

# Product Environmental Profile

**Arteor**

**2P+E shuttered - 2 modules Chinese - white**



## 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

|                          |   |                        |                        |
|--------------------------|---|------------------------|------------------------|
| <b>Function</b>          | Connect/disconnect the plug of a load consuming 10A maximum under a voltage of 250V while protecting the user from direct contact with live parts, in the Household/Commercial application areas, according to the appropriate use scenario, and for the reference service life of the product of 20 years. |                        |                        |
| <b>Reference Product</b> |    |                        |                        |
|                          | Cat.No 572113 (Mechanism)   | Cat.No: 575290 (Plate) | Cat.No: 576031 (Frame) |
|                          | 2P+E shuttered - 2 modules Chinese - white  |                        |                        |

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:

| Catalogue Numbers (Mechanism)  | Catalogue Numbers (Plate)  | Catalogue Numbers (Frame)                                  |
|--|--|--|
| <ul style="list-style-type: none"> <li>• 572113 (10A)</li> <li>• 572613</li> <li>• 572108</li> <li>• 572608</li> <li>• 572121 (16A)</li> <li>• 572621</li> <li>• 572366</li> <li>• 572367</li> </ul> | <ul style="list-style-type: none"> <li>• 575290</li> <li>• 571484</li> <li>• 575292</li> <li>• 571494</li> <li>• 571504</li> <li>• 571514</li> </ul> | <ul style="list-style-type: none"> <li>• 576031</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 amended by delegated directive (EU) 2015/863, and its amendment 2017/2102/EU.

|  |   |
|--|---|
| <b>Total weight of Reference Product</b> | <b>0.30 kg</b> (all packaging included) |
|--|---|

| Product alone weight 0.20 kg |        |                          |        |                      |  |
|------------------------------|--------|--------------------------|--------|----------------------|--|
| Plastics as % of weight      |        | Metals as % of weight    |        | Other as % of weight |  |
| PC                           | 30.7 % | Steel                    | 27.4 % |                      |  |
| PP                           | 5.9 %  | Copper and copper alloys | 3.4 %  |                      |  |
| PA                           | 0.5 %  |                          |        |                      |  |

| Packaging (alone) : 0.10 kg |       |  |  |           |        |
|-----------------------------|-------|--|--|-----------|--------|
| PEP                         | 2.2 % |  |  | Cardboard | 21.9 % |
| PE                          | 0.3 % |  |  | Wood      | 7.3 %  |
| PP                          | 0.2 % |  |  | Paper     | 0.2 %  |

|                                 |               |                               |               |                               |               |
|---------------------------------|---------------|-------------------------------|---------------|-------------------------------|---------------|
| <b>Total plastics : 0.11 kg</b> | <b>39.8 %</b> | <b>Total metals : 0.09 kg</b> | <b>30.8 %</b> | <b>Total others : 0.10 kg</b> | <b>29.4 %</b> |
|---------------------------------|---------------|-------------------------------|---------------|-------------------------------|---------------|

At the date of edition of this document, the content of recycled material(s) is :

- Product alone (excluding packaging): 10% by mass
- Packaging only: 60% 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 1339 km by road from our warehouse to the local point of distribution into the market in China.

Packaging is compliant with applicable regulation.



## ■ 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.



## 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:

|                                    |                              |   |
|------------------------------------|------------------------------|---|
| System Limit                       | <b>Manufacture<br/>A1-A3</b> | Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.   |
|                                    | <b>Distribution<br/>A4</b>   | Transport between the last Group distribution centre and an average delivery point in the sales area.   |
|                                    | <b>Installation<br/>A5</b>   | The end of life of the packaging.   |
|                                    | <b>Use<br/>B1-B7</b>         | <ul style="list-style-type: none"> <li>Product category: Power socket - «PSR-0005-ed3-EN-2023 06 06 § 3.10. Specific rules for the 'Sockets' family».</li> <li>Use scenario: non-continuous operation in Household/Commercial area for 20 years at 10% of rated load, during 30% of the time. This modelling duration does not constitute a minimum durability requirement.</li> <li>Energy model: Electricity Mix_Low voltage_2018_China_CN - 2018.</li> </ul> |
|                                    | <b>End of life<br/>C1-C4</b> | The default end of life scenario maximizing the impacts.  |
| <b>D Module</b>                    |                              | Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario. It expresses the net benefits and loads beyond the boundaries of the system, and are not to be included in the life cycle totals.  |
| <b>Software and data-base used</b> |                              | EIME V6 & its database CODDE-2023-02  |

Unless otherwise indicated the modelling energetic mix are those integrated in the data modules used from the aforementioned database.

