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# **Product Environmental Profile**

Plexo™ Square boxes





#### ■ 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 ■

Function	Protect persons during 20 years against direct contact with live parts and allow grouping control and protection devices in a single enclosure having the following dimensions 80x80x45mm, while protecting against mechanical impacts (IK07) and the penetration of solid objects and liquids (IP55).			
Reference Product	Cat.No 0 920 12 Square boxes - 80x80x45 mm			

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:

Boxes	
• 0 920 05	
• 0 920 12	
• 0 920 13	
• 0 920 20	
• 0 920 22	
• 0 920 23	
• 0 920 32	





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### **■ CONSTITUENT MATERIALS I**

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 amended by delegated directive (EU) 2015/863, and its amendment 2017/2102/EU.

Total weight of	
Reference Product	89 g (all packaging included)

Plastics as % of weight		Metals as % of weight		Other as % of weight		
PS	47.3 %					
PP	24.0 %					
SBS	7.9 %					
PE	0.2 %					
		Other metal	< 0.1 %			
		Packaging as % of weight			·	
PE	1.1 %			Wood	14.0 %	
				Paper	5.5 %	
Total plastics	80.5 %	Total metals	0.0 %	Total others	19.5 %	

Estimate recycled material content: 4 % 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 780 km by road from our warehouse to the local point of distribution into the market Europe.

Packaging is compliant with European directive 2004/12/EU concerning packaging and packaging waste. At their end of life, its recyclability rate is 91 % (in % of packaging weight).



## INSTALLATION INSTALLATION

For the installation of the product, only standard tools are needed.



## USE I

Under normal conditions of use, this product requires no servicing, no maintenance or additional products.





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#### ■ END OF LIFE I

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 87 %. 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:

- plastic materials (excluding packaging) : 68 % - packaging (all types of materials) : 19 %



## **■ ENVIRONMENTAL IMPACTS I**

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 from products marketed and used in Europe, in compliance with the local current

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

Manufacture	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.	
Distribution	Transport between the last Group distribution centre and an average delivery point in the sales area.	
Installation	The end of life of the packaging.	
Use	<ul> <li>Product category: PSR-0005-ed2-EN-2016 03 29 § 3.9. Unequipped enclosures and cabinets.</li> <li>Use scenario: no energy consumption during the 20 years working life. This modelling duration does not constitut a minimum durabilty requirement.</li> <li>Energy model: Electricity Mix; Europe 27 - 2008.</li> </ul>	
End of Life	The default end of life scenario maximizing the environmental impacts.	
Software and database used	EIME & database CODDE-2018-11	



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## ■ SELECTION OF ENVIRONMENTAL IMPACTS ■

	Total for I	_ife cycle	Raw material and e cycle manufacture		Distribution		Installation		Use		End of life	
Global warming	3.89E-01	kgCO <sub>2</sub> eq.	3.76E-01	97%	3.46E-03	< 1%	1.04E-03	< 1%	0.00E+00	0%	8.48E-03	2%
Ozone depletion	7.94E-09	kgCFC-11 eq.	7.71E-09	97%	7.01E-12	< 1%	6.34E-12	< 1%	0.00E+00	0%	2.17E-10	3%
Acidification of soils and water	6.73E-04	kgSO <sub>2</sub> eq.	6.20E-04	92%	1.55E-05	2%	4.74E-06	< 1%	0.00E+00	0%	3.23E-05	5%
Water eutrophication	2.06E-04	kg(PO <sub>4</sub> )³- eq.	1.63E-04	79%	3.57E-06	2%	2.76E-06	1%	0.00E+00	0%	3.68E-05	18%
Photochemical ozone formation	5.72E-05	kgC <sub>2</sub> H <sub>4</sub> eq.	5.33E-05	93%	1.10E-06	2%	3.39E-07	< 1%	0.00E+00	0%	2.52E-06	4%
Depletion of abiotic resources - elements	9.13E-04	kgSb eq.	9.13E-04	100%	1.38E-10	< 1%	4.57E-11	< 1%	0.00E+00	0%	5.46E-10	< 1%
Total use of primary energy	6.56E+00	МЛ	6.40E+00	98%	4.89E-02	< 1%	1.43E-02	< 1%	0.00E+00	0%	9.25E-02	1%
Net use of fresh water	3.36E-02	m³	3.36E-02	100%	3.10E-07	< 1%	2.54E-07	< 1%	0.00E+00	0%	7.47E-06	< 1%
Depletion of abiotic resources - fossil fuels	5.35E+00	МЛ	5.21E+00	97%	4.86E-02	< 1%	1.40E-02	< 1%	0.00E+00	0%	8.26E-02	2%
Water pollution	4.33E+01	m³	4.16E+01	96%	5.69E-01	1%	1.63E-01	< 1%	0.00E+00	0%	9.58E-01	2%
Air pollution	2.50E+01	m³	2.38E+01	95%	1.42E-01	< 1%	7.80E-02	< 1%	0.00E+00	0%	1.01E+00	4%

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.

For references other than the Reference Product, the environmental impacts of each phase of the lifecycle are obtained by applying the coefficients, indicated in the table below, to those of the Reference Product for each life cycle phase.

References	0 920 05	0 920 13	0 920 20	0 920 22	0 920 23	0 920 32
Coefficients	1	1	1.6	2	2	3

Registration N°: LGRP-01284-V01.01-EN	Drafting rules: «PEP-PCR-ed3-EN-2015 04 02» Supplemented by «PSR-0005-ed2-EN-2016 03 29»
Verifier accreditation N°: VH23	Information and reference documents: www.pep-ecopassport.org
Date of issue: 11-2020	Validity period: 5 years
Independent verification of the declaration and data, in Internal $\  \  \  \  \  \  \  \  \  \  \  \  \ $	compliance with ISO 14025 : 2010
The PCR review was conducted by a panel of experts ch	aired by Philippe Osset (SOLINNEN)
PEP are compliant with XP C08-100-1 : 2016 The elements of the present PEP cannot be compared v	with elements from another program
Document in compliance with ISO 14025 : 2010: «Enviror Type III environmental declarations»	nmental labels and declarations.
Environmental data in alignment with EN 15804: 2012 +	A1 : 2013