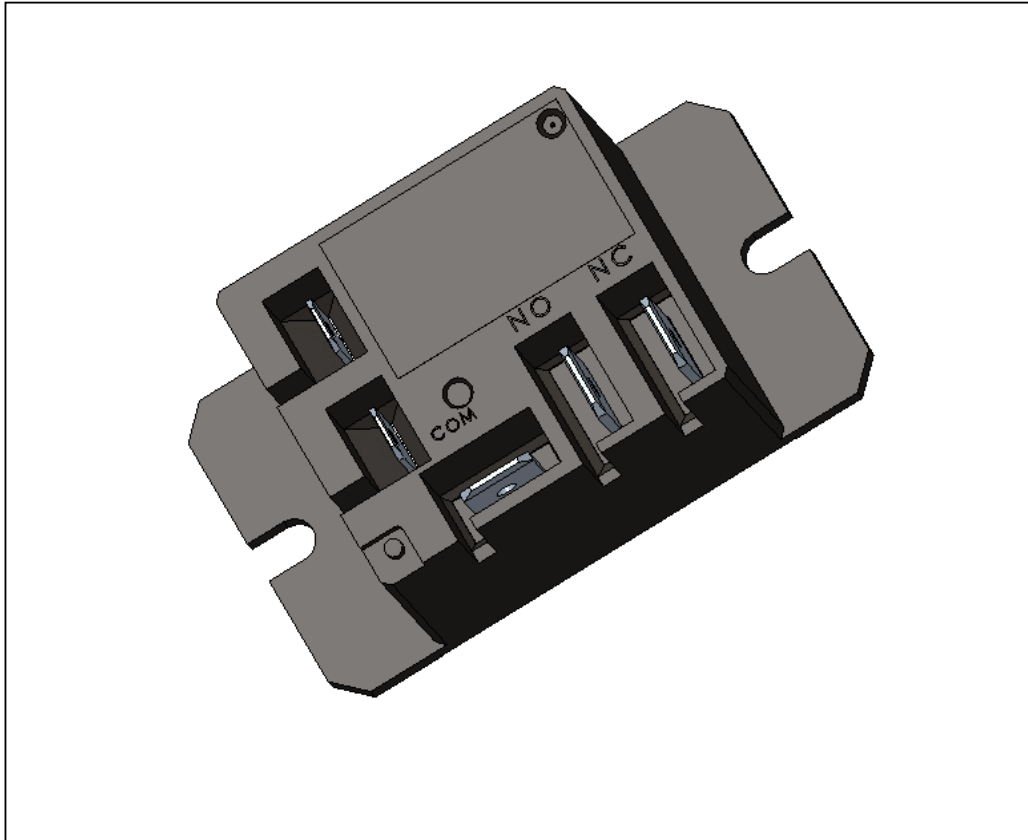


# Product Environmental Profile

## 9A RELAY



**Schneider**  
Electric



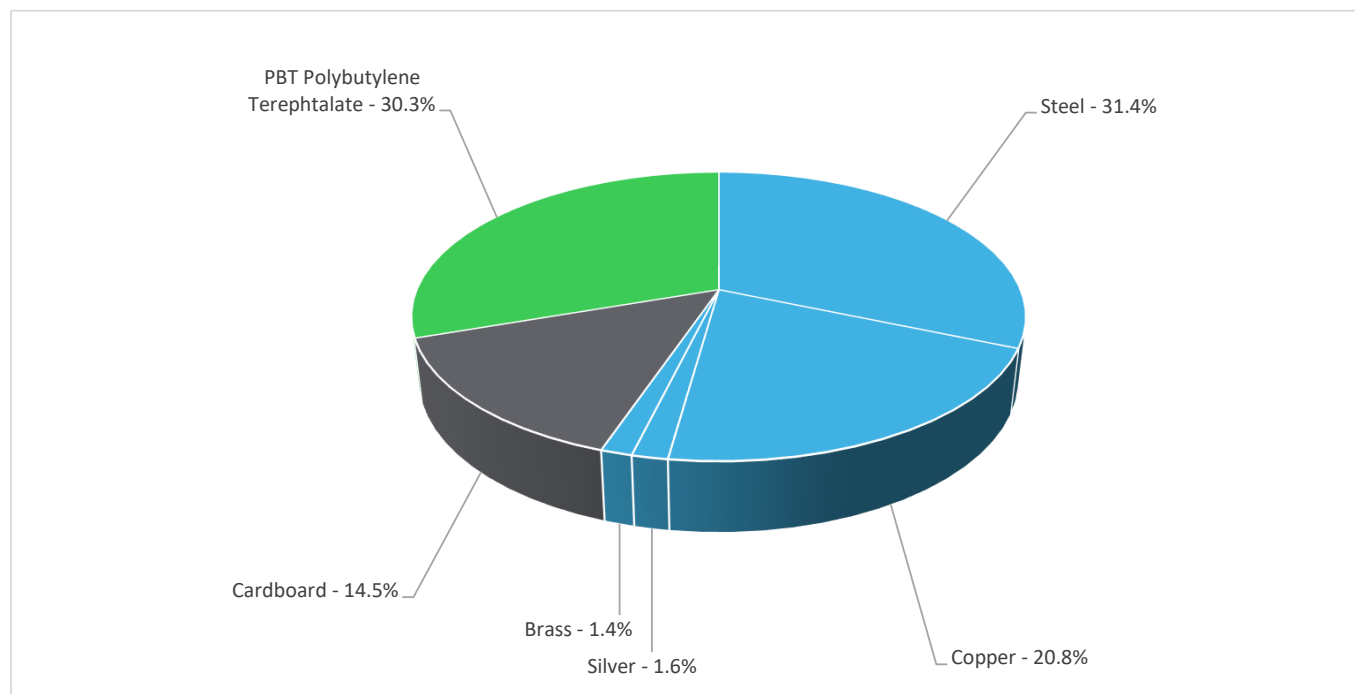
## General information

Representative product	9A RELAY - 9AS7A24
Description of the product	The 9A series power relays offer robust performance in applications such as HVAC, motor controls, and alarm systems
Functional unit	Relays are used when a low-power signal is needed in order to control a circuit, or when a number of circuits need to be controlled by one signal. This relay uses a physical moving part to connect contacts within the output component of the relay. The movement of this contact is generated using electromagnetic forces from the low-power input signal, allowing the completion of the circuit that contains the high-power signal. The Power Relays are provided with 9A to offer robust performance in applications such as HVAC, motor controls, and alarm systems during 20 years with a 10% use rate, Input voltage range from 12 to 240 Vac and from 5 to 110 Vdc.



