




LEGRAND'S ENVIRONMENTAL COMMITMENTS

- Incorporate environmental management into our industrial sites
Of all Legrand sites worldwide, over 80% are ISO 14001-certified (sites belonging to the Group for more than five years)..
- Involve the environment in product design
Provide our customers with all relevant information (composition, consumption, end of life, etc.).
Reduce the environmental impact of products over their whole life cycle..
- Offer our customers environmentally friendly solutions
Develop innovative solutions to help our customers design more energy efficient, better managed and more environmentally friendly installations.



REFERENCE PRODUCT

Fonction	Allow protection of an electric circuit BT 250V against overload and short circuit and protection of persons against direct and indirect contacts, in concordance of standard NFC-15100 and IEC-60947-2
Reference Product	 Catalogue Numbers 4 107 05 DX3 RCBO NEUTRAL ON LEFT 4500 - U+N 230V~ 16A - TYPE AC - 30MA - 6KA - Curve C - 2M

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 for the reference product refers to the following Catalogue Numbers:

Références
4 107 02; 4 107 03; 4 107 04; 4 107 05; 4 107 06; 4 107 07; 4 107 08; 4 107 09; 4 107 22; 4 107 23; 4 107 24; 4 107 25; 4 107 26; 4 107 27; 4 107 28; 4 107 29; 4 107 34; 4 107 35; 4 107 36; 4 107 48; 4 107 52; 4 107 53; 4 107 54; 4 107 55; 4 107 56; 4 107 78; 4 107 79; 4 107 80; 4 107 81; 4 107 82; 4 107 83; 4 107 84; 4 107 85; 4 107 86; 4 107 87; 4 107 88; 4 107 89; 4 107 91; 4 107 92; 4 107 93; 4 107 94; 4 107 95; 4 107 96; 4 107 97; 4 108 10; 4 108 11; 4 108 12; 4 108 13; 4 108 14; 4 108 15; 4 108 16; 4 108 17; 4 108 19; 4 108 20; 4 108 21; 4 108 22; 4 108 23; 4 108 24; 4 108 25; 4 108 51; 4 108 53; 4 108 54; 4 108 55; 4 108 56; 4 108 57; 4 108 58; 4 108 59; 4 108 81; 4 108 82; 4 108 83; 4 108 84; 4 108 85; 4 108 86; 4 108 89; 4 108 90; 4 108 91; 4 108 92; 4 108 93; 4 108 94; 4 108 95; 4 113 64, 4 110 66, 4 110 67, 4 110 68, 4 110 69

CONSTITUENT MATERIALS

This Reference Product contains no substances prohibited by the regulations applicable at the time of its introduction to the market. At the date of publication of this document, this Reference Product does not contain RoHS substances (2002/95/EC and its revision 2011/65/EU), and no substances appearing on the list of substances that are candidate for authorization of the european Reach regulation (REACH - article 33.1).

Total weight of Reference Product	215 g (with unit packaging)				
Plastics as % of weight		Metals as % of weight		Other as % of weight	
Polyamide 6	14,0%	Steel	31,0%	Glass fibre	7,5%
PBT glass fibre reinforced	13,8%	Copper	13,8%	Varnish	2,2%
Polybutylene terephthalate	1,9%	Stainless steel	1,8%	Alnico magnet	0,5%
Polycarbonates	1,0%			Polyphenylene sulfide	0,3%
Polyamide 66	0,6%			Other miscellaneous	0,5%
				Packaging as % of weight	
				Cardboard	9,2%
				Paper, 50% recycled	0,5%
Other plastics	0,0%	Other metals	1,2%	Ink	0,2%
Total plastics	31.3%	Total metals	47.8%	Total other and packaging	20.9%

Estimated recycled material content: 27% by mass.



MANUFACTURE

This Reference Product comes from a site that have 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 in Europe.

Packaging is compliant: European directive 2004/12/EC concerning packaging and packaging waste. At the packaging end of life, its theoretical recycling potential is of 98% and its energy recovery potential is of 98% (in % of the mass of the packaging)



INSTALLATION

Installation components not delivered with the product are not taken into account.



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 the Reference Product



END OF LIFE

- Hazardous waste contained in the product: 0 g
no hazardous waste comes from this Reference Product

- Non-hazardous waste contained in the product: 193 g

- Theoretical recycling potential:

The theoretical recycling potential of a product is the percentage of material that can be recycled using existing techniques. It takes no account of the existence or lack of recycling services, which are highly dependent on the local situation. This Reference Product contains 84% by weight of potentially recycling material (excluding packaging) :

This Reference Product contains 88% by weight of potentially recycling material (excluding packaging):

- Plastic materials : 35%
- Metal materials : 53 %

- Energy recovery potential:

Energy recovery consists in using the calories contained in waste by burning it and recovering the energy produced, for example, to heat buildings or to produce electricity. The process uses the convertible energy contained in the waste. 32 % of the product mass can be reclaimed with energy recovery.



