

# Product Environmental Profile

**LCS3 , LSZH 1m-2m**  
**LC-UPC single-model pigtails**



## 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

<p><b>Function</b></p>	<p>To protect and Connect one connection point through one LC-UPC connector and one Fusion Splice Protector using the other cable. Transmit a communication signal on 1 m according to IEC(60793-2-10) for Single mode (OS1/OS2) fiber, during 10 years and a 25% use rate in accordance with the standards in force.</p> <p>Lifetime and use rate match the Building-LAN:Commercial application defined in the table given in annex 1 of the wires, cables and accessories specific rules.</p>
<p><b>Reference Product</b></p>	<div data-bbox="486 1010 780 1308" data-label="Image"> </div> <p>Cat.No 0 322 43</p> <p>LSZH 1m-2m LC-UPC single-model pigtails.</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:

<p><b>Catalogue Numbers</b></p> <ul style="list-style-type: none"> <li>• LSZH 1m: 0 322 43</li> <li>• LSZH 2m: 0 322 47</li> </ul>
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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.

<b>Total weight of Reference Product</b>	<b>15 g</b> (all packaging included)				
Plastics as % of weight		Metals as % of weight		Other as % of weight	
Other plastics	<b>8.1 %</b>	Copper alloys	<b>0.7 %</b>	Ceramic	<b>0.3 %</b>
PU	<b>0.9 %</b>	Steel	<b>0.6 %</b>		
PP	<b>0.6 %</b>				
PMMA	<b>0.5 %</b>				
<b>Packaging as % of weight</b>					
PE	<b>16.6 %</b>			Paper	<b>62.1 %</b>
PP	<b>0.1 %</b>			Wood	<b>8.3 %</b>
				Other	<b>1.2 %</b>
<b>Total plastics</b>	<b>26.8 %</b>	<b>Total metals</b>	<b>1.3 %</b>	<b>Total others</b>	<b>71.9 %</b>

Estimated recycled material content: 48 % by mass.



## ■ MANUFACTURE

This Reference Product comes from a site that has 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 650 km by road from our warehouse to the local point of distribution into the market in China.

Packaging is compliant with applicable regulation. At their end of life, its recyclability rate is 79 % (in % of packaging weight).



## ■ 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.

• **Recyclability rate:**

Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 71 %. This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for the end of life of this product.

Separated into:

- metal materials (excluding packaging) : 1 %
- packaging (all types of materials) : 70 %



## 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 China.

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

<b>Manufacture</b>	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.
<b>Distribution</b>	Transport between the last Group distribution centre and an average delivery point in the sales area.
<b>Installation</b>	The end of life of the packaging.
<b>Use</b>	<ul style="list-style-type: none"> <li>• Product category: Optical fiber Pigtail.</li> <li>• Use scenario: Wires, Cables and Accessories PSR-0001-ed3-EN-2015 10 16 §4.1. Use scenario: non-continuous operation for 10 years of working life, during 25% of the time (for LAN tertiary applications). This modelling duration does not constitute a minimum durability requirement. The dissipation of the splice connection to the other optical fiber is not taken into account.</li> <li>• Energy model: Electricity Mix; China - 2009.</li> </ul>
<b>End of life</b>	The default end of life scenario maximizing the impacts.
<b>Software and database used</b>	EIME & database CODDE-2018-11

