

COMPANY OVERVIEW

- **Sustainability built in to support our associates, customers, and the environment**

At Legrand North and Central America, we're committed to leading by example within our own operations, to developing high quality solutions for our customers' High Performance Buildings, and to transforming how people live and work – more safely, more comfortably, more efficiently.

- **Better Performance**

A core principle of designing for sustainability drives us to innovate products and systems that enable buildings to reach exceptional levels of performance, bringing about industry-leading ideas, inventions and initiatives.

- **Better Operations**

A commitment to a leadership role in operational excellence through environmental management, optimizing the way we manage energy, water and waste.

- **Better Lives**

A dedication to enhancing employee and community welfare through programs that help people enjoy healthier, more productive and more rewarding lives.

For more information on Legrand's PEPs and other sustainability initiatives, visit [legrand.us/sustainability](https://www.legrand.us/sustainability).



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 Legrand 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**

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 dual band wireless access to communication network for devices with wireless speeds up to 2.4GHz: 1.0Gbps and 5GHz: 2.67Gbps according to IEEE 802.11ac Wave 2 for a lifetime of 10 years.
Reference Product	
	Part number : XAP 1610
	APEX™ WAVE 2 AC3100 DUAL-BAND ACCESS POINT

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.

Product Environmental Profile

LUXUL® Wireless Access Points



PRODUCTS CONCERNED

The environmental data is representative of the following products:

- XAP 1610

- XAP 1510

- XAP 1410

- XAP 810



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/EC and does not contain, as far as we know, any substance on the candidate list at the time the PEP was published for authorization of the REACH regulation (EC) no. 1907/2006 with a concentration above 0.1% w/w.

Total weight of Reference Product with unit packaging		2,310 g			
Plastics as % of weight		Metals as % of weight		Others as % of weight	
Product					
PC	11.7%	Al	8.7%	Electronic components	23.0%
PVC	9.0%	Copper Alloys	2.3%	Printed Circuit Board	5.4%
PP	1.0%	Steel	1.4%	Electric cables	1.4%
Other plastics	0.8%	Other metals	0.1%		
PA	0.4%				
Packaging					
PE	6.7%				
PET	2.7%			Paper	25.4%
Total plastics	32.3%	Total metals	12.5%	Total others	55.2%

Estimated recycled material content: 19% of weight.

This table is representative for XAP-1610, XAP-1510 and XAP-1410 products

Due to the absence of Aluminum Shield cover on XAP-810 products, the proportions of PVC, PE and Aluminum vary from the Reference Product values shown above. All other material proportions are the same as shown as the Reference Product.

Product Type	PVC	PE	Aluminum
XAP-1610	9 %	7 %	9 %
XAP-810	16 %	9 %	<1 %



MANUFACTURING

The Reference Product comes from sites that have received ISO 14001 certification.



DISTRIBUTION

Information on the distance of distribution is not available so the PCR hypothesis for "International transport", 11800 miles (19000 km) by boat and 621 miles (1000 km) by lorry, was used. This represents transportation of the Reference Product from our warehouse to the local point of distribution in the Europe market.



■ INSTALLATION

No electricity is required for installing the Reference Product.



■ 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.



■ END OF LIFE

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

• Components to process specifically :

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

- PCB > 10cm² : 125 g

• Hazardous waste* contained in the product: no hazardous waste

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

• Recycling rate:

Calculated using the method described in the IEC/TR 62635 technical report, the recyclability rate of the Reference Product without packaging is estimated as 57%. This value is based on data collected from a technological channel using industrial procedures. It does not pre-validate the effective use of this channel for end-of-life electrical and electronic products.

Separated into: (% mass of Reference Product excluding packaging)

- plastic materials:	32%
- metal materials:	19%
- other materials:	6%

Recycling rate of packaging (all types of materials): 73%



■ 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 Europe.

The following modelling elements were taken into account:

Manufacturing	Packaging taken into account. As required by the PEP ecopassport program, all transport for the manufacturing of the Reference Product, including materials and components, has been taken into account. The waste generated during manufacturing phase has been taken into account.
Distribution	Transport between the last distribution center and an average delivery to the sales area. The default scenario modelled maximizes the environmental impact using the PCR hypothesis for "International transport": 11800 miles (19000 km) by boat plus 621 miles (1000 km) by lorry.
Installation	The end of life of the packaging is taken into account at this phase. Transport of packaging to end of life treatment.
Use	• Under normal conditions of use, this type of product requires no servicing or maintenance. • No consumables are necessary to use this type of product. • Use scenario: 6 hours a day at maximum power (26 W) during weekdays and all other times at average power consumption (18 W). Which represents the conservative use scenario which maximizes environmental impacts. This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity (Europe) - 2008
End of life	The default end of life scenario modelled maximizes the environmental impact using the PCR hypothesis for "Local transport": 621 miles (1000 km) by heavy truck and landfilling.
Software used	EIME V5 and its database "CODDE-2016-11" and the indicators defined in the PCR ed 3 in alignment with the EN15804 standard

