

Product Environmental Profile

POWER OVER ETHERNET SWITCH + 2 POWER OVER ETHERNET WI-FI ACCESS POINT N+AC KIT



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	Insure communication between 1 RJ45 input port (max. 12 Gbps) and 4 Gigabit 802.3af/at Ethernet ports, provide up to 65W PoE output power for LAN-tertiary applications, and broadcast a Wi-Fi signal via two points in accordance with standard IEEE 802.11 a/b/g/n/ac, during the reference service life of the product of 10 years.
Reference Product	 <p>Cat.No LG-033611 POWER OVER ETHERNET SWITCH + 2 POWER OVER ETHERNET WI-FI ACCESS POINT N+AC KIT</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:

Catalogue Numbers
• LG-033611 - LG-033494

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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 amended by delegated directive (EU) 2015/863, and its amendment 2017/2102/EU.

Total weight of Reference Product	1.25 kg (all packaging included)
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Product alone weight 0.89 kg					
Plastics as % of weight		Metals as % of weight		Other as % of weight	
ABS	9.3%	Steel	12.1%	Various components	31.4%
PC	4.9%	Copper and copper alloys	0.3%	PWB > 10cm ²	12.3%
PVC	0.2%	Various metals	<0.1%	Various others	<0.1%
Rubber	0.2%				
PA	0.1%				
PBT	0.1%				
PE	<0.1%				
Various plastics	<0.1%				

Packaging (alone) : 0.36 kg					
PE	0.2%			Cardboard	20.7%
				Wood	6.7%
				Paper	1.4%

Total plastics : 0.19 kg	15.1 %	Total metals : 0.16 kg	12.4 %	Total others : 0.91 kg	72.5 %
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At the date of edition of this document, the content of recycled material(s) is :

- Product alone (excluding packaging): 0% by mass
- Packaging only: 65% by mass



■ MANUFACTURE

This Reference Product comes from sites that 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 378 Km by truck from our warehouse to the local point of distribution into the market in France.

Packaging is compliant with European directive 2004/12/EU concerning packaging and packaging waste and french decree 98-638.



■ 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.

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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:

- PWB > 10 cm² : 154 g

Extended producer responsibility :

In France, the sale of products covered by the field of application of the European Directive on Waste Electronic and Electrical Equipment (WEEE) is subject to a contribution to a certified eco-organisations.



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 of products marketed and used in France in an electrical installation in compliance with NF C 15100 and associated product standards.

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

System Limit	Manufacture A1-A3	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.
	Distribution A4	Transport between the last Group distribution centre and an average delivery point in the sales area.
	Installation A5	The end of life of the packaging.
	Use B1-B7	<ul style="list-style-type: none"> • Product category : Other equipments : Active Products • Use scenario : Continuous operation (100% of the time) for the switch (1,16W) at 100% use rate, for access points 35,6% of utilization rate in operation (8,3W) and 64,4% in passive stand by (3,9W), during the 10 years working life. This modelling period does not constitute a maximum durability requirement. • Energy model : Electricity Mix_Low voltage_2018_France_FR.
	End of life C1-C4	Choice of end-of-life by default model for PCR-ed4-EN-2021 09 06
D Module	Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario. It expresses the net benefits and loads beyond the boundaries of the system, and are not to be included in the life cycle totals.	
Software and data-base used	The indicators set used is « Indicators for PEF EF 3.0 (compliance: PEP ed.4, EN15804+A2) v2.0 » EIME V6 & its database 2024-01-24	

Unless otherwise indicated the modelling energetic mix are those integrated in the data modules used from the aforementioned database.