## Constituent materials

Reference product mass	38.8 g	including the product, its packaging and additional elements and accessories
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Plastics	30.3%
Metals	55.2%
Others	14.5%



## 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

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 9A RELAY presents the following relevant environmental aspects

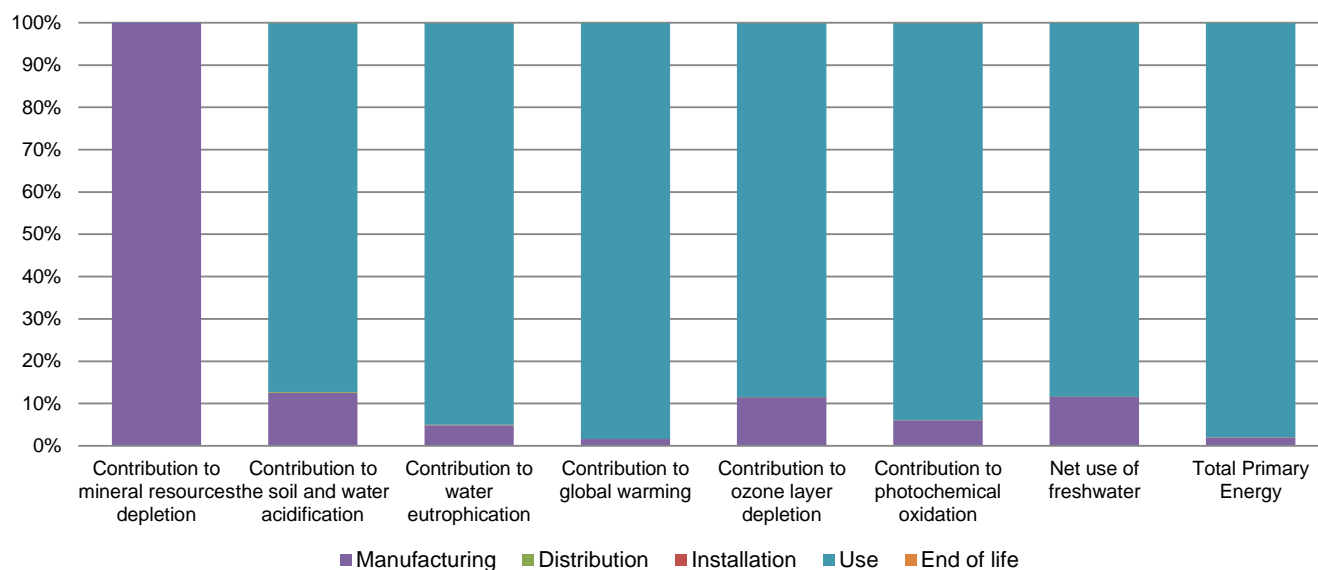
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 5.6 g, consisting of Cardboard(100%) Product distribution optimised by setting up local distribution centres
Installation	Does not require any installation operation.
Use	The product does not require special maintenance operations.
End of life	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials  No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process.  Recyclability potential: <b>58%</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

