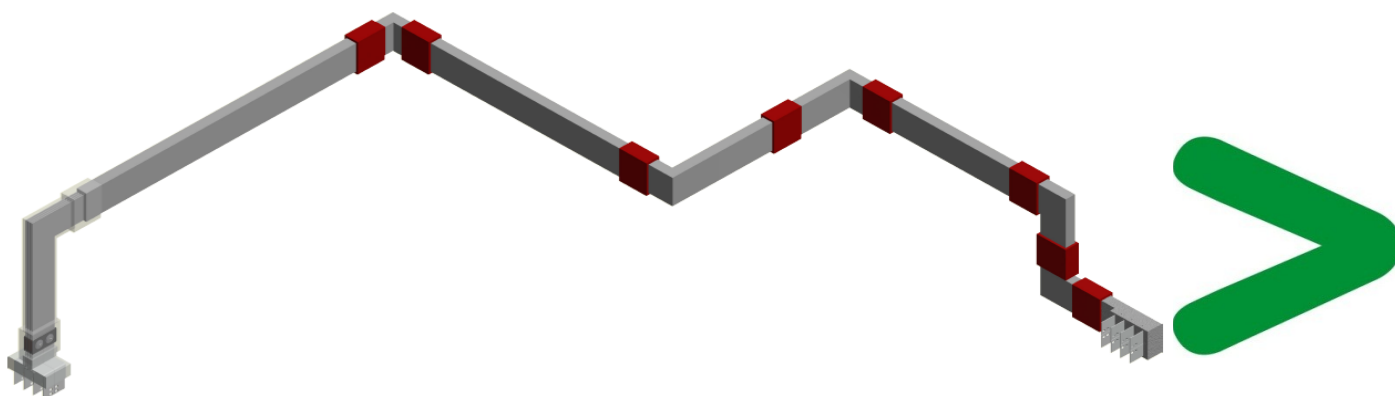


# Product Environmental Profile

## Canalis KRA

### Canalis KRA from 800 to 5000A





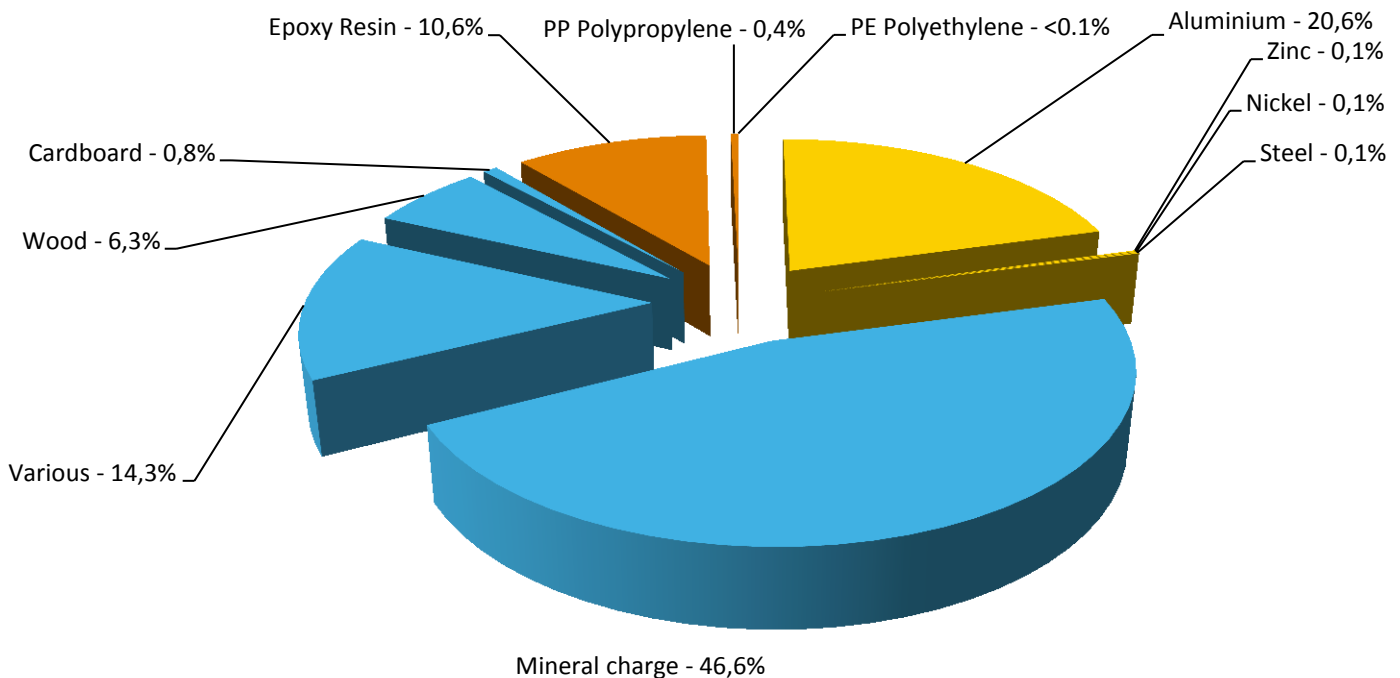
## General information

<b>Representative product</b>	<p>Canalis KRA -Busbar Trunking system</p> <p>The representative product used for the analysis is the typical product, KRA 2500A, which consists of:</p> <ul style="list-style-type: none"> <li>- 1 straight feed unit (cat No. KRA2500ER41)</li> <li>- 3 edgewise elbows (cat No. KRA2500LC4A / KRA2500LC4C)</li> <li>- 3 straight feeder lengths (cat No. KRA2500ET430 / KRA2500ET425 / KRA2500ET420)</li> <li>- 3 flat elbows (cat No. KRA2500LP4C / KRA2500LP4B)</li> <li>- 1 long feed unit (cat No. KRA2500EL41)</li> <li>- 10 junction block (cat No. KRA2500YA4)</li> <li>- 3 casting molds (cat No. KRB0270EM10)</li> <li>- 13 x cast resin material fillers and resin including hardener (cat No. KRB0000RH1 / KRB0000MF1)</li> <li>- 1 demoulding agent (cat No. KRB0000DA1)</li> </ul>
<b>Description of the product</b>	<p>The Busbar Trunking system is a power distribution system for high power. It provides a safe electrical connection between two electrical devices.</p>
<b>Description of the range</b>	<p>Canalis KRA from 800 to 5000A</p> <p>The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.</p>
