

# Product Environmental Profile

## Zucchini High Power Busbar - SCP System with copper conductors



### BTICINO'S ENVIRONMENTAL COMMITMENTS

Home automation, high range civil installation and canalisation systems are types of products in which BTicino excels on the Italian market. BTicino, as a responsible producer, adopts an environmental policy declined according to three axes:

• **Incorporate environmental management into our industrial sites**

BTicino is concerned with the protection and preservation of the environment from the manufacture of its products.

For this reason, all sites are ISO 14001 certified or committed to implementation of a environmental responsible management policy.

• **Involve the environment in product design**

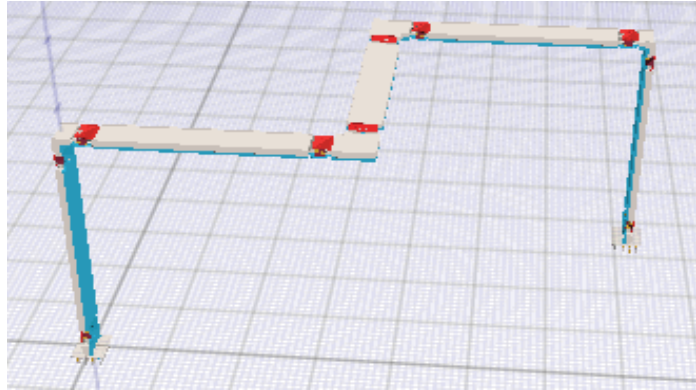
A product generates environmental impacts throughout its whole life cycle. For this reason, BTicino is committed to minimize the environmental impact of its products and provides its customers all relevant information (composition, consumption, end of life ...).

• **Offer our customers environmentally friendly solutions**

BTicino offers to its customers solutions to reduce the energy and environmental impact of commercial, residential and industrial buildings: solutions that allow to consume less energy in according to the real needs.



### REFERENCE PRODUCT

<p><b>Function</b></p>	<p>Allow the power supply in industrial and commercial buildings through an installation lenght of 1 meter over a 20 years life span, in compliance with the harmonised standards IEC EN 60439-1 / 2.</p> <p>The High Power Busbar Zucchini Super Compact 2000 A system with copper conductors includes straight elements, angle components, connection interfaces and fixing supports typically used in a standard installation. PCR category: passive product.</p>
<p><b>Reference Product</b></p>	<div style="text-align: center;">  </div> <p style="text-align: center;">5 x ZU-65280106P - 2 x ZU-65280316P - ZU-65280406P - ZU-65280416P - ZU-65281006P - ZU-65281016P - 4 x ZU-65202002 - 2 x ZU-65213722 - 8 x ZU-65202013 High Power Busbar Zucchini SCP 2000 A with copper alloy conductors</p>

The company reserves the right to change specifications and designs without notice. All illustrations, descriptions, dimensions and weights in the document are for guidance and cannot be held binding on the Company.



### CONCERNED PRODUCTS

The environmental data represent the following Catalogue Numbers: the total Zucchini High Power Busbar SCP with copper conductors product range, as presented in all relevant catalogues (list available on request from the Customer Service).

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### ■ CONSTITUENT MATERIALS

This product contains no substances prohibited by the regulations applicable at the time of its introduction to the market. At the date of publication of this document, this product contains no substances to which the RoHS directives apply (2002/95/EC and review 2011/65/EU) and none of the 144 candidate substances covered by appendix XIV of the REACH regulation dated 20/06/2013.

<b>Total weight of Reference Products:</b>	<b>57000 g</b> (unit packaging included)
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Plastics as % of weight		Metals as % of weight		Packaging as % of weight	
Thermosets	2,9 %	Aluminium	61,3 %	Wood	8,2 %
Polyamide	0,1 %	Steel	26,7 %	Steel	0,3 %
Other plastics	0,1 %			Other packaging	0,4 %
<b>Total plastics</b>	<b>3,1 %</b>	<b>Total metals</b>	<b>88,0 %</b>	<b>Total other and packaging</b>	<b>8,9 %</b>

Estimated recycled material content: 26 % by weight



### ■ MANUFACTURE

These products come from sites that have received ISO 14001 certification.



### ■ DISTRIBUTION

The Group's products are distributed from logistics centres located to optimize transport efficiency.

The Reference Product is therefore transported over an average distance of 780 km, essentially by road, representing a marketing in Europe.

Packaging is compliant with the European directive 2004/12/EC concerning packaging and packaging wastes.

At the packaging end of life, its recycling rate is of 95 % (as % of packaging weight).



### ■ INSTALLATION

Installation components not delivered with the product are not taken into account.



### ■ USE

#### Service and maintenance:

Under normal conditions of use, this type of product requires no servicing or maintenance.

#### Consumable

No consumables are necessary to use the products.

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### ■ END OF LIFE

Development teams integrate product end of life factor in the design phase. Dismantling and sorting of components or materials is made as easy as possible with a view to recycling or failing that, another form of reuse.

#### • Recyclability rate:

Calculated using the method described in the IEC/TR 62635 technical report, the recyclability rate of the product is estimated as 97 %. This value is based on data collected from a technological channel using industrial procedures. It does not presume the effective use of this channel for end-of-life electrical and electronic products.

