

Product Environmental Profile

MPCBs MPX3



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 during 20 years motor against overloads and short-circuits in circuit with assigned voltage 400/415 V and rated current 10 A. This protection is ensured in accordance with the following parameters: Number of poles 3; Rated breaking capacity 100 kA, in accordance with the standard IEC 60947-1, IEC 60947-2, IEC 60947-4; class 10, while ensuring the passage of a current of 50% In for 30% of the time..
Reference Product	<div style="text-align: center;">  <p>Cat.No 417360</p> <p>Thermal magnetic MPCBs MPX³ 63H -10 A - 100 kA</p> </div>

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>Catalogue Numbers</p> <p>417321, 417322, 417323, 417324, 417325, 417326, 417327, 417328, 417329, 417330, 417331, 417332, 417333, 417334, 417335, 417336, 417337, 417338, 417339, 417356, 417357, 417358, 417359, 417360, 417361, 417362, 417363, 417364, 417365, 417366, 417367, 417368, 417369, 417370, 417371, 417372, 417373, 417374, 417375, 417376, 417377, 417378, 417379</p>



■ 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.

Total weight of Reference Product	2181 g (with unit packaging)			
Plastics as % of weight		Metals as % of weight		Other as % of weight
PA	44.7%	Steel	33.7%	
Other plastic	7.7%	Copper alloys	10.5%	
PBT	0.1%	Zamak	1.9%	
PC	<0.1%			
				Packaging as % of weight
				Wood
				Paper
Total plastics	52.5%	Total metals	46.1%	Total other and packaging
				1.4%

Estimated recycled material content: 12% by mass.



■ MANUFACTURE

This Reference Product comes from sites that have received ISO 14001 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 in Europe.

Packaging is compliant with european directive 2004/12/EU concerning packaging and packaging waste. At their end of life, its recyclability rate is 99 % (in % of the mass of the packaging).



■ 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.



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 90%. This value is based on data collected from a technological channel using industrial procedures. It does not prevalidate the effective use of this channel for end-of-life electrical and electronic products.

Separated into:

- plastic materials (excluding packaging) : 43 %
- metal materials (excluding packaging) : 46 %
- other materials (excluding packaging) : 0 %
- packaging (all types of materials) : 1 %



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

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 style="list-style-type: none"> • Product category: passive product« • Use scenario: PSR 0005-ed2-EN-2016 03 29 § 3.1 « Circuit-breakers » • Energy model: Electricity Mix; Europe 27, year 2002
End of life	The default end of life scenario maximizing the environmental impacts.
Software and database used	EIME V5 and its database «CODDE-2015-04»



SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Global warming	1.19E+02	kg-CO₂ eq.	1.47E+01	12%	8.47E-02	< 1%	1.81E-03	< 1%	1.04E+02	87%	2.02E-01	< 1%
Ozone depletion	2.72E-05	kg-CFC-11 eq.	1.90E-06	7%	1.72E-10	< 1%	1.05E-11	< 1%	2.53E-05	93%	3.93E-09	< 1%
Acidification of soils and water	8.11E-01	kgSO₂ eq.	2.26E-02	3%	3.80E-04	< 1%	8.71E-06	< 1%	7.87E-01	97%	7.98E-04	< 1%
Water eutrophication	3.83E-02	kg-PO₄³⁻eq.	7.60E-03	20%	8.74E-05	< 1%	7.91E-06	< 1%	2.95E-02	77%	1.06E-03	3%
Photochemical ozone formation	4.03E-02	kg-C₂H₄ eq.	3.00E-03	7%	2.70E-05	< 1%	6.15E-07	< 1%	3.72E-02	92%	6.15E-05	< 1%
Depletion of abiotic resources - elements	2.09E-02	kgSb eq.	2.09E-02	100%	3.39E-09	< 1%	7.72E-11	< 1%	4.74E-06	< 1%	1.16E-08	< 1%
Total use of primary energy	2.18E+03	MJ	3.79E+02	17%	1.14E+00	< 1%	2.39E-02	< 1%	1.80E+03	82%	2.23E+00	< 1%
Net use of fresh water	4.36E-01	m³	1.64E-01	38%	7.58E-06	< 1%	4.78E-07	< 1%	2.72E-01	62%	1.38E-04	< 1%
Depletion of abiotic resources - fossil fuels	1.28E+03	MJ	2.01E+02	16%	1.19E+00	< 1%	2.52E-02	< 1%	1.07E+03	84%	2.82E+00	< 1%
Water pollution	4.91E+03	m³	4.98E+02	10%	1.39E+01	< 1%	2.83E-01	< 1%	4.37E+03	89%	2.48E+01	< 1%
Air pollution	7.52E+03	m³	3.03E+03	40%	3.47E+00	< 1%	1.95E-01	< 1%	4.47E+03	59%	2.00E+01	< 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.

For products covered by the PEP other than the Reference product, the environmental impacts of each phase of the lifecycle are calculated with

To determine the environmental impact of a product covered by the PEP other than the cat.number, the following rules apply :

of the Manufacturing , Distribution, Installation End of life phases are proportional to the mass of the product and the Use phase is proportional to the dissipated power

Registration N°: LGRP-00211-V01.01-EN	Drafting rules: «PEP-PCR-ed3-EN-2015 04 02» Supplemented by «PSR-0005-ed2-FR-2016 03 29»
Verifier accreditation N°: VH02	Information and reference documents : www.pep-ecopassport.org
Date of issue: 10-2017	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	
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	

