

# Product Environmental Profile

**Zero-U single phase PDU - 20xC13 + 4xC19 - IEC 60320 std - 2P+E plugt**



## LEGRAND'S ENVIRONMENTAL COMMITMENTS

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

Of all Legrand sites worldwide, over 85% are ISO 14001-certified (sites belonging to the Group for more than five years).

**• Offer our customers environmentally friendly solutions**

Develop innovative solutions to help our customers design more energy efficient, better managed and more environmentally friendly installations.

**• Involve the environment in product design and provide informations in compliance with ISO 14025**

Reduce the environmental impact of products over their whole life cycle.

Provide our customers with all relevant information (composition, consumption, end of life, etc.).



## REFERENCE PRODUCT

<b>Function</b>	to provide electric power for IT equipments for vertical installaton in 19» enclosure for 20 years, via 2 groups of sockets 2P+E (10 C13 and 2 C19 with 1 MCB protection), equiped with one 3 m cord 3G4 HO7-RNF with IEC 60309 plug.
<b>Reference Product</b>	 <p>Cat.No LG-646861 Zero-U single phase PDU - 20xC13 + 4xC19 - IEC 60320 std - 2P+E plug.</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.



## PRODUCTS CONCERNED

The environmental data is representative of the following products:

<b>Catalogue Numbers</b>
• LG-646861

# Product Environmental Profile

**Zero-U single phase PDU - 20xC13 + 4xC19 - IEC 60320 std - 2P+E plug**



## ■ CONSTITUENT MATERIALS

This Reference Product contains no substances prohibited by the regulations applicable at the time of its introduction to the market. It respects the restrictions on use of hazardous substances as defined in the RoHS directive 2011/65/EU.

<b>Total weight of Reference Product</b>	<b>3989 g</b> (all packaging included)				
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC-ABS	12,3 %	Al	17,7 %	Cables / electric wires	24,4 %
PA	6,0 %	Steel	7,3 %		
ABS	2,8 %	CopperAlloys	6,7 %		
PVC	0,4 %	Other metal	< 0,1 %		
PBT	0,2 %				
SBS	0,1 %				
Other plastic	< 0,1 %				
Various plastics	< 0,1 %	Various metals	< 0,1 %		
<b>Packaging as % of weight</b>					
PE	< 0,1 %			Paper	19,1 %
				Wood	3,0 %
<b>Total plastics</b>	<b>21,8 %</b>	<b>Total metals</b>	<b>31,7 %</b>	<b>Total others</b>	<b>46,5 %</b>

Estimated recycled material content: 31 % by mass.



## ■ MANUFACTURE

This Reference Product comes from sites that observe the applicable legislation for industrial sites.



## ■ DISTRIBUTION

Products are distributed from logistics centres located with a view to optimize transport efficiency. The Reference Product is therefore transported over an average distance of 1090 km by road, 1111 km by sea and 398 km by air from our warehouse to the local point of distribution into the markets all around the world.

Packaging is compliant with applicable regulation. At their end of life, its recyclability rate is 99 % (in % of packaging weight).



## ■ INSTALLATION

For the installation of the product, only standard tools are needed.



## ■ USE

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

# Product Environmental Profile

**Zero-U single phase PDU - 20xC13 + 4xC19 - IEC 60320 std - 2P+E plug**



## END OF LIFE

The product end-of-life factors are taken into account during 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. For European market, this product falls within the scope of the WEEE directive (2012/19/EU). Therefore it must be processed through local WEEE recycling/recovery channels.

• **For European market, extended producer responsibility:**

For European market, the sale of this product is subject to a contribution to eco-organisations in each country responsible for managing end-of-life products in the field of application of the European Waste Electronic and Electrical Equipment Directive.

• **Recyclability rate:**

Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 83 %. This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for the end of life of this product.

Separated into:

- plastic materials (excluding packaging) : 21 %
- metal materials (excluding packaging) : 32 %
- other materials (excluding packaging) : 8 %
- packaging (all types of materials) : 22 %



## ENVIRONMENTAL IMPACTS

The evaluation of environmental impacts examines the stages of the Reference Product life cycle: manufacturing, distribution, installation, use and end-of-life. It is representative from worldwide marketed products.