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## SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
<b>Global warming</b>	<b>4,77E-02</b>	<b>kgCO<sub>2</sub> eq.</b>	3,76E-02	<b>79 %</b>	4,94E-04	<b>1 %</b>	9,79E-04	<b>2 %</b>	2,43E-03	<b>5 %</b>	6,17E-03	<b>13 %</b>
<b>Ozone depletion</b>	<b>3,83E-08</b>	<b>kgCFC-11 eq.</b>	3,81E-08	<b>100 %</b>	1,00E-12	<b>&lt; 1 %</b>	1,25E-11	<b>&lt; 1 %</b>	1,93E-11	<b>&lt; 1 %</b>	1,38E-10	<b>&lt; 1 %</b>
<b>Acidification of soils and water</b>	<b>2,14E-04</b>	<b>kgSO<sub>2</sub> eq.</b>	7,45E-05	<b>35 %</b>	2,22E-06	<b>1 %</b>	4,42E-06	<b>2 %</b>	2,63E-06	<b>1 %</b>	1,30E-04	<b>61 %</b>
<b>Water eutrophication</b>	<b>3,75E-05</b>	<b>kg(PO<sub>4</sub>)<sup>3-</sup> eq.</b>	1,78E-05	<b>47 %</b>	5,10E-07	<b>1 %</b>	4,60E-06	<b>12 %</b>	6,95E-07	<b>2 %</b>	1,39E-05	<b>37 %</b>
<b>Photochemical ozone formation</b>	<b>1,55E-05</b>	<b>kgC<sub>2</sub>H<sub>4</sub> eq.</b>	7,98E-06	<b>52 %</b>	1,58E-07	<b>1 %</b>	3,21E-07	<b>2 %</b>	3,11E-07	<b>2 %</b>	6,69E-06	<b>43 %</b>
<b>Depletion of abiotic resources - elements</b>	<b>2,13E-07</b>	<b>kgSb eq.</b>	2,13E-07	<b>100 %</b>	1,98E-11	<b>&lt; 1 %</b>	4,92E-11	<b>&lt; 1 %</b>	1,07E-11	<b>&lt; 1 %</b>	2,04E-10	<b>&lt; 1 %</b>
<b>Total use of primary energy</b>	<b>6,89E-01</b>	<b>MJ</b>	5,57E-01	<b>81 %</b>	6,99E-03	<b>1 %</b>	1,26E-02	<b>2 %</b>	3,98E-02	<b>6 %</b>	7,33E-02	<b>11 %</b>
<b>Net use of fresh water</b>	<b>1,19E-03</b>	<b>m<sup>3</sup></b>	1,18E-03	<b>99 %</b>	4,42E-08	<b>&lt; 1 %</b>	4,78E-07	<b>&lt; 1 %</b>	2,71E-06	<b>&lt; 1 %</b>	3,06E-06	<b>&lt; 1 %</b>
<b>Depletion of abiotic resources - fossil fuels</b>	<b>4,40E-01</b>	<b>MJ</b>	3,18E-01	<b>72 %</b>	6,94E-03	<b>2 %</b>	1,19E-02	<b>3 %</b>	3,67E-02	<b>8 %</b>	6,64E-02	<b>15 %</b>
<b>Water pollution</b>	<b>6,55E+00</b>	<b>m<sup>3</sup></b>	4,36E+00	<b>67 %</b>	8,12E-02	<b>1 %</b>	1,38E-01	<b>2 %</b>	1,21E-01	<b>2 %</b>	1,85E+00	<b>28 %</b>
<b>Air pollution</b>	<b>4,71E+00</b>	<b>m<sup>3</sup></b>	3,53E+00	<b>75 %</b>	2,03E-02	<b>&lt; 1 %</b>	1,16E-01	<b>2 %</b>	2,52E-01	<b>5 %</b>	7,86E-01	<b>17 %</b>

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.

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## SELECTION OF ENVIRONMENTAL IMPACTS

For the products in 1 and 2m configurations the environmental impacts of each phase of the lifecycle are obtained by adopting the following coefficients.

	Sum	Manufacturing	Distribution	Installation	Use	End of life
	2 m	2 m	2 m	2 m	2 m	2 m
Global warming	1,1	1,1	1,1	1	1	1,2
Ozon depletion	1	1				1,3
Acidification of soil and water	1,1	1,1				1,1
Water eutrophication						1,1
Photochemical ozon creation	1	1				1,2
Depletion of abiotic resources - elements						1,1
Total use of primary energy during the life cycle	1,1	1,1				1,1
Net use of fresh water	1,3	1,3				1,4
Depletion of abiotic resources - fossil fuels	1,1	1,1				1,1
Water pollution	1,3	1,2				1,6
Air pollution	1,1	1,1	1,1			

Registration number: LGRP-01160-V01.01-EN	Drafting rules: «PEP-PCR-ed3-EN-2015 04 02» Supplemented by PSR-0001-ed3-2015 10 16
Verifier accreditation N°: VH02	Information and reference documents: <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue: 11-2020	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)	
PEP are compliant with XP C08-100-1 : 2016 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»	
Environmental data in alignment with EN 15804: 2012 + A1 : 2013	

