

Product Environmental Profile

Ortronics® U/UTP Patch Cords



LEGRAND COMPANY OVERVIEW

• **Designed to Be Better – Our Commitment to Sustainability**

At Legrand®, our sustainability commitment translates into greater benefits and tangible value for our customers, business partners, employees, and the broader community.

• **Better Performance**

We provide building solutions to meet many building performance goals from sustainability and energy efficiency to productivity and occupant well being. The right choice in network and electrical infrastructure can play a key role in many facets of building performance. Our products help ensure electrical safety. They offer choice and flexibility in space design. They are designed to reduce installation time and material waste on site. Because we know buildings consume a great deal of energy, we offer a range of products and solutions that reduce energy consumption from lighting to plug load to data centers.

• **Better Solutions**

We offer a wide range of innovative solutions for the building, while constantly evolving our design and development processes to improve the environmental profile of our products. Through active monitoring and research, we serve as an expert resource for market trends and building and product performance standards to keep our customers at the top of their game.

• **Better Operations**

We focus on operational excellence because we believe optimizing the way we manage energy, water and waste is not only good for the environment, it's good for business. As part of the Department of Energy's Better Building, Better Plants Challenge (BBBP) Legrand has reduced its energy intensity by over 30% across 14 sites in the United States in just three years. Integrating sustainability into the way we run our operations makes us more competitive – and a better business partner.



For information on Legrand PEP's and other sustainability initiatives, scan the QR code to be brought to our Product Sustainability page.



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	Connects equipment using two RJ45 connectors and transmits between them a communication signal on 1 m of cable according to TIA 568C.2-2009 cabling standard, Category 6a, during a 10 year typical lifetime.
Reference Product	 <p>Representative image shown.</p> <p>Part Number: OR-MC6A03-09</p> <p>Unshielded Clarity 6A Modular Patch Cord, 3 ft, white</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.

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PRODUCTS CONCERNED

The environmental data is representative of the following products:

Clarity® UTP Modular Patch Cords

OR-MC6AXX-YY
OR-MC6XX-YY
OR-MC5EXX-YY
XX = length (feet) YY = color

EZ Patch Patch Cords™

OR-EZC6AXXQZZ-YY
OR-EZC6XXQZZ-YY
OR-EZC5EXXQZZ-YY
XX = length (feet)
YY = cable color
ZZ = quantity of patch cords

TechChoice® Modular Patch Cords

OR-SPCA6XX-YY
OR-SPCA5EXX-YY
OR-SPC6XX-YY (pack of 10)
OR-SPC5EXX-YY (pack of 10)
XX = length (feet) YY = color

Reduced Diameter Patch Cord

OR-RDC6XX-YY
XX = length (feet) YY = color



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/CE.

Total weight of Reference Product (with unit packaging)	2.5 oz (70 g)				
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PVC	53.0%	Copper Alloys	20.0%		
PE (high density)	5.0%				
PC	3.0%				
PP	2.0%			Packaging as % of weight	
PET	<0.1%			PE (low density)	16.0%
				Paper, Cardboard	1.0%
Total plastics	63%	Total metals	20.0%	Total other and packaging	17.0%

Estimated recycled material content: 3% of weight.

Note: The proportions of PVC, Copper Alloys, plastic and cardboard packaging vary for patch cords due to different ratios of Copper Alloy conductors, PVC cable jacketing, plastic and cardboard packaging compared to the total mass. Percentages for these are shown in the table below. All other material proportions are the same as shown for the Reference Product above.

Part Number	% PVC	% Copper Alloys	% Plastic Packaging		% Paper, Cardboard
			% PE (low density)	% ABS	
OR-MC603 / OR-MC5E03 OR-SPCA603 / OR-SPCA5E03	25	40	24	N/A	same
OR-RDC603	25	25	39	N/A	same
OR-EZC6A03Q50	41	15	N/A	2	31
OR-EZC603Q50 OR-EZC5E03Q50	15	28	N/A	3	43

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MANUFACTURING

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



DISTRIBUTION

Products are distributed from logistics centers located to optimize transport efficiency. Information on the distance of distribution is not available so the PCR hypothesis for "Intercontinental transport", 2175 miles (3500 km) by heavy truck, was used. This represents transportation of the Reference Product from our warehouse to the local point of distribution in the North American market.



