

Product Environmental Profile

LED indoor self-contained emergency lighting units



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	Provide 100 lumens illumination for 1 hour duration in escape routes and open areas, to avoid panic and to enable safe evacuation in the premises, when the power supply to the mains lighting circuits fails. This function is powered for 10 years by its own power supply.
Reference Product	
	Cat.No 6 616 03
	Emergency lighting unit URA21LED range 100 lm 1 h Maintained/non maintained IP 42 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:

Cat. Numbers	Designation	Lumen (lm)	Autonomy	Consumption (W)	IP	IK
6 616 03	Emergency lighting unit URA21LED range 100 lm 1 h Maintained/non maintained IP 42 standard	100	1 H	2	IP 42	IK 07
6 616 06	Emergency lighting unit URA21LED range 200 lm 1 h Maintained/non maintained IP 42 standard	200				
6 616 07	Emergency lighting unit URA21LED range 350 lm 1 h Maintained/non maintained IP 42 standard	350				
6 626 03	Emergency lighting unit URA21LED range 100 lm 1 h Maintained/non maintained IP 42 autotest/addressable	100				
6 626 06	Emergency lighting unit URA21LED range 200 lm 1 h Maintained/non maintained IP 42 autotest/addressable	200				

Product Environmental Profile

LED indoor self-contained emergency lighting units



■ 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	589 g (all packaging included)
--	---------------------------------------

Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	47.9 %	Copper alloys	2.0 %	Accumulators	15.6 %
PP	0.8 %	Other metals	0.4 %	Electronic card	9.8 %
PS	0.4 %	Steel	0.2 %		
PE	0.1 %	Al	< 0.1 %		
				Packaging as % of weight	
				Paper (packaging)	17.4 %
				Wood (packaging)	5.3 %
				PP (packaging)	0.1 %
Total plastics	49.2 %	Total metals	2.6 %	Total other and packaging	48.2 %

Estimated recycled material content: 18 % by mass.

For products covered by the PEP other than the Reference Product, constituent materials are:

Total weight of product 6 616 06	634 g (all packaging included)
---	---------------------------------------

Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	44.8 %	Copper alloys	1.9 %	Accumulators	21.3 %
PP	0.7 %	Other metals	0.3 %	Electronic card	9.4 %
PS	0.3 %	Steel	0.2 %		
PE	< 0.1 %	Al	< 0.1 %		
				Packaging as % of weight	
				Paper (packaging)	16.1 %
				Wood (packaging)	4.9 %
				PP (packaging)	0.1 %
Total plastics	45.8 %	Total metals	2.4 %	Total other and packaging	51.8 %

Estimated recycled material content: 18 % by mass.

Total weight of product 6 616 07	685 g (all packaging included)
---	---------------------------------------

Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	41.4 %	Copper alloys	1.7 %	Accumulators	27.1 %
PP	0.7 %	Other metals	0.3 %	Electronic card	8.7 %
PS	0.3 %	Steel	0.2 %		
PE	< 0.1 %	Al	< 0.1 %		
				Packaging as % of weight	
				Paper (packaging)	15.0 %
				Wood (packaging)	4.5 %
				PP (packaging)	0.1 %
Total plastics	42.4 %	Total metals	2.2 %	Total other and packaging	55.4 %

Estimated recycled material content: 18 % by mass.

Product Environmental Profile

LED indoor self-contained emergency lighting units



■ CONSTITUENT MATERIALS (CONTINUED)

Total weight of product 6 626 03	684 g (all packaging included)
---	---------------------------------------

Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	41.4 %	Copper alloys	1.7 %	Accumulators	19.7 %
PP	0.7 %	Other metals	0.3 %	Electronic card	8.4 %
PS	0.3 %	Steel	0.2 %		
PE	0.1 %	Al	< 0.1 %		
				Packaging as % of weight	
				Paper (packaging)	15.0 %
				Wood (packaging)	12.1 %
				PP (packaging)	0.1 %
Total plastics	42.5 %	Total metals	2.2 %	Total other and packaging	55.3 %

Estimated recycled material content: 16 % by mass.