For each phase, the following modelling elements were taken in account:

<b>Manufacture</b>	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.
<b>Distribution</b>	Transport between the last Group distribution centre and an average delivery point in the sales area.
<b>Installation</b>	The end of life of the packaging.
<b>Use</b>	<ul style="list-style-type: none"> <li>• Product category: PDU (power Distribution Unit).</li> <li>• Use scenario: continuous operation (100% of the time) for 20 years at 25% of rated load. This modelling duration does not constitute a minimum durability requirement.</li> <li>• Energy model: Electricity Mix; Europe 27 - 2008.</li> </ul>
<b>End of life</b>	The default end of life scenario maximizing the impacts.
<b>Software and database used</b>	EIME & database CODDE-2018-11

# Product Environmental Profile

**Zero-U single phase PDU - 20xC13 + 4xC19 - IEC 60320 std - 2P+E plug**



## SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
	Value	Unit	Value	%	Value	%	Value	%	Value	%	Value	%
<b>Global warming</b>	3,29E+02	kgCO <sub>2</sub> eq.	2,97E+01	9%	3,59E+00	1%	6,17E-02	< 1%	2,96E+02	90%	3,02E-01	< 1%
<b>Ozone depletion</b>	2,27E-05	kgCFC-11 eq.	3,46E-06	15%	5,60E-09	< 1%	6,94E-10	< 1%	1,93E-05	85%	6,16E-09	< 1%
<b>Acidification of soils and water</b>	1,34E+00	kgSO <sub>2</sub> eq.	8,78E-02	7%	1,28E-02	< 1%	2,86E-04	< 1%	1,23E+00	92%	1,18E-03	< 1%
<b>Water eutrophication</b>	1,14E-01	kg(PO <sub>4</sub> ) <sup>3-</sup> eq.	3,54E-02	31%	2,60E-03	2%	3,12E-04	< 1%	7,45E-02	65%	1,53E-03	1%
<b>Photochemical ozone formation</b>	7,44E-02	kgC <sub>2</sub> H <sub>4</sub> eq.	5,66E-03	8%	8,51E-04	1%	2,06E-05	< 1%	6,78E-02	91%	9,14E-05	< 1%
<b>Depletion of abiotic resources - elements</b>	1,18E-03	kgSb eq.	1,15E-03	98%	1,43E-07	< 1%	2,98E-09	< 1%	2,57E-05	2%	1,76E-08	< 1%
<b>Total use of primary energy</b>	6,34E+03	MJ	3,76E+02	6%	5,06E+01	< 1%	8,06E-01	< 1%	5,91E+03	93%	3,42E+00	< 1%
<b>Net use of fresh water</b>	1,07E+03	m <sup>3</sup>	1,04E+00	< 1%	3,33E-04	< 1%	2,75E-05	< 1%	1,07E+03	100%	2,15E-04	< 1%
<b>Depletion of abiotic resources - fossil fuels</b>	3,63E+03	MJ	2,21E+02	6%	5,04E+01	1%	7,70E-01	< 1%	3,36E+03	92%	3,14E+00	< 1%
<b>Water pollution</b>	1,93E+04	m <sup>3</sup>	6,51E+03	34%	5,90E+02	3%	8,93E+00	< 1%	1,22E+04	63%	3,65E+01	< 1%
<b>Air pollution</b>	1,64E+04	m <sup>3</sup>	3,55E+03	22%	8,34E+01	< 1%	7,68E+00	< 1%	1,27E+04	78%	3,08E+01	< 1%

The values of the 27 impacts defined in the PCR-ed3-EN-2015 04 02 are available in the digital database of pep-ecopassport.org website.

Registration number: LGRP-00705-V01.01-EN	Drafting rules: «PEP-PCR-ed3-EN-2015 04 02»
Verifier accreditation N°: VH02	Information and reference documents: <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue: 05-2020	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010 Internal <input checked="" type="checkbox"/> External <input type="checkbox"/>	
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)	
PEP are compliant with XP C08-100-1 : 2016 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»	
Environmental data in alignment with EN 15804: 2012 + A1 : 2013	