INSTALLATION

No impact due to manual installation of the Reference Product by the end user.



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

Development teams integrate product end-of-life factors in the design phase.

• **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 product is estimated as 97%. 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)
- plastic materials (excluding packaging):	61%
- metal materials (excluding packaging):	20%
- packaging (all types of materials):	16%

All products other than the Reference Product have different proportions of plastic, metal, and packaging materials. However, the recycling rate for all products is equivalent to 97%.

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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 North America.

The following modelling elements were taken into account:

Manufacturing	Packaging taken into account up to first level packaging. 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.
Installation	The end-of-life of the packaging is taken into account at this phase.
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: Data communication cable with connectors • Use scenario: 10 year working life operating 100% of the time, according to the data center application defined in Annex 1 of the wires, cables and accessories specific rules (PSR0001). This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity(US) - 2009
End of life	In accordance with the PSR0001 end of life scope, the Reference Product is transported locally 621.37 miles (1000km) by truck. Metal and plastic materials undergo separation and grinding. 100% of the metals are transported locally 621.37 miles (1000km) by truck to a manufacturing site for reuse after grinding and all other materials, not including packaging, are disposed of at a landfill.
Software used	EIME V5 and its database "CODDE-2015-04" and the indicators defined in the PCR ed 3 in alignment with the EN15804 standard

	Total for Life cycle		Raw material and manufacturing		Distribution		Installation		Use		End of life	
	Value	Unit	Value	%	Value	%	Value	%	Value	%	Value	%
Global warming (GW)	3.75E-01	kg CO ₂ eq.	2.23E-01	60%	1.22E-02	3%	1.34E-03	< 1%	8.27E-02	22%	5.55E-02	15%
Ozone depletion (OD)	2.94E-08	kg CFC-11 eq.	2.56E-08	87%	2.47E-11	< 1%	3.42E-11	< 1%	1.50E-09	5%	2.24E-09	8%
Acidification of soil and water (A)	4.61E-04	kg SO ₂ eq.	2.83E-04	61%	5.48E-05	12%	5.09E-06	1%	7.92E-05	17%	3.85E-05	8%
Water eutrophication (WE)	1.41E-04	kg PO ₄ ³⁻ eq.	8.64E-05	61%	1.26E-05	9%	5.80E-06	4%	2.11E-05	15%	1.55E-05	11%
Photochemical ozone creation (POCP)	4.95E-05	kg C ₂ H ₄ eq.	2.85E-05	58%	3.89E-06	8%	3.97E-07	< 1%	1.27E-05	26%	4.02E-06	8%
Depletion of abiotic resources - elements (ADPe)	2.96E-05	kg Sb eq.	2.96E-05	100%	4.88E-10	< 1%	8.61E-11	< 1%	8.13E-10	< 1%	1.15E-09	< 1%
Total use of primary energy (PE)	9.79E+00	MJ	7.86E+00	80%	1.72E-01	2%	2.07E-02	< 1%	1.42E+00	14%	3.23E-01	3%
Net use of fresh water (FW)	4.58E-03	m ³	4.38E-03	96%	1.09E-06	< 1%	1.18E-06	< 1%	1.46E-04	3%	5.05E-05	1%
Depletion of abiotic resources – fossil fuels (ADP_f)	6.04E+00	MJ	4.34E+00	72%	1.71E-01	3%	1.91E-02	< 1%	1.31E+00	22%	2.09E-01	3%
Water pollution (WP)	1.10E+02	m ³	3.96E+01	36%	2.01E+00	2%	1.51E-01	< 1%	4.08E+00	4%	6.39E+01	58%
Air pollution (AP)	9.93E+01	m ³	9.02E+01	91%	5.00E-01	< 1%	1.59E-01	< 1%	7.04E+00	7%	1.37E+00	1%