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ENVIRONMENTAL IMPACTS

	Total Life Cycle		Manufacturing	Distribution	Installation	Use ⁽¹⁾			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Climate change - total	1.31E+02	kg CO ₂ eq.	5.95E+01	2.38E-02	1.29E-01	7.08E+01	0.00E+00	7.08E+01	5.80E-01	-5.80E-01
Climate change - fossil fuels	1.31E+02	kg CO ₂ eq.	5.95E+01	2.38E-02	1.29E-01	7.06E+01	0.00E+00	7.06E+01	5.78E-01	-6.21E-01
Climate change - biogenics	2.38E-01	kg CO ₂ eq.	5.31E-02	0.00E+00	2.16E-04	1.82E-01	0.00E+00	1.82E-01	2.31E-03	4.07E-02
Climate change - land use and land use transformation	7.76E-05	kg CO ₂ eq.	7.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-08	0.00E+00
Ozone depletion	7.88E-06	kg CFC-11 eq.	6.81E-06	0*	4.49E-09	1.04E-06	0.00E+00	1.04E-06	2.47E-08	-1.06E-08
Acidification (AP)	8.15E-01	mole of H ⁺ eq.	4.01E-01	1.51E-04	7.64E-04	4.10E-01	0.00E+00	4.10E-01	3.03E-03	-7.86E-03
Freshwater eutrophication	3.56E-03	kg P eq.	1.21E-04	0*	0*	3.37E-03	0.00E+00	3.37E-03	6.76E-05	2.43E-06
Marine aquatic eutrophication	1.14E-01	kg of N eq.	5.70E-02	7.06E-05	1.85E-04	5.64E-02	0.00E+00	5.64E-02	5.96E-04	-2.33E-04
Terrestrial eutrophication	1.43E+00	mole of N eq.	6.11E-01	7.75E-04	2.43E-03	8.10E-01	0.00E+00	8.10E-01	7.01E-03	-3.90E-03
Photochemical ozone formation	3.57E-01	kg NMVOC eq.	1.87E-01	1.95E-04	5.21E-04	1.67E-01	0.00E+00	1.67E-01	1.99E-03	-1.85E-03
Depletion of abiotic resources - elements	7.87E-03	kg Sb eq.	7.83E-03	0*	0*	3.35E-05	0.00E+00	3.35E-05	2.17E-06	-1.44E-03
Depletion of abiotic resources - fossil fuels	1.44E+04	MJ	7.95E+02	0*	2.38E+00	1.36E+04	0.00E+00	1.36E+04	3.05E+01	-4.54E+01
Water requirement	1.98E+01	m ³ deprivation worldwide eq.	1.44E+01	0*	5.39E-03	5.13E+00	0.00E+00	5.13E+00	2.21E-01	-6.82E-01
Emission of fine particles	1.80E-05	incidence of diseases	2.10E-06	0*	5.29E-09	1.59E-05	0.00E+00	1.59E-05	1.92E-08	-4.44E-08

* represents less than 0.01% of the total life cycle of the reference flow

(!) For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table

In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column

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	Total Life Cycle		Manufacturing	Distribution	Installation	Use ⁽¹⁾			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Ionizing radiation, human health	1.96E+03	kBq of U235 eq.	1.30E+02	0*	0*	1.83E+03	0.00E+00	1.83E+03	0*	-2.84E+00
Ecotoxicity (fresh water)	1.28E+03	CTUe	7.42E+02	0*	2.08E+00	5.00E+02	0.00E+00	5.00E+02	3.47E+01	3.12E-01
Human toxicity, carcinogenic effects	1.83E-07	CTUh	1.70E-07	0*	2.24E-11	1.18E-08	0.00E+00	1.18E-08	9.91E-10	1.03E-07
Human toxicity, non-carcinogenic effects	1.38E-06	CTUh	8.48E-07	0*	1.27E-09	5.11E-07	0.00E+00	5.11E-07	1.78E-08	-1.66E-07
Impacts related to land use/soil quality	2.75E+00	-	2.95E-01	0.00E+00	2.50E-03	2.26E+00	0.00E+00	2.26E+00	2.00E-01	2.74E-03
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	1.28E+03	MJ	2.24E+01	0*	1.80E-01	1.26E+03	0.00E+00	1.26E+03	2.30E-01	-1.08E+00
Use of renewable primary energy resources used as raw materials	3.31E+00	MJ	3.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	1.28E+03	MJ	2.57E+01	0*	1.80E-01	1.26E+03	0.00E+00	1.26E+03	2.30E-01	3.11E+00
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	1.44E+04	MJ	7.78E+02	0*	2.38E+00	1.36E+04	0.00E+00	1.36E+04	3.05E+01	-4.44E+01
Use of non-renewable primary energy resources used as raw materials	1.70E+01	MJ	1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-9.31E-01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	1.44E+04	MJ	7.95E+02	0*	2.38E+00	1.36E+04	0.00E+00	1.36E+04	3.05E+01	-4.54E+01

* represents less than 0.01% of the total life cycle of the reference flow

(¹) For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table

In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column

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	Total Life Cycle		Manufacturing	Distribution	Installation	Use ⁽¹⁾			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Use of secondary materials	2.34E-01	kg	2.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	0.00E+00	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	0.00E+00	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	4.62E-01	m ³	3.37E-01	0*	2.10E-04	1.19E-01	0.00E+00	1.19E-01	5.19E-03	-1.59E-02
Hazardous waste disposed of	8.57E+01	kg	8.40E+01	0.00E+00	1.34E-01	1.05E+00	0.00E+00	1.05E+00	5.10E-01	-2.42E+01
Non-hazardous waste disposed of	2.06E+01	kg	1.36E+01	0*	1.86E-02	6.81E+00	0.00E+00	6.81E+00	1.82E-01	-1.34E-01
Radioactive waste disposed of	9.63E-03	kg	6.63E-03	0*	7.67E-06	2.86E-03	0.00E+00	2.86E-03	1.33E-04	3.08E-05
Components for re-use	0.00E+00	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	2.25E-01	kg	4.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-01	0.00E+00
Materials for energy recovery	0.00E+00	MJ by energy vector	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	0.00E+00	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of primary energy during the life cycle	1.57E+04	MJ	8.20E+02	0*	2.56E+00	1.48E+04	0.00E+00	1.48E+04	3.08E+01	-4.22E+01

Biogenic carbon content of the product	0.00E+00	kg of C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the associated packaging	1.11E-01	kg of C	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

For biogenic carbon storage, the methodology use is 0/0

* represents less than 0.01% of the total life cycle of the reference flow

(¹) For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table

In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column

The values of the indicators defined in the PCR-ed4-EN-2021 09 06 are available in the digital database of pep-ecopassport.org website.

