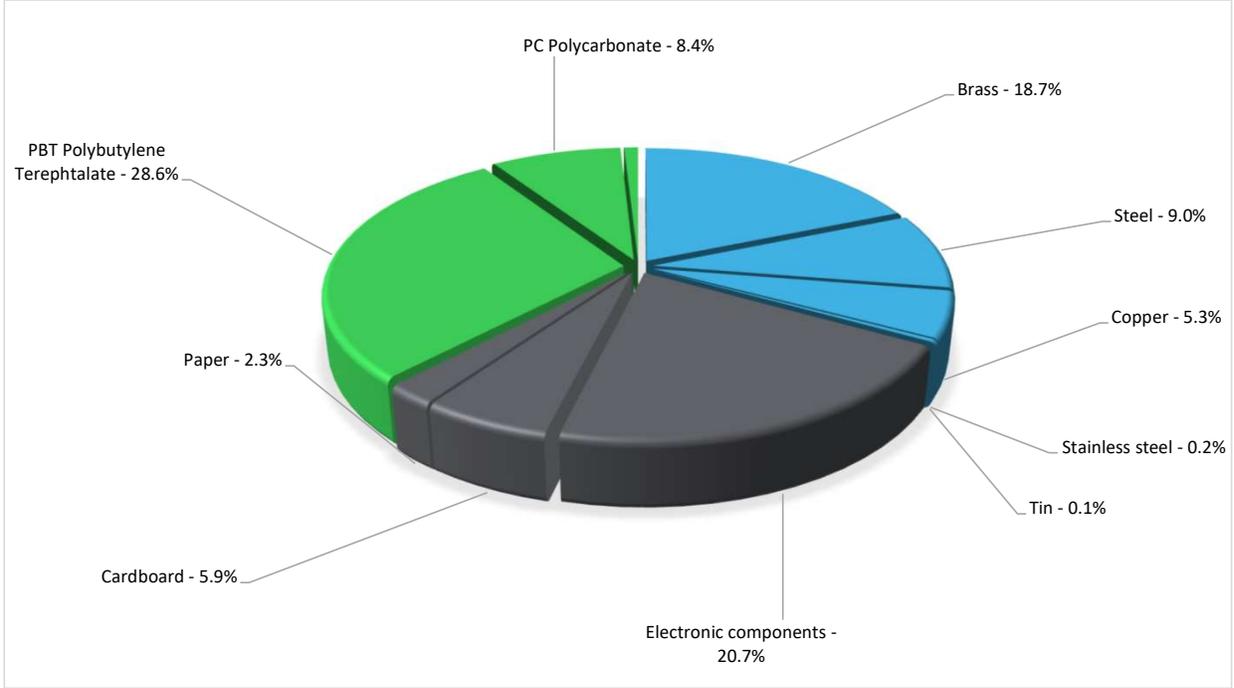


## General information

Reference product	Acti9 iPRU 40r 40kA 3P+N 350V SPD - A9L040601
Description of the product	The main function of this product is to protect electrical equipment against the direct or indirect effects of lightning or against transient overvoltage.
Description of the range	This range consists of SPD of 230 V AC, 25 A to 80 A, 1P to 4P , The representative product used for the analysis is Acti9 iPRU 40r 40kA 3P+N 350V SPD (commercial reference:A9L040601). The mass of the product range is from 46 g to 662 g including packaging.  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 20 years against direct or indirect effects of lightning or against transient overvoltages electrical equipments connected to electrical networks with a rated operational voltage up to 1000 V AC or 1500 V DC. This protection is ensured in accordance with the following parameters: -Number of poles:3P+N -Uc = 350V -In = 20kA -Up = L/N: 1.5kV N/PE:1.5kV L/PE:1.85kV -Ic = 600 µA -followed standard: IEC 61643-11

## Constituent materials

Reference product mass 457.7 g including the product, its packaging and additional elements and accessories



Plastics	37.90%
Metals	33.20%
Others	28.90%

## 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>36%</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	Surge arresters and Surge protective devices type 1, 2 or 3 connected to low voltage power systems			
Installation elements	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 scenario	Load factor : 100% of Ic Use rate: 100 % of the 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 in production.			
Geographical representativeness	China			
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Production mix; Low voltage; CN	Electricity Mix; Production mix; Low voltage; CN	Electricity Mix; Production mix; Low voltage; CN	Electricity Mix; Production mix; Low voltage; CN