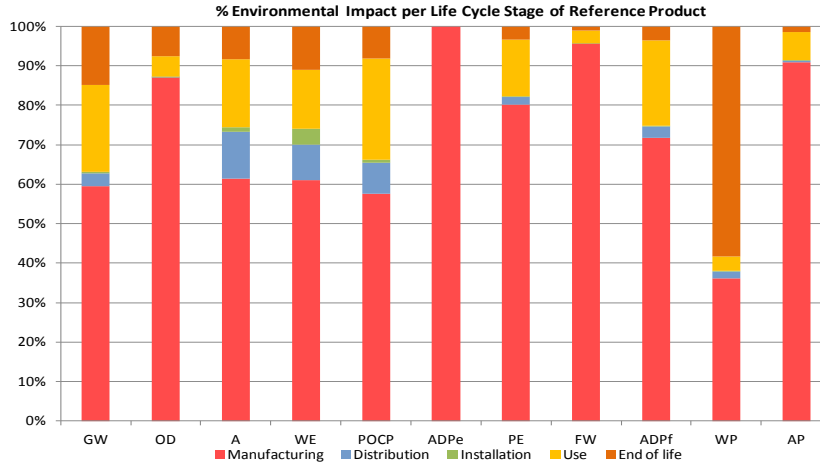
The values of the 27 impacts defined in the PCR-ed3-EN-2015 04 02 are available in the digital database of pep-ecopassport.org website. The environmental impacts of the Reference Product are representative of the products covered by the PEP, which therefore constitute a homogeneous environmental family.

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ENVIRONMENTAL IMPACTS (continued)



The environmental impact of the Reference Product occurs predominantly during the manufacturing phase, with the exception of the high impact of water pollution during the End of Life phase.

For products other than the Reference Product, the environmental impacts can be estimated by weighting the environmental impacts of the Reference Product by the values shown in the table below. Impacts for Distribution are proportional to the mass of each product and impacts for Installation are the same as the Reference Product.

The values are based on the default length of a 3 ft patch cord. To extrapolate different lengths of patch cord, multiply the values in the table below by a scale factor corresponding to the desired length relative to 3 feet (ie. for a 20 ft patch cord multiply the values by 20/3 or 6.7; for a 5 ft patch cord multiply by 5/3 or 1.7). The impacts for OR-SPC6XX-YY and OR-SPC5EXX-YY (pack of 10) can be calculated by multiplying the impacts of OR-SPCA6XX-YY and OR-SPCA5EXX-YY by 10.

To calculate impacts for OR-EZC6AXXQZZ-YY, OR-EZC6XXQZZ-YY, and OR-EZC5EXXQZZ-YY, multiply the quantity of patch cords inside the EZ Patch box by the value of OR-MC6AXX-YY, OR-MC6XX-YY, and OR-MC5EXX-YY respectively in addition to multiplying by the desired length relative to 3 feet. For example, the scale factor of distribution for OR-EZC615Q25-YY would be $0.7 \times 15/3$ (or 5) $\times 25 = 87.5$. The impact of OD during Manufacturing is an exception to this rule. OD is double the scale factor that is calculated through this process.

Part Number	Manufacturing	Distribution	Use	End of Life
OR-MC6AXX-YY	1.0	1.0	1.0	1.0
OR-MC6XX-YY OR-MC5EXX-YY	ADPe / AP / FW: 1.2 all else: 0.8	0.7	0.8	0.6
OR-SPCA6XX-YY OR-SPCA5EXX-YY	ADPe / AP: 1.3 all else: 0.8	0.7	0.2	0.7
OR-RDC6XX-YY	0.6	0.4	0.8	0.3

Registration number: LGRP-00005-V01.01-EN	Drafting rules: "PCR-ed3-EN-2015 04"
Verifier's accreditation number: VH02	Information and reference documents: www.pep-ecopassport.org
Date of issue: 09-2015	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.	
Documents 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"	