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For each stage of the life cycle, the environmental impacts of the product in question are calculated by multiplying the impacts of the declaration corresponding to the reference product by the extrapolation coefficient.

Associated references	The reference product : LG-033611 <i>Description : POWER OVER ETHERNET SWITCH + 2 POWER OVER ETHERNET WI-FI ACCESS POINT N+AC KIT</i> Coefficient of extrapolation of environmental indicators						
	Total life Cycle	Manufacturing	Distribution	Installation	Use	End of life	
LG-033494 Switch POE 6 ports gigabit + 3 POE Wi-Fi access point kit	Climate change - total	0.7	0.8	1.3	1.5	0.6	2.8
	Climate change - fossil fuels	0.7	0.8	1.3	1.5	0.6	2.8
	Climate change - biogenics	0.7	1.1	0.0	1.5	0.6	3.2
	Climate change - land use and land use transformation	1.1	1.1	0.0	0.0	0.0	3.2
	Ozone depletion	0.6	0.6	1.3	1.5	0.6	1.4
	Acidification (AP)	0.7	0.9	1.3	1.5	0.6	2.4
	Freshwater eutrophication	0.6	1.5	1.3	1.5	0.6	3.3
	Marine aquatic eutrophication	1.1	1.5	1.3	1.5	0.6	2.2
	Terrestrial eutrophication	1.0	1.5	1.3	1.5	0.6	2.2
	Photochemical ozone formation	1.0	1.4	1.3	1.5	0.6	2.4
	Depletion of abiotic resources - elements	2.4	2.4	1.3	1.5	0.6	3.3
	Depletion of abiotic resources - fossil fuels	0.6	1.1	1.3	1.5	0.6	3.3
	Water requirement	1.1	1.2	1.3	1.5	0.6	3.2
	Emission of fine particles	0.6	0.8	1.3	1.5	0.6	2.1
	Ionizing radiation, human health	0.7	3.0	1.3	1.5	0.6	1.7
	Ecotoxicity (fresh water)	0.6	0.6	1.3	1.5	0.6	1.3
	Human toxicity, carcinogenic effects	8.1	8.7	1.3	1.5	0.6	1.4
	Human toxicity, non-carcinogenic effects	1.4	1.8	1.3	1.5	0.6	2.9
	Impacts related to land use/soil quality	0.9	1.6	0.0	1.5	0.6	3.3
	Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	0.6	0.6	1.3	1.5	0.6	1.8
	Use of renewable primary energy resources used as raw materials	2.0	2.0	0.0	0.0	0.0	0.0
	Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	0.6	0.8	1.3	1.5	0.6	1.8
	Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	0.6	1.1	1.3	1.5	0.6	3.3
	Use of non-renewable primary energy resources used as raw materials	0.6	0.6	0.0	0.0	0.0	0.0
	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	0.6	1.1	1.3	1.5	0.6	3.3
	Use of secondary materials	1.0	1.0	0.0	0.0	0.0	0.0
	Use of renewable secondary fuels	0.0	0.0	0.0	0.0	0.0	0.0
	Use of non-renewable secondary fuels	0.0	0.0	0.0	0.0	0.0	0.0
	Net use of fresh water	1.1	1.2	1.3	1.5	0.6	3.2
	Hazardous waste disposed of	2.6	2.6	0.0	1.5	0.6	2.2
	Non-hazardous waste disposed of	0.6	0.6	1.3	1.5	0.6	1.0
	Radioactive waste disposed of	0.6	0.6	1.3	1.5	0.6	1.0
	Components for re-use	0.0	0.0	0.0	0.0	0.0	0.0
	Materials for recycling	3.0	3.3	0.0	0.0	0.0	2.9
	Materials for energy recovery	0.0	0.0	0.0	0.0	0.0	0.0
	Exported energy	0.0	0.0	0.0	0.0	0.0	0.0
	Total use of primary energy during the life cycle	0.6	1.1	1.3	1.5	0.6	3.3
	Biogenic carbon content of the product	0.0	0.0	0.0	0.0	0.0	0.0
	Biogenic carbon content of the associated packaging	1.6	1.6	0.0	0.0	0.0	0.0

Registration number: LGRP-01956-V01.01-EN	Drafting rules : PEP-PCR-ed4-2021 09 06 Supplemented by PSR-0005-ed3.1-2023 12 08
Verifier accreditation N°: VH08	Information and reference documents : www.pep-ecopassport.org
Date of issue: 04-2024	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006	
Internal <input type="checkbox"/> External <input checked="" type="checkbox"/>	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)	
PEP are compliant with XP C08-100-1 :2016 or EN 50693 :2019 The elements of the present PEP cannot be compared with elements from another program	
Document in compliance with ISO 14025 : 2006: «Environmental labels and declarations. Type III environmental declarations»	



Environmental data in alignment with EN 15804: 2012 + A2 : 2019