<b>Functional unit</b>	<p>As per PSR-0005-ed2-EN-2016 03 29 section 3.13: To connect during 20 years from 2 to 50 clamping units between 2 or more devices with a rated connecting capacity from 800 to 5000A, a rated voltage 1000V max, a short time withstand current up to 100kA</p>



## Constituent materials

**Reference product mass** 1107kg including the product, its packaging and additional elements and accessories



## 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

<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>

## Additional environmental information

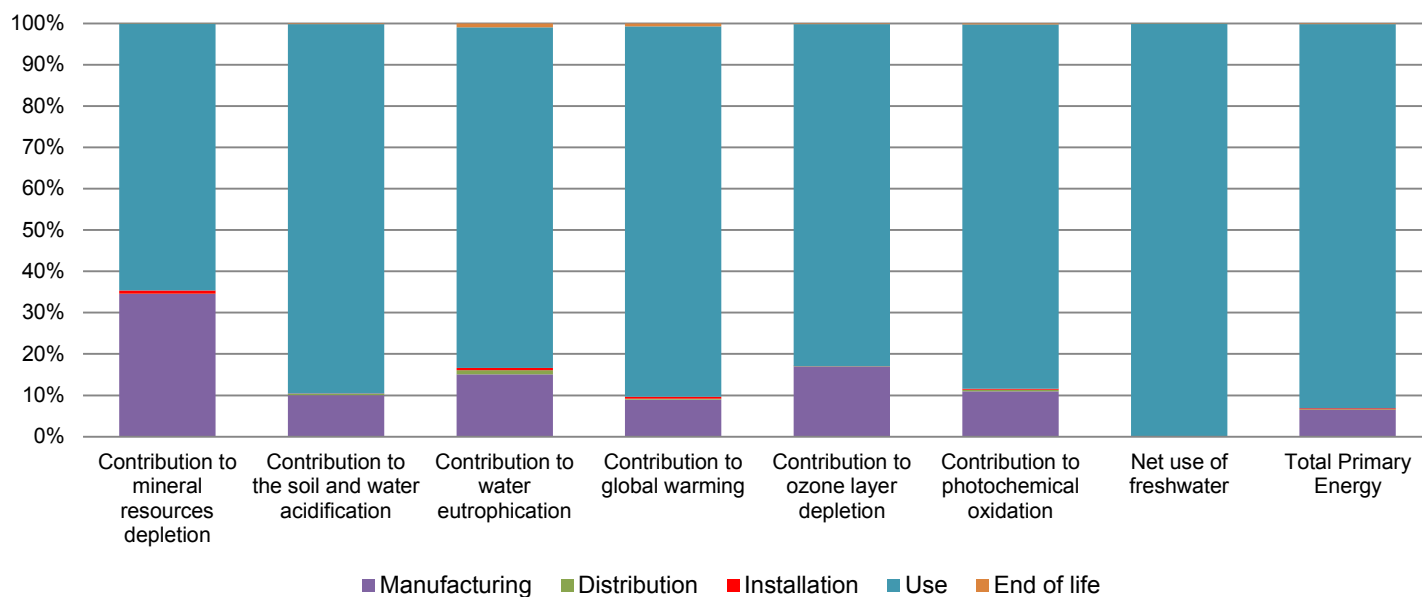
The Canalis KRA presents the following relevant environmental aspects

<b>Manufacturing</b>	Manufactured at a BKS production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 99,1 kg, consisting of wood (83.3%), paper (10.4%) and plastic (6.3%) Product distribution optimised by setting up local distribution centres
<b>Installation</b>	The installation consists in the use of additional resin and hardener to set the product in place.
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	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>24%</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