Detailed results, including all the optional indicators mentioned in PCRred4, 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 iPRU 40r 40kA 3P+N 350V SPD - A9L040601					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to climate change	kg CO2 eq	1.21E+02	2.98E+00	1.32E-01	6.90E-02	1.17E+02	8.58E-01	-2.00E+00
Contribution to climate change-fossil	kg CO2 eq	1.21E+02	2.94E+00	1.32E-01	6.60E-02	1.17E+02	8.44E-01	-1.97E+00
Contribution to climate change-biogenic	kg CO2 eq	7.01E-02	3.60E-02	0*	3.06E-03	1.68E-02	1.42E-02	-2.57E-02
Contribution to climate change-land use and land use change	kg CO2 eq	8.53E-08	1.11E-09	0*	0*	0*	8.42E-08	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	1.44E-06	6.28E-07	1.16E-07	4.56E-09	6.68E-07	2.02E-08	-5.12E-07
Contribution to acidification	mol H+ eq	9.20E-01	3.66E-02	5.73E-04	2.74E-04	8.76E-01	6.87E-03	-2.69E-02
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	2.23E-04	1.48E-05	0*	4.98E-07	2.47E-05	1.83E-04	-5.29E-06
Contribution to eutrophication marine	kg N eq	1.00E-01	2.63E-03	2.63E-04	7.27E-05	9.36E-02	3.78E-03	-1.27E-03
Contribution to eutrophication, terrestrial	mol N eq	1.10E+00	2.85E-02	2.85E-03	5.50E-04	1.06E+00	6.83E-03	-1.43E-02
Contribution to photochemical ozone formation - human health	kg MNVOC eq	3.29E-01	1.26E-02	9.36E-04	1.47E-04	3.13E-01	2.18E-03	-6.09E-03
Contribution to resource use, minerals and metals	kg Sb eq	8.06E-03	8.05E-03	0*	0*	1.50E-06	5.07E-06	-4.69E-04
Contribution to resource use, fossils	MJ	1.98E+03	5.45E+01	1.60E+00	7.19E-01	1.89E+03	2.95E+01	-3.23E+01
Contribution to water use	m3 eq	6.65E+01	1.25E+00	6.69E-03	2.94E-02	5.16E+00	6.01E+01	-1.58E+00

Additional indicators for the French regulation are available as well

Inventory flows Indicators			Acti9 iPRU 40r 40kA 3P+N 350V SPD - A9L040601					
Inventory flows	Unit	Total	Manufact.	Distribution	Installation	Use	End of Life	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	2.01E+02	4.89E-01	0*	5.15E-02	2.00E+02	3.85E-01	-3.53E-01
Contribution to use of renewable primary energy resources used as raw material	MJ	7.29E-01	7.29E-01	0*	0*	0*	0*	-4.65E-01
Contribution to total use of renewable primary energy resources	MJ	2.02E+02	1.22E+00	0*	5.15E-02	2.00E+02	3.85E-01	-8.18E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.97E+03	5.02E+01	1.60E+00	7.19E-01	1.89E+03	2.95E+01	-3.23E+01
Contribution to use of non renewable primary energy resources used as raw material	MJ	4.30E+00	4.30E+00	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	1.98E+03	5.45E+01	1.60E+00	7.19E-01	1.89E+03	2.95E+01	-3.23E+01
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	m <sup>3</sup>	1.74E+00	3.14E-02	0*	6.85E-04	1.20E-01	1.59E+00	-3.67E-02
Contribution to hazardous waste disposed	kg	2.00E+01	1.59E+01	0*	0*	3.55E+00	5.53E-01	-3.77E+01
Contribution to non hazardous waste disposed	kg	2.22E+01	1.54E+00	0*	2.24E-01	2.04E+01	4.72E-02	-1.52E+00
Contribution to radioactive waste disposed	kg	1.30E-03	4.05E-04	2.62E-05	3.01E-05	8.34E-04	4.46E-06	-4.37E-04
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	2.53E-01	6.38E-02	0*	3.79E-02	0*	1.51E-01	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>

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 :	ENVPEP130303EN_V3	Drafting rules	PEP-PCR-ed4-2021 09 06
Verifier accreditation N°		Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	2023/12/01	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 <input checked="" type="checkbox"/> External <input type="checkbox"/>			
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 »			

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SCHN-00001-V01.01-EN

Published by Schneider Electric

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2023/12/01