



LEGRAND'S ENVIRONMENTAL COMMITMENTS

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

Of all Legrand sites worldwide, over 80% are ISO 14001-certified (sites belonging to the Group for more than five years).

• **Involve the environment in product design**

Provide our customers with all relevant information (composition, consumption, end of life, etc.).
Reduce the environmental impact of products over their whole life cycle.

• **Offer our customers environmentally friendly solutions**

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



REFERENCE PRODUCT

Function	Allow the making and breaking, in air, of a 250 V low voltage circuit, carrying a load current not exceeding 10 A, according to the standards IEC 60669-1 and GOST R 51324.1, for household or similar purposes, during 20 years.
Reference Product	
	Cat.No 7 822 00
	One-way switch, 10 A, white

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 are representative of the following products:

Catalogue Numbers
<ul style="list-style-type: none"> • 7 822 00 • 7 822 30

Product Environmental Profile

Quteo™
One-way Switch - 10 A - White



■ CONSTITUENT MATERIALS

This Reference Product contains no substances prohibited by the regulations applicable at the time of its introduction to the market.

It does not contain substances covered by the RoHS Directive (2002/95/EC and its revision 2011/65/EC). It contains none of the 138 candidate substances covered by appendix XIV of the REACH regulation dated 19/12/2012.

Total weight of Reference Product	54 g (with unit packaging)				
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PP	37.0 %	Steel	4.5 %		
PC	24.5 %	Copper alloys	2.5 %		
ABS	15.9 %				
PA	0.2 %				
				Packaging as % of weight	
				Paper	11.0 %
		Silver alloys	< 0.1 %	PP	4.4 %
Total plastics	77.6%	Total metals	7.0 %	Total other and packaging	15.4 %

Estimated recycled material content: 12 % of weight.



■ MANUFACTURE

This Reference Product comes from a site that observes 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 440 km by road from our warehouse to the local point of distribution into the market in Russia.

Packaging is compliant with European directive 2004/12/EC concerning packaging and packaging waste. At their end of life the recyclability rate is 71 % (in % of packaging weight).



■ INSTALLATION

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



■ USE

Servicing and maintenance:

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

Consumable:

no consumables are necessary to use this type of product.

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END OF LIFE

Product end of life management is integrated into product design by the development teams. The disassembly and sorting of components or materials is made as easy as possible with a view to recycling or another form of reuse.

• Recyclability rate:

Calculated using the method given in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 92 %. This value is based on data collected from a technological channel operating on an industrial basis. It does not prejudge the effective use of the channel for electrical and electronic products at the end of their life.

Separated into:

- plastic materials (excluding packaging): 74 %
- metal materials (excluding packaging) : 7 %
- other materials (excluding packaging) : 0 %
- packaging (all types of materials) : 11 %



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 products marketed and used in Russia.

The following modelling elements were taken into account:

Manufacture	Unit packaging taken into account. As required by the "PEP ecopassport" programme all transport for the manufacturing of the Reference Product, including materials and components, has been taken in account.
Distribution	Transport between the last Group distribution centre and an average delivery to the sales area.
Installation	Installation components not delivered with the product are not taken into account.
Use	<ul style="list-style-type: none"> • Under normal conditions of use, this type of product requires no servicing or maintenance. • No consumables are necessary to use this type of product. • Product category: passive product. • Use scenario: no continuous operation for 20 years at 30 % of rated load, during 30 % of the time. This modelling duration does not constitute a minimum durability requirement. • Energy model: Russia - 2009
End of life	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, transport of the Reference Product by road only once, over a distance of 1000 km, to a processing site at end of life was counted.
Software used	EIME V5 and its database "Legrand-2012-10-31 version 3" made from the data base "CODDE-2012-07".

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ENVIRONMENTAL IMPACTS (continued)

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life		
	Value	Unit	Value	%	Value	%	Value	%	Value	%	Value	%	
Mandatory indicators	Global warming	2.23E+03	g~CO ₂ eq.	3.64E+02	16%	1.79E+00	< 1%	0.00E+00	0%	1.86E+03	83%	2.67E+00	< 1%
	Ozone depletion	9.10E-05	g~CFC-11 eq.	4.10E-05	45%	1.27E-06	1%	0.00E+00	0%	4.87E-05	54%	5.07E-09	< 1%
	Water eutrophication	5.10E-02	g~PO ₄ ³⁻ eq.	4.74E-02	93%	2.98E-05	< 1%	0.00E+00	0%	3.62E-03	7%	4.97E-06	< 1%
	Photochemical ozone creation	6.85E-01	g~C ₂ H ₄ eq.	1.82E-01	26%	1.56E-03	< 1%	0.00E+00	0%	5.01E-01	73%	5.96E-04	< 1%
	Air acidification	2.58E-01	g~H+ eq.	5.35E-02	21%	2.37E-04	< 1%	0.00E+00	0%	2.04E-01	79%	4.97E-04	< 1%
	Total energy depletion	3.65E+01	MJ	6.94E+00	19%	2.27E-02	< 1%	0.00E+00	0%	2.95E+01	81%	3.77E-02	< 1%
	Water depletion	3.61E+00	dm ³	1.69E+00	47%	2.15E-03	< 1%	0.00E+00	0%	1.92E+00	53%	2.78E-04	< 1%

Optional indicators	Raw material depletion	5.48E-15	year ⁻¹	5.41E-15	99%	3.09E-20	< 1%	0.00E+00	0%	7.28E-17	1%	5.46E-20	< 1%
	Air toxicity	3.29E+05	m ³	8.08E+04	25%	3.50E+02	< 1%	0.00E+00	0%	2.47E+05	75%	7.38E+02	< 1%
	Water toxicity	4.64E-01	m ³	1.91E-01	41%	2.50E-04	< 1%	0.00E+00	0%	2.71E-01	58%	1.14E-03	< 1%
	Hazardous waste production	2.49E-02	kg	5.55E-03	22%	6.67E-07	< 1%	0.00E+00	0%	1.94E-02	78%	3.31E-09	< 1%

The environmental impacts of the Reference Product are representative of the products covered by the PEP, which therefore constitute a homogeneous environmental family. For products other than the Reference Product, the environmental impacts of each phase of the lifecycle are proportional to the dissipated power, the impact of the distribution phase is identical to that of the Reference Product.

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-2013-126-V1-EN	Drafting rule → PCR: PEP-PCR-ed 2.1-FR-2012 12 11 → PSR: PSR-0005-ed1-FR-2012 12 11
Authorisation number of checker: VH02	Programme information: www.pep-ecopassport.org
Date of issue: 11-2013	Validity period: 4 years
Independent verification of the declaration and data, in accordance with ISO 14025:2006 Internal <input checked="" type="checkbox"/> External <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	