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

The following modelling elements were taken into account:

Manufacture	Unit packaging taken in account. As required by the "PEP ecopassport" programme all transports for the manufacturing of the Reference Product, including materials and components, has been taken in account.
Distribution	Transport between the last Group distribution centre and an average delivery to the sales area
Installation	Installation components not delivered with the product are not taken into account.
Use	<ul style="list-style-type: none"> • Under normal conditions of use, this type of Product requires no servicing or maintenance • No consumables are necessary to use the Reference Product • Product category : passive product • Use scenario : non-continuous operation for 20 years at 30% of rated load, during 30% of the time. This modelling duration does not constitute a minimum durability requirement • Energy model: Europe, year 2005
End of life	In view of the data available on the date of creation of the document, and in accordance with the requirements of the PCR of the «PEP ecopassport» programme, transport of the Reference Product by road only once, over a distance of 1000 km, to a processing site at end of life was counted.
Software used	EIME V5 and its database «Legrand_2012_10_31_version_3, made from the database «CODDE-2012-07»



ENVIRONMENTAL IMPACTS (continued)

		Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Mandatory indicators	Contribution to greenhouse effect	1,69E+01	g~CO2	1,08E+00	6%	1,98E-02	< 1%	0,00E+00	0%	1,58E+01	93%	1,60E-02	< 1%
	Damage to the ozone layer	9,99E-07	g~CFC-11	1,16E-07	12%	1,40E-08	1%	0,00E+00	0%	8,58E-07	86%	1,14E-08	1%
	Eutrophisation of water	1,67E-04	g~PO43-	1,29E-04	77%	3,30E-07	< 1%	0,00E+00	0%	3,71E-05	22%	2,67E-07	< 1%
	Photochemical ozone formation	6,29E-03	g~C2H4	7,39E-04	12%	1,72E-05	< 1%	0,00E+00	0%	5,52E-03	88%	1,39E-05	< 1%
	Acidification of the air	2,40E-03	g~H+	2,73E-04	11%	2,52E-06	< 1%	0,00E+00	0%	2,12E-03	88%	2,12E-06	< 1%
	Total energy consumed	3,32E+02	MJ	1,86E+01	6%	2,50E-01	< 1%	0,00E+00	0%	3,13E+02	94%	2,03E-01	< 1%
	Consumption of water	5,75E+01	dm3	1,22E+01	21%	2,38E-02	< 1%	0,00E+00	0%	4,52E+01	79%	1,93E-02	< 1%

Optional indicators	Depletion of natural resources	2,83E-14	années ⁻¹	2,79E-14	99%	3,41E-19	< 1%	0,00E+00	0%	3,55E-16	1%	2,77E-19	< 1%
	Toxicity of the air	3,19E+06	m ³	5,64E+05	18%	3,73E+03	< 1%	0,00E+00	0%	2,62E+06	82%	3,14E+03	< 1%
	Toxicity of the water	5,80E+00	dm ³	1,26E+00	22%	2,76E-03	< 1%	0,00E+00	0%	4,53E+00	78%	2,24E-03	< 1%
	Production of hazardous waste	2,87E-01	kg	2,54E-02	9%	7,37E-06	< 1%	0,00E+00	0%	2,62E-01	91%	5,98E-06	< 1%

The environmental impacts of the Reference Product are representative of the products covered by the PEP. The environmental impacts of the Reference Product are representative of the products covered by the PEP, which therefore constitute a homogeneous environmental family

To determine the environmental impact of a product covered by the PEP product other than the reference (ref 410705), the following rules apply:

- The impact of the distribution phase are identical
- The use phase impacts (except Depletion of natural resources and Water Eutrophication) are proportional to the dissipated power
- The indicator Depletion of natural resources and Water Eutrophication are generally proportional to the mass of the product

The values of these impacts are valid for the context specified in this document. They must not be used directly to draw up the environmental balance sheet for the installation.

Registration number: LGRP-2013-129-v1-en	Drafting rule: PEP-PCR-ed 2.1-FR-2011 12 11
Authorisation number of checker: VH02	Programme information: www.pep-ecopassport.org
Date of issue: 06-2013	Validity period: 4 years
Independent verification of the declaration and data, in accordance with ISO 14025:2006 Internal <input checked="" type="checkbox"/> External <input type="checkbox"/>	
In accordance with ISO 14025 :2006 Type III environmental declaration	
The critical review of the PCR was conducted by a panel of experts chaired by J.Chevalier (CSTB)	
The elements of the present PEP cannot be compared with elements from another programme	

