

Product Environmental Profile

Canalis KBA 25A-40A



Product Environmental Profile – PEP

Product overview

The main purpose of the Canalis KBA product range is to distribute electrical power for lighting (with luminaires support brackets) for 20 years. Canalis KBA busbar trunking is a full and compatible range for lighting systems in small and medium-height buildings (garages, workshop, and supermarket). It's compatible with Canalis KBL lights, pre-mounted and pre-cabled in the factory

Technical characteristics of Canalis KBA:

- Length of busbar trunking components: 2 or 3m
- Rated service current: 25 and 40A
- Rated tap off units current: 10 and 16A
- Rated insulating voltage: 690V
- Number of circuits: 1 circuit (2 or 4 conductors)
- Protection index: IP55
- Surface treatment: galvanised or white RAL 9010
- Regulations: compliant with IEC 60439-2

This range consists of: **Canalis KBA, 25 to 40 A, IP55.**

The representative product used for the analysis is the typical product, KBA 25 A, which consists of:

- 1 x 25 A power feed box (cat. no. KBA25ABG4)
- 7 x 3 m straight lengths, 1 m modules for tap-off units (cat. no. KBA25ED4303)
- 7 connectors (cat. no. KBC10DCB20)
- 22 fixing devices (cat. no. KBA40ZFU).

Lists of functions included in the configuration

Product Number	Description & Size (mm)	Qty	Device	Device Function
1. KBA25ABG4	FEED UNIT 25A LEFT MOUNTING Feed Unit L x D = 273 x \varnothing 57 End Cover L x B x H = 138 x 30 x 46	1	Feed Unit supplied with End Cover Left Mounting	The feed units delivered with the end cover receive the cables supplying one end of Canalis KBA trunking.
2. KBA25ED4303	STRAIGHT DISTRIBUTION LENGTH 25A 3M L x B x H = 3000 x 30 x 46	7	Straight Distribution Length 3Ph + N + PE Polarity 3 Tap-Off units	Transport (Carry) the current with Tap-off points, support and supply the luminaires. 2 or 4 live conductors. Available in 2 and 3 metre fixed lengths.
3. KBC10DCB20	10A TAPOFF UNITS L x B x H = 1114 x 60 x 62	7	10A TAP-OFF Unit 2-Pole + PE, To be wired	The 10 and 16 A tap-off units pre-wired or not, offer phase selection or fixed polarities, and can be used on KDP, KDA and KBB ranges.
4. KBA40ZFU	UNIVERSAL FIXING BRACKET L x B x H = 39 x 22 x 70.5	22	Fixing System Mounting for direct suspension under trunking Suspended on threaded rod or lateral (except wall)	The fixing system ensures that Canalis KBA is well secured, whatever the type of building structure. There are also fixings to secure the luminaires to Canalis KBA. A metal duct is available for running other circuits such as emergency lighting, low-current circuits, etc.

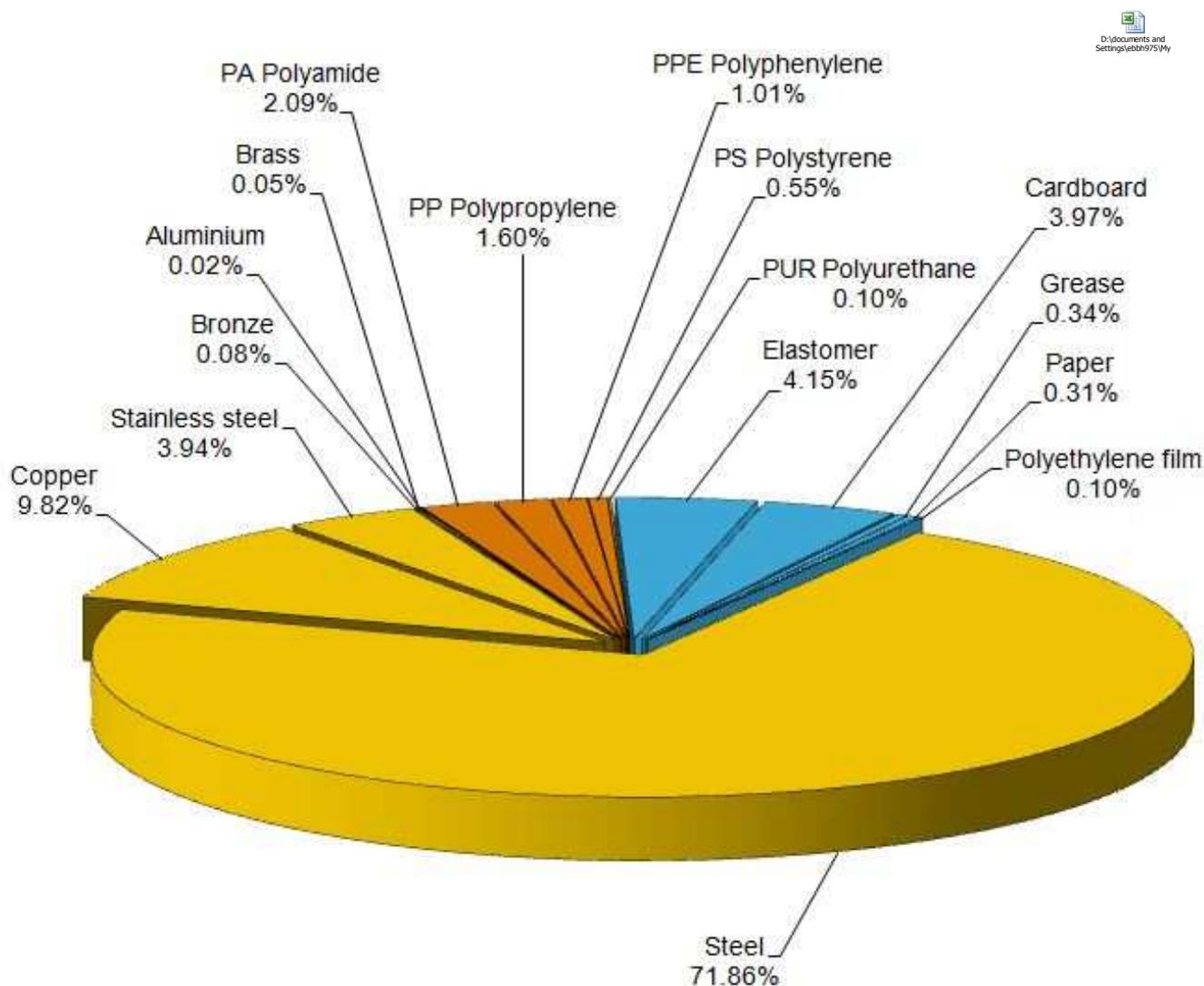
The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.

