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® Field-Installable Connectors

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	To protect and splice a connection point for 10 years with a 100% use rate in a data communications system for data centers applications. Complies with Connector Intermateability specifications per IEC 61754-4 standard.
Reference Product	
	Part Number: OR-205KNT9FA-50T
	Field-Installable SC Connector, 50/125 LOMF

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:

SC Connectors
OR-205KNT9XA-CCC
X or Y = polish CCC = core size and grade

LC Connectors
OR-205KNT9YA-CCC
X or Y = polish CCC = core size and grade

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	**0.3 oz (9 g)**

Plastics as % of weight		**Metals as % of weight**		**Others as % of weight**	
Product					
PC	**12.3%**	Stainless Steel	**3.3%**		
PBT	**5.2%**	Copper Alloys	**2.2%**		
PEI	**10.1%**				
Epoxy Resin	**0.1%**				
Thermoplastic Elastomer	**2.3%**				
Packaging					
PC	**15.6%**			Paper and Cardboard	**40.8%**
PE (low density)	**6.6%**				
m-PPE	**1.5%**				
Total plastics	**53.7%**	**Total metals**	**5.5%**	**Total others**	**40.8%**

Estimated recycled material content: 33% of weight.

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 "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 electricity is required for installing the Reference Product.

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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 62%. 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 without packaging)
- plastic materials (excluding packaging):	47%
- metal materials (excluding packaging):	15%
Recycling rate of packaging (all types of materials):	63% (% mass of packaging)

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 second 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.
Installation	The impact concerning the product installation process should be completed by the PEP user, depending on its installation scenario, according to PSR0001.
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. • Product category: passive optical component • Use scenario: 10 year working life operating 100% of the time, according to the data center applications defined in Annex 1 of PSR0001. This modelling duration does not constitute a minimum durability requirement. Assumed 0 dBm (1 mW) of injected power in fiber with an average insertion loss rate of 8%, according to product specification sheet. • Energy model: Electricity(US) - 2009
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. Separation between connector and fiber cable taken into account.
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

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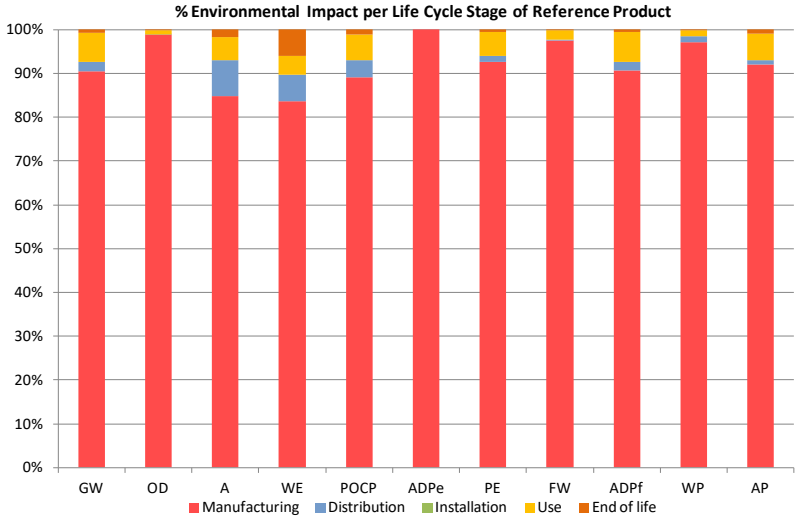
ENVIRONMENTAL IMPACTS (continued)

	Total for Life cycle		Raw material and manufacturing		Distribution		Installation		Use		End of life	
Global warming (GW)	**7.08E-02**	**kg CO_2 eq.**	6.40E-02	**90%**	1.59E-03	**2%**	0.00E+00	**0%**	4.73E-03	**7%**	4.83E-04	**< 1%**
Ozone depletion (OD)	**1.06E-08**	**kg CFC-11 eq.**	1.05E-08	**99%**	3.22E-12	**< 1%**	0.00E+00	**0%**	8.58E-11	**< 1%**	2.70E-11	**< 1%**
Acidification of soil and water (A)	**8.66E-05**	**kg SO_2 eq.**	7.35E-05	**85%**	7.15E-06	**8%**	0.00E+00	**0%**	4.53E-06	**5%**	1.51E-06	**2%**
Water eutrophication (WE)	**2.78E-05**	**kg PO_4^{3-} eq.**	2.33E-05	**84%**	1.64E-06	**6%**	0.00E+00	**0%**	1.20E-06	**4%**	1.68E-06	**6%**
Photochemical ozone creation (POCP)	**1.27E-05**	**kg C_2H_4 eq.**	1.13E-05	**89%**	5.08E-07	**4%**	0.00E+00	**0%**	7.26E-07	**6%**	1.51E-07	**1%**
Depletion of abiotic resources - elements (ADPe)	**6.36E-07**	**kg Sb eq.**	6.36E-07	**100%**	6.37E-11	**< 1%**	0.00E+00	**0%**	4.65E-11	**< 1%**	2.50E-11	**< 1%**
Total use of primary energy (PE)	**1.50E+00**	**MJ**	1.38E+00	**93%**	2.25E-02	**2%**	0.00E+00	**0%**	8.10E-02	**5%**	8.17E-03	**< 1%**
Net use of fresh water (FW)	**3.77E-04**	**m^3**	3.68E-04	**98%**	1.42E-07	**< 1%**	0.00E+00	**0%**	8.36E-06	**2%**	6.48E-07	**< 1%**
Depletion of abiotic resources – fossil fuels (ADPf)	**1.11E+00**	**MJ**	1.01E+00	**91%**	2.23E-02	**2%**	0.00E+00	**0%**	7.49E-02	**7%**	6.87E-03	**< 1%**
Water pollution (WP)	**1.90E+01**	**m^3**	1.85E+01	**97%**	2.62E-01	**1%**	0.00E+00	**0%**	2.33E-01	**1%**	4.77E-02	**< 1%**
Air pollution (AP)	**6.76E+00**	**m^3**	6.23E+00	**92%**	6.52E-02	**< 1%**	0.00E+00	**0%**	4.03E-01	**6%**	6.64E-02	**< 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 manufacturing phase.

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ENVIRONMENTAL IMPACTS (continued)

For products other than the Reference Product, the environmental impacts for Manufacturing, Distribution, and End of Life are proportional to the mass of each product. The impacts for Use are the same as the Reference Product.

Registration number: LGRP-00018-V01.02-EN	Drafting rules: "PCR-ed3-EN-2015 04" Supplemented by "PSR-0001-ed3-EN-2015 10 16"
Verifier's accreditation number: VH02	Information and reference documents: **www.pep-ecopassport.org**
Date of issue: 11-2015	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"	