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## ENVIRONMENTAL IMPACTS

|   | Total Life Cycle |  | Manufacturing | Distribution | Installation | Use <sup>(1)</sup> |    |          | End of Life | Module D  |
|---|------------------|--|---------------|--------------|--------------|--------------------|----|----------|-------------|-----------|
|   |                  |  | A1-A3         | A4           | A5           | Total B1-B7        | B2 | B6       | C1-C4       |           |
| Climate change - total                                | 2.43E+00         | kg CO <sub>2</sub> eq.                   | 1.23E+00      | 2.03E-02     | 1.37E-01     | 5.01E-01           | 0* | 5.01E-01 | 5.42E-01    | -3.08E-01 |
| Climate change - fossil fuels                         | 2.28E+00         | kg CO <sub>2</sub> eq.                   | 1.18E+00      | 2.03E-02     | 3.38E-02     | 5.01E-01           | 0* | 5.01E-01 | 5.40E-01    | -3.07E-01 |
| Climate change - biogenics                            | 1.52E-01         | kg CO <sub>2</sub> eq.                   | 4.74E-02      | 0*           | 1.04E-01     | 7.18E-05           | 0* | 7.18E-05 | 1.30E-03    | -9.07E-04 |
| Climate change - land use and land use transformation | 1.37E-04         | kg CO <sub>2</sub> eq.                   | 1.37E-04      | 0*           | 0*           | 0*                 | 0* | 0*       | 4.11E-08    | 0.00E+00  |
| Ozone depletion                                       | 4.17E-08         | kg CFC-11 eq.                            | 3.56E-08      | 3.11E-11     | 1.14E-10     | 2.86E-09           | 0* | 2.86E-09 | 3.13E-09    | -4.14E-09 |
| Acidification (AP)                                    | 9.39E-03         | mole of H <sup>+</sup> eq.               | 4.61E-03      | 1.28E-04     | 5.64E-05     | 3.75E-03           | 0* | 3.75E-03 | 8.38E-04    | -2.04E-03 |
| Freshwater eutrophication                             | 5.76E-05         | kg P eq.                                 | 1.70E-05      | 7.60E-09     | 0*           | 1.06E-07           | 0* | 1.06E-07 | 4.05E-05    | -2.16E-07 |
| Marine aquatic eutrophication                         | 1.44E-03         | kg of N eq.                              | 8.07E-04      | 6.02E-05     | 2.48E-05     | 4.01E-04           | 0* | 4.01E-04 | 1.46E-04    | -1.84E-04 |
| Terrestrial eutrophication                            | 1.60E-02         | mole of N eq.                            | 8.73E-03      | 6.60E-04     | 3.00E-04     | 4.54E-03           | 0* | 4.54E-03 | 1.73E-03    | -2.02E-03 |
| Photochemical ozone formation                         | 5.12E-03         | kg NMVOC eq.                             | 3.00E-03      | 1.67E-04     | 6.64E-05     | 1.34E-03           | 0* | 1.34E-03 | 5.48E-04    | -8.00E-04 |
| Depletion of abiotic resources - elements             | 1.54E-04         | kg Sb eq.                                | 1.54E-04      | 0*           | -2.47E-08    | 0*                 | 0* | 0*       | 1.38E-07    | -8.28E-06 |
| Depletion of abiotic resources - fossil fuels         | 6.77E+01         | MJ                                       | 4.52E+01      | 2.83E-01     | 1.04E-01     | 8.10E+00           | 0* | 8.10E+00 | 1.41E+01    | -2.19E+01 |
| Water requirement                                     | 2.74E+00         | m <sup>3</sup> deprivation worldwide eq. | 2.55E+00      | 0*           | 1.66E-02     | 2.21E-02           | 0* | 2.21E-02 | 1.47E-01    | -1.60E-01 |
| Emission of fine particles                            | 5.67E-08         | incidence of diseases                    | 3.07E-08      | 1.04E-09     | 3.16E-10     | 2.05E-08           | 0* | 2.05E-08 | 4.25E-09    | -1.11E-08 |