Product Environmental Profile

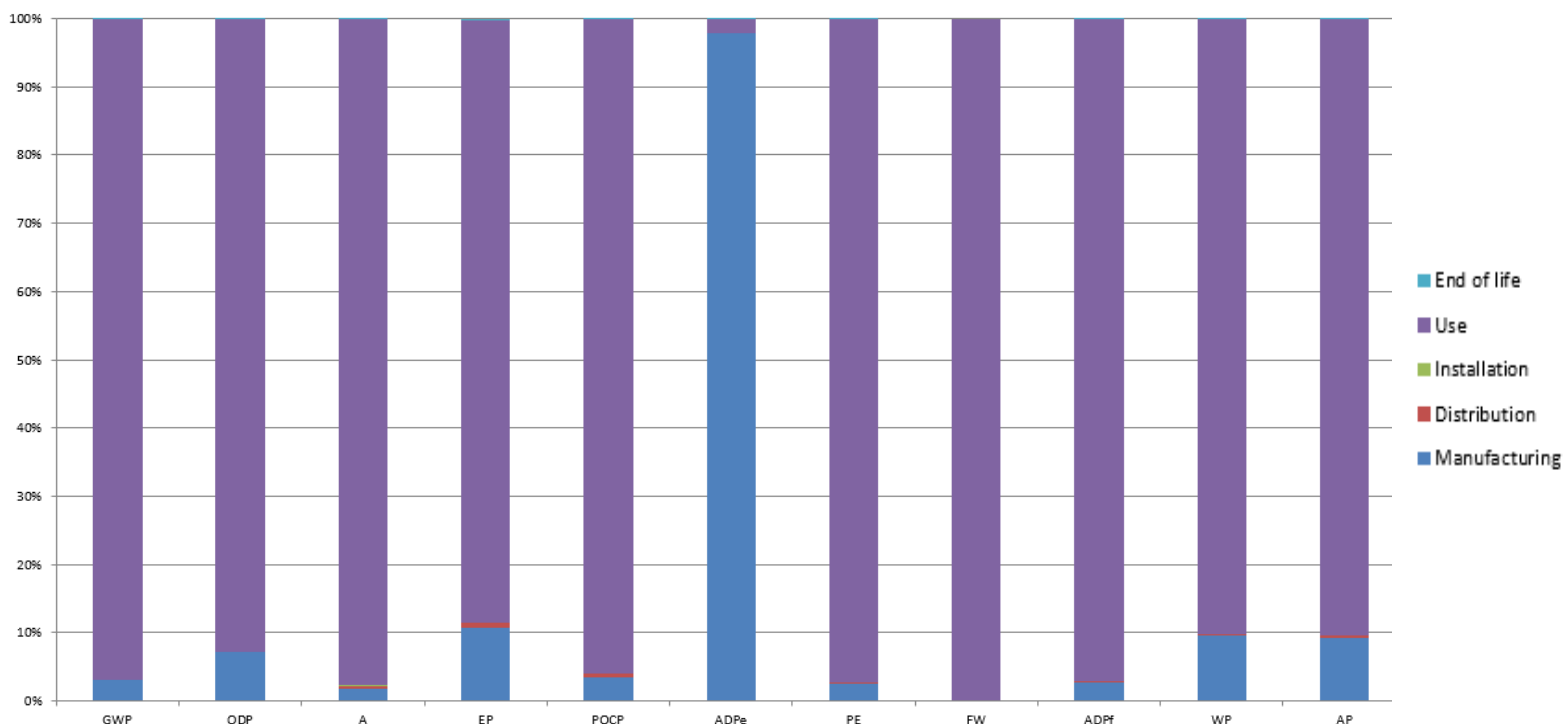
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ENVIRONMENTAL IMPACTS (continued)