Reference life time	10 years			
Installation elements	No special components needed			
Use scenario	The product is in active mode 10% of the time with a power use of 2 W and in off mode 90% of the time for 20 years			
Geographical representativeness	USA			
Technological representativeness	The 9A series power relays offer robust performance in applications such as HVAC,motor controls, and alarm systems			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: China	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; US

Compulsory indicators		9A RELAY - 9AS7A24					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	6.12E-04	6.12E-04	0*	0*	1.19E-07	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	1.33E-02	1.67E-03	2.29E-05	0*	1.16E-02	9.89E-06
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	3.23E-03	1.56E-04	5.26E-06	0*	3.06E-03	2.68E-06
Contribution to global warming	kg CO <sub>2</sub> eq	1.23E+01	1.94E-01	5.01E-03	0*	1.21E+01	4.87E-03
Contribution to ozone layer depletion	kg CFC11 eq	2.49E-07	2.86E-08	0*	0*	2.20E-07	2.21E-10
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	1.98E-03	1.20E-04	1.63E-06	0*	1.86E-03	1.04E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	2.43E-02	2.83E-03	0*	0*	2.14E-02	4.40E-06
Total Primary Energy	MJ	1.67E+02	3.31E+00	7.08E-02	0*	1.63E+02	4.84E-02



Optional indicators		9A RELAY - 9A S7A24					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1.50E+02	1.96E+00	7.03E-02	0*	1.48E+02	3.89E-02
Contribution to air pollution	m³	1.12E+03	8.65E+01	2.13E-01	0*	1.03E+03	3.48E-01
Contribution to water pollution	m³	6.11E+02	1.21E+01	8.23E-01	0*	5.98E+02	4.11E-01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1.39E-03	1.39E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1.01E+01	2.66E-01	0*	0*	9.81E+00	0*
Total use of non-renewable primary energy resources	MJ	1.57E+02	3.04E+00	7.07E-02	0*	1.54E+02	4.83E-02
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	9.96E+00	1.54E-01	0*	0*	9.81E+00	0*
Use of renewable primary energy resources used as raw material	MJ	1.11E-01	1.11E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.56E+02	2.69E+00	7.07E-02	0*	1.54E+02	4.83E-02
Use of non renewable primary energy resources used as raw material	MJ	3.49E-01	3.49E-01	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	4.02E+00	3.64E+00	0*	0*	3.24E-01	4.71E-02
Non hazardous waste disposed	kg	1.97E+00	1.11E-01	0*	0*	1.85E+00	0*
Radioactive waste disposed	kg	2.62E-04	7.12E-05	1.27E-07	0*	1.91E-04	2.33E-07
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	2.84E-02	3.83E-03	0*	5.57E-03	0*	1.90E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	5.85E-04	0*	0*	0*	0*	5.85E-04
Exported Energy	MJ	1.77E-05	1.66E-06	0*	1.60E-05	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 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	ENVPEP2006003_V1-EN	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	07/2020	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Validity period	5 years	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Independent verification of the declaration and data			
Internal	X	External	
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 - Self-declared environmental claims (Type II environmental labelling) »			

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