\*Represents less than 0.01% of the total life cycle of the reference flow

<sup>(1)</sup> For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table

In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column

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| Total Life Cycle  |          |                 | Manufacturing | Distribution | Installation | Use <sup>(1)</sup> |    |          | End of Life | Module D  |
|---|----------|-----------------|---------------|--------------|--------------|--------------------|----|----------|-------------|-----------|
|   |          |                 | A1-A3         | A4           | A5           | Total B1-B7        | B2 | B6       | C1-C4       |           |
| Ionizing radiation, human health  | 2.34E+00 | kBq of U235 eq. | 2.27E+00      | 0*           | 0*           | 5.95E-02           | 0* | 5.95E-02 | 7.63E-03    | -1.75E+00 |
| Ecotoxicity (fresh water)   | 4.33E+01 | CTUe            | 2.99E+01      | 1.37E-02     | 9.72E-02     | 9.45E+00           | 0* | 9.45E+00 | 3.80E+00    | -5.64E-01 |
| Human toxicity, carcinogenic effects  | 5.00E-08 | CTUh            | 4.99E-08      | 0*           | 0*           | 6.41E-11           | 0* | 6.41E-11 | 6.35E-11    | -1.21E-07 |
| Human toxicity, non-carcinogenic effects  | 3.46E-08 | CTUh            | 2.34E-08      | 3.86E-11     | 6.83E-11     | 3.65E-09           | 0* | 3.65E-09 | 7.49E-09    | -2.05E-08 |
| Impacts related to land use/soil quality  | 6.12E-01 | -               | 4.59E-01      | 0*           | 0*           | 1.45E-03           | 0* | 1.45E-03 | 1.51E-01    | 7.07E-07  |
| Use of renewable primary energy, excluding renewable primary energy resources used as raw materials                     | 1.64E+00 | MJ              | 7.58E-01      | 3.77E-04     | -3.93E-03    | 8.57E-01           | 0* | 8.57E-01 | 3.24E-02    | -3.09E-02 |
| Use of renewable primary energy resources used as raw materials   | 8.33E-01 | MJ              | 8.33E-01      | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | 1.02E-03  |
| Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)     | 2.48E+00 | MJ              | 1.59E+00      | 3.77E-04     | -3.93E-03    | 8.57E-01           | 0* | 8.57E-01 | 3.24E-02    | -2.99E-02 |
| Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials             | 6.34E+01 | MJ              | 4.09E+01      | 2.83E-01     | 1.04E-01     | 8.10E+00           | 0* | 8.10E+00 | 1.41E+01    | -2.17E+01 |
| Use of non-renewable primary energy resources used as raw materials   | 4.28E+00 | MJ              | 4.28E+00      | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | -1.53E-01 |
| Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) | 6.77E+01 | MJ              | 4.52E+01      | 2.83E-01     | 1.04E-01     | 8.10E+00           | 0* | 8.10E+00 | 1.41E+01    | -2.19E+01 |