	Total for Life cycle		Raw material and manufacturing		Distribution		Installation		Use		End of life	
Global warming (GWP)	8.64E+02	kg CO ₂ eq.	2.86E+01	3%	6.89E-01	< 1%	6.20E-02	< 1%	8.34E+02	97%	1.64E-01	< 1%
Ozone depletion (ODP)	5.89E-05	kg CFC-11 eq.	4.53E-06	8%	1.18E-09	< 1%	9.04E-10	< 1%	5.44E-05	92%	3.84E-09	< 1%
Acidification of soil and water (A)	3.57E+00	kg SO ₂ eq.	6.61E-02	2%	1.95E-02	< 1%	2.76E-04	< 1%	3.48E+00	98%	6.32E-04	< 1%
Water eutrophication (EP)	2.40E-01	kg PO ₄ ³⁻ eq.	2.72E-02	11%	1.93E-03	< 1%	3.04E-04	< 1%	2.10E-01	87%	7.62E-04	< 1%
Photochemical ozone creation (POCP)	2.00E-01	kg C ₂ H ₄ eq.	7.52E-03	4%	9.68E-04	< 1%	2.02E-05	< 1%	1.91E-01	96%	4.91E-05	< 1%
Depletion of abiotic resources - elements (ADPe)	3.51E-03	kg Sb eq.	3.44E-03	98%	2.49E-08	< 1%	3.23E-09	< 1%	7.25E-05	2%	1.02E-08	< 1%
Total use of primary energy (PE)	1.71E+04	MJ	4.73E+02	3%	8.81E+00	< 1%	7.80E-01	< 1%	1.67E+04	97%	1.82E+00	< 1%
Net use of fresh water (FW)	3.03E+03	m ³	2.18E-01	< 1%	5.32E-05	< 1%	3.40E-05	< 1%	3.03E+03	100%	1.33E-04	< 1%
Depletion of abiotic resources - fossil fuels (ADPf)	9.77E+03	MJ	2.87E+02	3%	8.76E+00	< 1%	7.35E-01	< 1%	9.47E+03	97%	1.64E+00	< 1%
Water pollution (WP)	3.84E+04	m ³	3.89E+03	10%	1.03E+02	< 1%	8.52E+00	< 1%	3.44E+04	90%	1.91E+01	< 1%
Air pollution (AP)	4.00E+04	m ³	3.95E+03	10%	9.44E+01	< 1%	7.64E+00	< 1%	3.59E+04	90%	1.83E+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. The environmental impacts of the Reference Product are representative of the products covered by the PEP, which therefore constitute a homogeneous environmental family.



The environmental impact of the Reference Product occurs predominantly during the USE phase.

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ENVIRONMENTAL IMPACTS (continued)

For products other than the Reference Product, the environmental impacts can be calculated by taking the values of the reference product and applying these ratios :

Part Number	Manufacturing	Distribution	Installation	Use	End of Life
XAP 1610	1.0	1.0	1.0	1.0	1.0
XAP 1510	0.7	0.8	0.9	0.9	0.8
XAP 1410	0.9	0.9	0.9	0.6	1.0
XAP 810	0.7	0.8	0.9	0.6	0.9

For the DISTRIBUTION phase of products sold in different geographic areas, the environmental impacts can be calculated by taking the values of the reference product and applying the ratios above, if applicable, and then applying these ratios :

Geographic Area	GWP	ODP	A	EP	POCP	ADPe	PE	FW	ADPf	WP	AP
Europe & Australia	1.0	1.0	1.0	1.0	1.0	1.0	10	1.0	1.0	1.0	1.0
Canada & United-States	0.6	0.7	0.1	0.2	0.2	0.7	0.7	0.7	0.7	0.7	0.2

For the USE phase of products sold in different geographic areas, the environmental impacts can be calculated by taking the values of the reference product and applying the ratios above, if applicable, and then applying these ratios :

Geographic Area	GWP	ODP	A	EP	POCP	ADPe	PE	FW	ADPf	WP	AP
Europe	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Canada	0.6	0.4	0.2	0.6	0.4	0.3	0.7	0.1	0.6	0.8	1.0
United-States	1.4	0.4	0.4	1.5	1.0	0.2	1.0	0.7	1.5	1.7	2.8
Australia	2.3	0.5	0.6	2.5	1.4	0.1	1.7	0.1	2.8	2.6	5.1

For example :

If you are looking for the Water Eutrophication (EP) value for the USE phase of the XAP-1410 in Australia, the calculation is :
 $2.10E-01 \times 0.6 \times 2.5 = 3.15E-01 \text{ kg PO}_4^{3-} \text{ eq.}$

Registration number: LGRP-00873-V01.01-EN	Drafting rules: "PCR-ed3-EN-2015 04"
Verifier's accreditation number: VH34	Information and reference documents: www.pep-ecopassport.org
Date of issue: 02-2019	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025:2010 Internal ☒ External ☐	
The PCR Review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN).	
PEP are compliant with XP C08-100-1: 2014 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"	
In compliance with ISO 14040:2006: "Environmental management - LCA - Principles and framework" In compliance with ISO 14044:2006: "Environmental management - LCA - Requirements and guidelines" In alignment with EN 15804:2012+A1:2013: "Sustainability of construction works - EPD's - Core rules for the product category of construction products"	