The environmental analysis was performed in conformity with ISO 14040.

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Constituent materials

The mass of the product range is from 19000 g and 25000 kg including packaging. It is **21396.36 g** for the **Canalis KBA 25A – 40A**. The constituent materials are distributed as follows:



Substance assessment

Products of this range are designed in conformity with the requirements of the European RoHS Directive 2011/65/EU 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) . (<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>)

Manufacturing

The Canalis KBA product range is manufactured at a Schneider Electric production site on which an ISO14001 certified environmental management system has been established.

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Distribution

The weight and volume of the packaging have been optimized, based on the European Union's packaging directive.

The Canalis KBA 25A - 40A packaging weight is **939g**. It consists of Cardboard 850g, Paper 67g and Polyethylene film 22g.

The product distribution flows have been optimised by setting up local distribution centres close to the market areas.

Use

The products of the Canalis KBA range do not generate environmental pollution (noise, emissions) requiring special precautionary measures in standard use.

The dissipated power depends on the conditions under which the product is implemented and used. This dissipated power is between 0 W and 220 W for the Canalis KBA product range. It is 218 W at 100% load for the typical product, Canalis KBA 25A – 40A referenced, i.e. 10.4 W/metre.

This thermal dissipation represents less than **0.2%** of the power which passes through the product.

The product range does not require special maintenance operations.

End of life

At end of life, the products in the Canalis KBA range have been optimized to decrease the amount of waste and allow recovery of the product components and materials.

This product range doesn't need any special end-of-life treatment. According to countries' practices this product can enter the usual end-of-life treatment process.

The recyclability potential of the products has been evaluated using the "ECO DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

According to this method, the potential recyclability ratio without packaging is: **88%**.

As described in the recyclability calculation method this ratio includes only metals and plastics which have proven industrial recycling processes.

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Environmental impacts

Life cycle assessment has been performed on the following life cycle phases: Materials and Manufacturing (M), Distribution (D), Installation (I) Use (U), and End of life (E).

Modeling hypothesis and method:

- The calculation was performed on **Canalis KBA 25A - 40A** range.
- Product packaging is included.
- Installation components: No special components included.
- Scenario for the Use phase: this product range is included in the category **“Energy passing product”**. Assumed service lifetime is 20 years with an installation utilisation rate of 30 % and a load rate of 50%.
- The geographical representative area for the assessment is **European** and the electrical power model used for calculation is **Europe** model.
- End of life impacts are based on a worst case transport distance to the recycling plant (1000km)

