

Product Environmental Profile

19" and 10" PDU - 1 U with German standard outlets and 3 m power supply cord with 16 A 2P+E French/German plug



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

Function	to provide electric power for IT equipments for vertical installaton in 19" enclosure for 20 years, via 1 group of 9 outlets 2P+E German standard, equipped with one 3 m cord 3G1,5 H05-VVF with 16 A 2P+E French/German plug.
Reference Product	
Cat.No 646812	
19" PDU - 1 U - 9 x 2P+E - German standard.	

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:

Catalogue Numbers
<ul style="list-style-type: none"> • 646801 • 646806 • 646812 • 646823

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■ 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.

Total weight of Reference Product	1129 g (all packaging included)
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• Pour la référence 646812 (UF du PEP) et les ref associées 646806, 646823

Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	14 %	Al	19,3 %	3m electric cord 2P+E	34,3 %
ABS	4,1 %	Copper alloys	7,5 %		
PA	0,5 %	Steel	3,4 %		
PE	< 0,1 %				
Packaging as % of weight					
PE	0,6 %			Paper	14,4 %
				Wood	1,8 %
Total plastics	19,2 %	Total metals	30,2 %	Total others	50,5 %

Estimated recycled material content: 28 % by mass.

• Pour la référence 646801

Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	6,8 %	Al	9,1 %	3m electric cord 2P+E	36,8 %
ABS	2,5 %	Copper alloys	3,4 %		
PA	0,6 %	Steel	3,1 %		
PE	< 0,1 %				
Packaging as % of weight					
PE	0,7 %			Paper	11,2 %
				Wood	25,9 %
Total plastics	10,6 %	Total metals	15,6 %	Total others	73,9 %

Estimated recycled material content: 20 % by mass.



■ MANUFACTURE

This Reference Product comes from a site 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 1625 km by road, 627 by sea and 48 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 96 % (in % of packaging weight).

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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.



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 74 %. 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) : 18 %
- metal materials (excluding packaging) : 30 %
- other materials (excluding packaging) : 10 %
- packaging (all types of materials) : 16 %



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:

Manufacture	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.
Distribution	Transport between the last Group distribution centre and an average delivery point in the sales area.
Installation	The end of life of the packaging.
Use	<ul style="list-style-type: none"> • Product category: PDU (power Distribution Unit). • 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. • Energy model: Electricity Mix; Europe 27 - 2008.
End of life	The default end of life scenario maximizing the impacts.
Software and database used	EIME & database CODDE-2018-11

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SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Global warming	1,36E+02	kgCO₂ eq.	9,75E+00	7%	2,14E-01	< 1%	1,34E-02	< 1%	1,26E+02	93%	9,37E-02	< 1%
Ozone depletion	9,37E-06	kgCFC-11 eq.	1,15E-06	12%	3,73E-10	< 1%	1,55E-10	< 1%	8,21E-06	88%	1,97E-09	< 1%
Acidification of soils and water	5,66E-01	kgSO₂ eq.	3,83E-02	7%	1,05E-03	< 1%	6,22E-05	< 1%	5,26E-01	93%	3,66E-04	< 1%
Water eutrophication	4,63E-02	kg(PO₄)³⁻ eq.	1,38E-02	30%	1,98E-04	< 1%	6,79E-05	< 1%	3,18E-02	69%	4,67E-04	1%
Photochemical ozone formation	3,12E-02	kgC₂H₄ eq.	2,22E-03	7%	6,77E-05	< 1%	4,49E-06	< 1%	2,89E-02	93%	2,83E-05	< 1%
Depletion of abiotic resources - elements	2,85E-04	kgSb eq.	2,74E-04	96%	8,50E-09	< 1%	6,55E-10	< 1%	1,10E-05	4%	5,54E-09	< 1%
Total use of primary energy	2,64E+03	MJ	1,17E+02	4%	3,01E+00	< 1%	1,75E-01	< 1%	2,52E+03	95%	1,06E+00	< 1%
Net use of fresh water	4,57E+02	m³	2,87E-01	< 1%	1,94E-05	< 1%	6,11E-06	< 1%	4,57E+02	100%	6,88E-05	< 1%
Depletion of abiotic resources - fossil fuels	1,51E+03	MJ	7,38E+01	5%	2,99E+00	< 1%	1,67E-01	< 1%	1,43E+03	95%	9,67E-01	< 1%
Water pollution	7,28E+03	m³	2,03E+03	28%	3,50E+01	< 1%	1,94E+00	< 1%	5,20E+03	71%	1,12E+01	< 1%
Air pollution	6,57E+03	m³	1,13E+03	17%	7,42E+00	< 1%	1,67E+00	< 1%	5,43E+03	83%	9,75E+00	< 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.

The environmental impact of the products, described in this document and different of the Reference Product, can be estimated by weighting the environmental impacts of the Reference Product by the corresponding factors (see below).

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	total life cycle	manufacturing	distribution	installation	Use	End of life
PDU 10" 4 outlets (German standard) - reference 846801	0,4	0,3 for ADPe and 0,5 for other indicators	0,9	1,9	0,4	0,7
PDU 19" 6 outlets (German standard) - reference 846806	0,9	0,6 for ADPe and 0,8 for other indicators	1,0	1,1	0,9	0,9
PDU 19" 8 outlets (German standard) with luminous switch- reference 846823	1,1	0,7 for ADPe and 1,0 for other indicators	1,0	0,1	1,2	1,0

Registration number: LGRP-00707-V01.01-EN	Drafting rules: «PEP-PCR-ed3-EN-2015 04 02»
Verifier accreditation N°: VH02	Information and reference documents: www.pep-ecopassport.org
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	