<b>Reference life time</b>	20 years			
<b>Product category</b>	Passive products - continuous operation			
<b>Installation elements</b>	Resin and hardener (33 kg), mineral charges (159 kg) and demoulding agent (0.5 kg)			
<b>Use scenario</b>	Product dissipation is 601 W, loading rate is 30% and service uptime percentage is 100% As per PSR 5: "Passive product - continuous operation" scenario: products through which the main current passes during continuous operation: load rate / rated current (In): 30 % of In and percentage of utilization time: 100%			
<b>Geographical representativeness</b>	Europe			
<b>Technological representativeness</b>	The Busbar Trunking system is a power distribution system for high power. It provides a safe electrical connection between two electrical devices.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Electricity grid mix; AC; consumption mix, at consumer; 230V; CH	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

Mandatory indicators		Canalis KRA					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	6,93E-03	2,39E-03	5,72E-06	5,04E-05	4,48E-03	3,69E-06
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	2,41E+02	2,42E+01	6,52E-01	2,21E-01	2,15E+02	3,95E-01
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	1,58E+01	2,38E+00	1,50E-01	8,52E-02	1,30E+01	1,50E-01
Contribution to global warming	kg CO <sub>2</sub> eq	5,75E+04	5,16E+03	1,43E+02	2,71E+02	5,16E+04	3,95E+02
Contribution to ozone layer depletion	kg CFC11 eq	4,06E-03	6,93E-04	0*	2,68E-06	3,36E-03	8,91E-06
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	1,34E+01	1,47E+00	4,66E-02	3,74E-02	1,18E+01	3,86E-02
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1,87E+05	3,40E+01	0*	0*	1,87E+05	0*
Total Primary Energy	MJ	1,11E+06	7,19E+04	2,02E+03	2,37E+03	1,03E+06	1,79E+03



Optional indicators		Canalis KRA					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	6,58E+05	6,52E+04	2,01E+03	3,99E+03	5,85E+05	1,64E+03
Contribution to air pollution	m <sup>3</sup>	2,68E+06	4,30E+05	6,08E+03	1,15E+04	2,22E+06	1,36E+04
Contribution to water pollution	m <sup>3</sup>	3,70E+06	1,29E+06	2,35E+04	2,42E+05	2,13E+06	2,07E+04
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,05E+01	1,05E+01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1,37E+05	6,47E+03	0*	0*	1,31E+05	0*
Total use of non-renewable primary energy resources	MJ	9,70E+05	6,54E+04	2,02E+03	2,37E+03	8,99E+05	1,78E+03
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1,36E+05	4,65E+03	0*	0*	1,31E+05	0*
Use of renewable primary energy resources used as raw material	MJ	1,82E+03	1,82E+03	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	9,66E+05	6,21E+04	2,02E+03	1,65E+03	8,99E+05	1,78E+03
Use of non renewable primary energy resources used as raw material	MJ	4,04E+03	3,32E+03	0*	7,16E+02	0*	0*
Use of non renewable secondary fuels	MJ	9,67E+01	9,67E+01	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	1,11E+03	1,11E+03	0*	0*	0*	0*
Waste categories	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Hazardous waste disposed	kg	3,24E+03	8,58E+02	0*	1,97E+02	2,69E+01	2,16E+03
Non hazardous waste disposed	kg	2,00E+05	8,05E+03	0*	0*	1,92E+05	0*
Radioactive waste disposed	kg	1,35E+02	6,17E+00	0*	0*	1,28E+02	0*

Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	3,34E+02	5,36E+01	0*	3,56E+01	0*	2,45E+02
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1,04E+02	1,07E+01	0*	0*	0*	9,29E+01
Exported Energy	MJ	9,01E+01	9,01E+01	0*	0*	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.5, database version 2016-11.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

The extrapolation rules have been defined as follow: LCA have been performed on all products covered by this PEP. For each life cycle phase and each product, the displayed ratio is the highest of all compulsory indicator ratios. This conservative approach is close to the calculated impacts as there is a low variations among impacts. Exact results for each products are available in the accompanying report.

Extrapolation rules						
Product reference	Manufacturing	Distribution	Installation	Use	End of Life	
KRA 800A	0,32	0,32	0,61	0,38	0,33	
KRA 1000A	0,42	0,44	0,61	0,46	0,44	
KRA 1250A	0,49	0,52	0,63	0,57	0,51	
KRA 1600A	0,71	0,75	0,77	0,57	0,72	
KRA 2000A	0,86	0,90	0,84	0,71	0,85	
<b>KRA 2500A - Reference</b>	<b>1,00</b>	<b>1,00</b>	<b>1,00</b>	<b>1,00</b>	<b>1,00</b>	
KRA 3200A	1,36	1,46	1,53	1,20	1,40	
KRA 4000A	1,67	1,75	1,76	1,48	1,66	
KRA 5000A	2,48	2,24	2,06	2,00	2,12	

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°	VH15	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Date of issue	01/2017	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 Philippe Osset (SOLINNEN)

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

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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](http://www.schneider-electric.com)

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