Legrand North and Central America
Data Communications Division
125 Eugene O'Neill Drive
New London, CT 06320
1.877.BY.LEGRAND (295.3472)
www.legrand.us

Product Environmental Profile

Ortronics® U/UTP Patch Cords

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.

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	Representative image shown.
	Part Number: OR-MC6A03-09
	Unshielded Clarity 6A Modular Patch Cord, 3 ft, 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.

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PEP ecopassport®

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**		**Others as % of weight**	
Product					
PVC	**53.0%**	Copper Alloys	**20.0%**		
PE (high density)	**5.0%**				
PC	**3.0%**				
PP	**2.0%**				
PET	**<0.1%**				
Packaging					
PE (low density)	**16.0%**			Paper, Cardboard	**1.0%**
Total plastics	**79.0%**	**Total metals**	**20.0%**	**Total others**	**1.0%**

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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PEP ecopassport®

MANUFACTURING

The Reference Product comes from a site that observes the applicable legislation for industrial sites.

DISTRIBUTION

Products are distributed from logistics centers located to optimize transport efficiency using EPA SmartWay® certified carriers to reduce greenhouse gases emissions. Information on the distance of distribution is not available so the PCR hypothesis for "Intracontinental 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 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

• **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. The default scenario modelled maximizes the environmental impact using the PCR hypothesis for "Intracontinental transport": 2175 miles (3500 km) by heavy truck.
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: 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	PSR0001 was used as a guideline for the end of life scope based on communication and data cable. 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	
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_2H_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 (ADPf)	**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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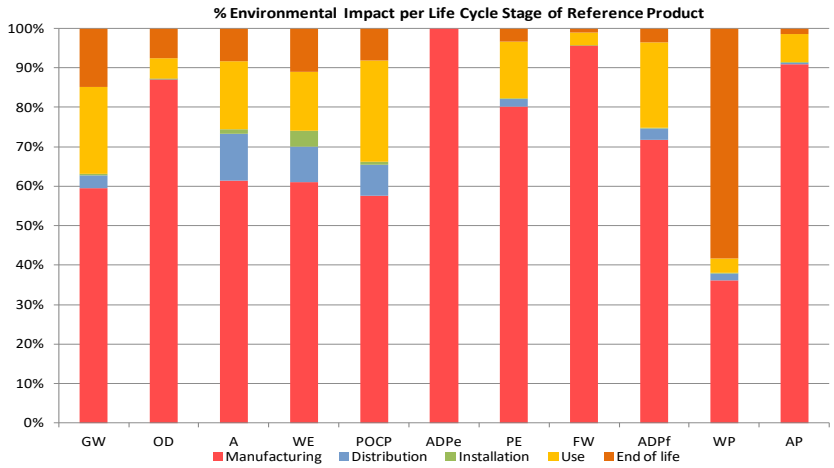
ENVIRONMENTAL IMPACTS (continued)



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

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 x 15/3 (or 5) x 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-V01.02-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 ☒ External ☐	
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"	