Total weight of product 6 626 06	905 g (all packaging included)
---	---------------------------------------

Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	41.3 %	Copper alloys	1.7 %	Accumulators	27.1 %
PP	0.7 %	Other metals	0.3 %	Electronic card	8.8 %
PS	0.3 %	Steel	0.2 %		
PE	0.1 %	Al	< 0.1 %		
				Packaging as % of weight	
				Paper (packaging)	14.9 %
				Wood (packaging)	4.5 %
				PP (packaging)	0.1 %
Total plastics	42.4 %	Total metals	2.2 %	Total other and packaging	55.4 %

Estimated recycled material content: 13 % by mass.



■ MANUFACTURE

The Reference Product comes from sites that, in their majority, have received ISO14001 certification.



■ 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 780 km by road from our warehouse to the local point of distribution into the market in Europe. Packaging is compliant with European directive 2004/12/EU concerning packaging and packaging waste. At their end of life, its recyclability rate is 98 % (in % of packaging weight).



■ INSTALLATION

For product installation, only standard tools are needed.

Product Environmental Profile

LED indoor self-contained emergency lighting units



USE

Changing 1 battery packs: the modeling, based on 4 years battery lifetime, requires 2 additional cycles of battery pack replacement (from end of life of original battery supplied in the product) to reach 10 years operating time.

Cat. Numbers	Quantity	Type of batteries	Weight
6 616 03	1	Battery pack Ni-Cd 1.5 Ah 2.4 V Cs HT stick with connector (Ref. 0 610 92)	92 g
6 616 06		Battery pack Ni-Cd 1.5 Ah 3.6 V Cs HT stick with connector	135 g
6 616 07		Battery pack Ni-Cd 1.5 Ah 4.8 V Cs HT stick with connector (Ref. 0 610 93)	186 g
6 626 03		Battery pack Ni-Cd 1.5 Ah 3.6 V Cs HT stick with connector	135 g
6 626 06		Battery pack Ni-Cd 1.5 Ah 4.8 V Cs HT stick with connector (Ref. 0 610 93)	186 g



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. This product falls within the scope of the WEEE directive (2012/19/EU). Therefore it must be processed through local WEEE recycling/recovery channels.

• Elements to process specifically:

In accordance with the requirements of this Directive, the following components must be removed and sent to specific channels for processing which comply with the WEEE Directive 2012/19/EU:

- electronic card : 58 g
- plastic parts with brominated flame retardant : 290 g
- accu Ni-Cd : 92 g*

(*): Hazardous waste as defined by European Commission decision 2000/532/EU.

• Extended producer responsibility:

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 85 %. 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) : 46 %
- metal materials (excluding packaging) : 3 %
- other materials (excluding packaging) : 14 %
- packaging (all types of materials) : 22 %

For products covered by the PEP other than the Reference Product, the recyclability rates are:	6 616 06	6 616 07	6 626 03	6 626 06
- Estimated recyclability rate of the product:	82 %	80 %	84 %	80 %
- Plastic materials (excluding packaging) :	43 %	40 %	40 %	40 %
- Metal materials (excluding packaging) :	2 %	2 %	2 %	2 %
- Other materials (excluding packaging) :	16 %	19 %	15 %	19 %
- Packaging (all types of materials) :	21 %	19 %	27 %	19 %

Product Environmental Profile

LED indoor self-contained emergency lighting units



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 Europe, in compliance with the local current standards.

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: active. • Use scenario: for a 10 years working life, in continuous operation at 100 % rated load 2 W 230 V\sim for 100 % of the time. This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity Mix ; Europe 27 - 2002.
End of life	The default end of life scenario maximizing the impacts.
Software and database used	EIME V5 and its database «CODDE-2015-04»



SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Global warming	1.12E+02	kgCO ₂ eq.	6.48E+00	6 %	1.47E-02	< 1 %	8.03E-03	< 1 %	1.05E+02	94 %	5.36E-02	< 1 %
Ozone depletion	2.58E-05	kgCFC-11 eq.	6.20E-07	2 %	2.99E-11	< 1 %	4.91E-11	< 1 %	2.52E-05	98 %	1.35E-09	< 1 %
Acidification of soils and water	7.94E-01	kgSO ₂ eq.	8.38E-03	1 %	6.62E-05	< 1 %	3.86E-05	< 1 %	7.85E-01	99 %	2.05E-04	< 1 %
Water eutrophication	3.26E-02	kg(PO ₄) ³⁻ eq.	2.26E-03	7 %	1.52E-05	< 1 %	3.57E-05	< 1 %	3.00E-02	92 %	2.35E-04	< 1 %
Photochemical ozone formation	3.84E-02	kgC ₂ H ₄ eq.	1.14E-03	3 %	4.71E-06	< 1 %	2.73E-06	< 1 %	3.72E-02	97 %	1.60E-05	< 1 %
Depletion of abiotic resources - elements	3.67E-03	kgSb eq.	2.05E-03	56 %	5.90E-10	< 1 %	3.45E-10	< 1 %	1.62E-03	44 %	3.43E-09	< 1 %
Total use of primary energy	2.03E+03	MJ	1.29E+02	6 %	1.98E-01	< 1 %	1.06E-01	< 1 %	1.90E+03	94 %	5.70E-01	< 1 %
Net use of fresh water	4.25E-01	m ³	7.08E-02	17 %	1.32E-06	< 1 %	2.21E-06	< 1 %	3.54E-01	83 %	4.66E-05	< 1 %
Depletion of abiotic resources - fossil fuels	1.17E+03	MJ	8.09E+01	7 %	2.07E-01	< 1 %	1.12E-01	< 1 %	1.09E+03	93 %	7.65E-01	< 1 %
Water pollution	6.69E+03	m ³	2.17E+03	33 %	2.43E+00	< 1 %	1.25E+00	< 1 %	4.50E+03	67 %	6.09E+00	< 1 %
Air pollution	5.53E+03	m ³	7.34E+02	13 %	6.04E-01	< 1 %	8.81E-01	< 1 %	4.79E+03	87 %	6.30E+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.

Product Environmental Profile

LED indoor self-contained emergency lighting units



SELECTION OF ENVIRONMENTAL IMPACTS (CONTINUED)

For products covered by the PEP other than the Reference Product, the rates are:

Distribution phase do not represent significant differences with the Reference Product	Rate 6 616 03	Rate 6 616 06			
		Manufacturing	Installation	Use	End of life
Global warming	1	1.1	1	1	1.1
Ozon depletion					
Acidification des sols et de l'eau					
Eutrophisation de l'eau					
Formation d'ozone photochimique					
Appauvrissement des ressources abiotiques - éléments					
Total d'énergie primaire utilisée					
Volume net d'eau douce consommée					
Appauvrissement des ressources abiotiques - énergie fossiles					
Pollution de l'eau					
Pollution de l'air	1.0	1			
	1.1				

Distribution phase do not represent significant differences with the Reference Product	Rate 6 616 03	Rate 6 616 07 - 6 626 06			
		Manufacturing	Installation	Use	End of life
Global warming	1	1.2	1	1	1.2
Ozon depletion					
Acidification des sols et de l'eau					
Eutrophisation de l'eau					
Formation d'ozone photochimique					
Appauvrissement des ressources abiotiques - éléments					
Total d'énergie primaire utilisée					
Volume net d'eau douce consommée					
Appauvrissement des ressources abiotiques - énergie fossiles					
Pollution de l'eau					
Pollution de l'air	1.3				

Distribution phase do not represent significant differences with the Reference Product	Rate 6 616 03	Rate 6 626 03			
		Manufacturing	Installation	Use	End of life
Global warming	1	1.1	1.3	1	1.1
Ozon depletion					
Acidification des sols et de l'eau					
Eutrophisation de l'eau					
Formation d'ozone photochimique					
Appauvrissement des ressources abiotiques - éléments					
Total d'énergie primaire utilisée					
Volume net d'eau douce consommée					
Appauvrissement des ressources abiotiques - énergie fossiles					
Pollution de l'eau					
Pollution de l'air	1.1	1.1			

Registration N°: LGRP-00357-V01.01-EN	Drafting rules: «PEP-PCR-ed3-EN-2015 04 02» Supplemented by «PSR-0007-ed1.1-FR-2015 10 16»
Verifier accreditation N°: VH23	Information and reference documents: www.pep-ecopassport.org
Date of issue: 03-2017	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)	
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	