Presentation of the product environmental impacts

Environmental indicators	Unit	For Canalis KBA 25A – 40A					
		S = M + D + I + U + E	M	D	I	U	E
Air Acidification (AA)	kg H+ eq	9.08E-01	1.58E-02	6.90E-04	0.00E+00	8.88E-01	3.05E-03
Air toxicity (AT)	m³	1.14E+09	3.40E+07	1.03E+06	0.00E+00	1.10E+09	4.54E+06
Energy Depletion (ED)	MJ	1.33E+05	1.24E+03	5.17E+01	0.00E+00	1.31E+05	2.19E+02
Global Warming Potential (GWP)	kg CO ₂ eq.	6.72E+03	8.27E+01	3.68E+00	0.00E+00	6.62E+03	1.55E+01
Hazardous Waste Production (HWP)	kg	1.11E+02	1.44E+00	4.54E-06	0.00E+00	1.10E+02	1.92E-05
Ozone Depletion Potential (ODP)	kg CFC-11 eq.	3.66E-04	6.73E-06	6.96E-09	0.00E+00	3.60E-04	2.94E-08
Photochemical Ozone Creation Potential (POCP)	kg C ₂ H ₄ eq.	2.34E+00	1.97E-02	9.48E-04	0.00E+00	2.32E+00	3.86E-03
Raw Material Depletion (RMD)	Y-1	3.23E-13	1.74E-13	7.50E-17	0.00E+00	1.49E-13	3.17E-16
Water Depletion (WD)	dm ³	1.99E+04	9.18E+02	3.81E-01	0.00E+00	1.90E+04	1.61E+00
Water Eutrophication (WE)	kg PO ₄ ³⁻ eq.	2.05E-02	4.90E-03	6.82E-06	0.00E+00	1.56E-02	2.88E-05
Water Toxicity (WT)	m³	1.93E+03	2.15E+01	1.57E+00	0.00E+00	1.90E+03	6.63E+00

Life cycle assessment has been performed with the EIME software (Environmental Impact and Management Explorer), version 5 and with its database version 2013-02

The **USE (U)** phase is the life cycle phase which has the greatest impact on the majority of environmental indicators.

System approach

As the products of the range are designed in accordance with the European RoHS Directive 2011/65/EU, they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

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.

Glossary

Air Acidification (AA)	The acid substances present in the atmosphere are carried by rain. A high level of acidity in the rain can cause damage to forests. The contribution of acidification is calculated using the acidification potentials of the substances concerned and is expressed in mode equivalent of H ⁺ .
Air Toxicity (AT)	This indicator represents the air toxicity in a human environment. It takes into account the usually accepted concentrations for several gases in the air and the quantity of gas released over the life cycle. The indication given corresponds to the air volume needed to dilute these gases down to acceptable concentrations.
Energy Depletion (ED)	This indicator gives the quantity of energy consumed, whether it is from fossil, hydroelectric, nuclear or other sources. It takes into account the energy from the material produced during combustion. It is expressed in MJ.
Global Warming (GW)	The global warming of the planet is the result of the increase in the greenhouse effect due to the sunlight reflected by the earth's surface being absorbed by certain gases known as "greenhouse-effect" gases. The effect is quantified in gram equivalent of CO ₂ .
Hazardous Waste Production (HWP)	This indicator quantifies the quantity of specially treated waste created during all the life cycle phases (manufacturing, distribution and utilization). For example, special industrial waste in the manufacturing phase, waste associated with the production of electrical power, etc. It is expressed in kg.
Ozone Depletion (OD)	This indicator defines the contribution to the phenomenon of the disappearance of the stratospheric ozone layer due to the emission of certain specific gases. The effect is expressed in gram equivalent of CFC-11.
Photochemical Ozone Creation (POC)	This indicator quantifies the contribution to the "smog" phenomenon (the photochemical oxidation of certain gases which generates ozone) and is expressed in gram equivalent of ethylene (C ₂ H ₄).
Raw Material Depletion (RMD)	This indicator quantifies the consumption of raw materials during the life cycle of the product. It is expressed as the fraction of natural resources that disappear each year, with respect to all the annual reserves of the material.
Water Depletion (WD)	This indicator calculates the volume of water consumed, including drinking water and water from industrial sources. It is expressed in dm ³ .
Water Eutrophication (WE)	Eutrophication is a natural process defined as the enrichment in mineral salts of marine or lake waters or a process accelerated by human intervention, defined as the enrichment in nutritive elements (phosphorous compounds, nitrogen compounds and organic matter). This indicator represents the water eutrophication of lakes and marine waters by the release of specific substances in the effluents. It is expressed in grams equivalency of PO43-(phosphate).
Water Toxicity (WT)	This indicator represents the water toxicity. It takes into account the usually accepted concentrations for several substances in water and the quantity of substances released over the life cycle. The indication given corresponds to the water volume needed to dilute these substances down to acceptable concentrations.

PEP achieved with Schneider-Electric TT01 V10.3 and TT02 V19 procedures in compliance with ISO14040 series standards

Registration N° : SCHN-2015-046	Applicable PCR : PEP-PCR-ed 2.1-EN-2012 12 11 PSR0003-ed1-EN-2012 02 02-Cable Management Solutions
Verifier accreditation N° : VH08	Program information: www.pep-ecopassport.org
Date of issue: 03-2015	Period of validity: 4 years
Independent verification of the declaration and data, according to ISO 14025:2006	
Internal	External <input checked="" type="checkbox"/>
In compliance with ISO 14025:2006 type III environmental declarations	
PCR review was conducted by an expert panel chaired by J. Chevalier (CSTB).	
The elements of the actual PEP cannot be compared with elements from another program.	



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