Separated into:

- Metal materials (excluding packaging): 89 %
- Packaging (all types of materials): 8 %



### ■ ENVIRONMENTAL IMPACTS

The evaluation of environmental impacts examines the stages of the Reference Product life cycle: manufacturing, distribution, installation, use and end of life of the product marketed and used in Europe. The following modelling elements were taken into account:

<b>Manufacture</b>	Unit packaging taken in account. As required by the «PEP ecopassport» programme, all transports for the manufacturing of the Reference Product, including materials and components, has been taken in account.
<b>Distribution</b>	Transport between the last Group distribution centre and an average delivery to the sales area.
<b>Installation</b>	Installation components not delivered with the product are not taken into account.
<b>Use</b>	<ul style="list-style-type: none"> <li>• Maintenance: under normal conditions of use, this type of product requires no servicing or maintenance. No consumables are necessary to use the product.</li> <li>• Product category: passive product.</li> <li>• Use scenario: continuous operation (100% of the time) for 20 years at 30% of rated load of the time. This modelling duration does not constitute a minimum durability requirement.</li> <li>• Energy model: Electricity Europe 2005.</li> </ul>
<b>End of life</b>	In view of the data available on the date of creation of the document, and in accordance with the requirements of the PCR of the « PEP ecopassport » programme, was counted transport of the Reference Product by road only once, over a distance of 1000 km, to a processing site at end of life.
<b>Software used</b>	EIME V5 and its database «Legrand-2012-10-31 version 3» developed from database «CODDE-2012-07».

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### ENVIRONMENTAL IMPACTS

		Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Mandatory indicators	Contribution to greenhouse effect	2.31E+06	g-CO <sub>2</sub> eq.	1.22E+05	5%	3.34E+03	< 1%	0.00E+00	0%	2.19E+06	95%	3.90E+00	< 1%
	Damage to the ozone layer	1.43E-01	g-CFC-11 eq.	2.18E-02	15%	2.37E-03	2%	0.00E+00	0%	1.19E-01	83%	2.77E-06	< 1%
	Eutrophication of water	2.27E+01	g-PO <sub>4</sub> <sup>3-</sup> eq.	1.75E+01	77%	5.57E-02	< 1%	0.00E+00	0%	5.14E+00	23%	6.51E-05	< 1%
	Photochemical ozone formation	8.12E+02	g-C <sub>2</sub> H <sub>4</sub> eq.	4.46E+01	5%	2.91E+00	< 1%	0.00E+00	0%	7.65E+02	94%	3.40E-03	< 1%
	Acidification of the air	4.20E+02	g-H <sup>+</sup> eq.	1.27E+02	30%	4.42E-01	< 1%	0.00E+00	0%	2.93E+02	70%	5.16E-04	< 1%
	Total energy consumed	4.57E+04	MJ	2.36E+03	5%	4.24E+01	< 1%	0.00E+00	0%	4.33E+04	95%	4.95E-02	< 1%
	Consumption of water	1.22E+04	dm <sup>3</sup>	5.96E+03	49%	4.02E+00	< 1%	0.00E+00	0%	6.26E+03	51%	4.69E-03	< 1%

Optional indicators	Depletion of natural resources	1.39E-12	years <sup>-1</sup>	1.34E-12	96%	5.77E-17	< 1%	0.00E+00	0%	4.92E-14	4%	6.74E-20	< 1%
	Toxicity of the air	7.46E+08	m <sup>3</sup>	3.83E+08	51%	6.55E+05	< 1%	0.00E+00	0%	3.63E+08	49%	7.65E+02	< 1%
	Toxicity of the water	7.10E+02	m <sup>3</sup>	8.18E+01	12%	4.67E-01	< 1%	0.00E+00	0%	6.28E+02	88%	5.45E-04	< 1%
	Production of hazardous waste	5.50E+01	kg	1.87E+01	34%	1.25E-03	< 1%	0.00E+00	0%	3.63E+01	66%	1.46E-06	< 1%

The environmental impacts of the Reference Product are representative of the products covered by the PEP, which therefore constitute a homogeneous environmental family.

Extrapolation rule: the environmental impacts of the products of the homogeneous family different from those of reference, for every life cycle phase, and for every meter of installation, are obtained by multiplying those of the Reference Product by these coefficients:

Busbar Load	Total	Raw material and manufacture	Distribution	Installation	Use	End of life
800 A	0.40	0.54	0.54	-	0.33	0.54
1000 A	0.47	0.61	0.61	-	0.40	0.61
1250 A	0.63	0.66	0.71	-	0.62	0.67
1600 A	0.80	0.86	0.88	-	0.77	0.87
<b>2000 A</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	-	<b>1.00</b>	<b>1.00</b>
2500 A	1.21	1.14	1.14	-	1.25	1.14
3200 A	1.54	1.54	1.54	-	1.54	1.54
4000 A	2.02	2.09	1.95	-	2.00	2.04
5000 A	2.41	2.26	2.26	-	2.50	2.26

The values of these impacts are valid for the context specified in this document. They must not be used directly to draw up the environmental balance sheet for the installation.

Registration number: LGRP-2013-227-v1-it	Drafting rule: PEP-PCR-ed2.1-FR-2012 12 11 and PSR-0005-ed1-FR-2012 12 11
Authorisation number of checker: VH02	Programme information: <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue: December 2013	Validity period: 4 years
Independent verification of the declaration and data, in accordance with ISO 14025:2006 Interne <input checked="" type="checkbox"/> Externe <input type="checkbox"/>	
In accordance with ISO 14025 :2006 Type III environmental declaration	
The critical review of the PCR was conducted by a panel of experts chaired by J.Chevalier (CSTB)	
The elements of the present PEP cannot be compared with elements from another programme	