\*Represents less than 0.01% of the total life cycle of the reference flow

<sup>(1)</sup> For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table

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| Total Life Cycle                                    |          |                     | Manufacturing | Distribution | Installation | Use <sup>(1)</sup> |    |          | End of Life | Module D  |
|---|----------|---------------------|---------------|--------------|--------------|--------------------|----|----------|-------------|-----------|
|   |          |                     | A1-A3         | A4           | A5           | Total B1-B7        | B2 | B6       | C1-C4       |           |
| Use of secondary materials                          | 8.45E-02 | kg                  | 8.45E-02      | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | 0.00E+00  |
| Use of renewable secondary fuels                    | 0.00E+00 | MJ                  | 0*            | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | 0.00E+00  |
| Use of non-renewable secondary fuels                | 0.00E+00 | MJ                  | 0*            | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | 0.00E+00  |
| Net use of fresh water                              | 6.53E-02 | m³                  | 6.10E-02      | 0*           | 3.86E-04     | 5.15E-04           | 0* | 5.15E-04 | 3.41E-03    | -3.72E-03 |
| Hazardous waste disposed of                         | 5.23E-01 | kg                  | 3.23E-01      | 0*           | -1.65E-04    | 1.52E-02           | 0* | 1.52E-02 | 1.85E-01    | -7.60E-01 |
| Non-hazardous waste disposed of                     | 9.19E-01 | kg                  | 6.84E-01      | 7.12E-04     | 1.05E-01     | 8.73E-02           | 0* | 8.73E-02 | 4.24E-02    | -1.18E-03 |
| Radioactive waste disposed of                       | 4.59E-04 | kg                  | 4.37E-04      | 5.07E-07     | 1.82E-06     | 3.57E-06           | 0* | 3.57E-06 | 1.58E-05    | -1.08E-06 |
| Components for re-use                               | 0.00E+00 | kg                  | 0*            | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | 0.00E+00  |
| Materials for recycling                             | 9.92E-02 | kg                  | 2.35E-02      | 0*           | 0*           | 0*                 | 0* | 0*       | 7.57E-02    | 0.00E+00  |
| Materials for energy recovery                       | 0.00E+00 | MJ by energy vector | 0*            | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | 0.00E+00  |
| Exported energy                                     | 0.00E+00 | MJ                  | 0*            | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | 0.00E+00  |
| Total use of primary energy during the life cycle   | 7.02E+01 | MJ                  | 4.67E+01      | 2.83E-01     | 9.98E-02     | 8.96E+00           | 0* | 8.96E+00 | 1.41E+01    | -2.19E+01 |
| Biogenic carbon content of the product              | 0.00E+00 | kg of C             | 0*            | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | 0.00E+00  |
| Biogenic carbon content of the associated packaging | 2.73E-02 | kg of C             | 0*            | 0*           | 0*           | 0*                 | 0* | 0*       | 0*          | 0.00E+00  |

\*Represents less than 0.01% of the total life cycle of the reference flow

<sup>(1)</sup> For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table

In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column

The values of the indicators defined in the PCR-ed4-EN-2021 09 06 are available in the digital database of pep-ecopassport.org website.

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The environmental  
configuration w  
are obtained by



## ENVIRONMENTAL IMPACTS

The environmental impacts are calculated for a configuration composed by 2 socket-outlets, 1 plate 4 modules and 1 frame 4 modules. For a configuration with 2 16A socket-outlet mechanisms (572121, 572621, 572366, 572367), the environmental impacts of each phase of the lifecycle are obtained by adopting the following coefficients on those of the Reference Product.

|   | Total LCA | Manufacturing [A1-A3] | Distribution [A4] | Installation [A5] | Use [B1-B7] | B2 | B6  | End of life [C1-C4] |
|---|-----------|-----------------------|-------------------|-------------------|-------------|----|-----|---------------------|
|   | 572121    |                       |                   |                   |             |    |     |                     |
| Climate change - total  |           |                       |                   |                   |             |    |     |                     |
| Climate change - fossil fuels   |           |                       |                   |                   |             |    |     |                     |
| Climate change - biogenics  |           |                       |                   |                   |             |    |     |                     |
| Climate change - land use and land use transformation   |           |                       |                   |                   |             |    |     |                     |
| Ozone depletion   |           |                       |                   |                   |             |    |     |                     |
| Acidification (AP)  |           |                       |                   |                   |             |    |     |                     |
| Freshwater eutrophication   |           |                       |                   |                   |             |    |     |                     |
| Marine aquatic eutrophication   |           |                       |                   |                   |             |    |     |                     |
| Terrestrial eutrophication  |           |                       |                   |                   |             |    |     |                     |
| Photochemical ozone formation   |           |                       |                   |                   |             |    |     |                     |
| Depletion of abiotic resources - elements   |           |                       |                   |                   |             |    |     |                     |
| Depletion of abiotic resources - fossil fuels   |           |                       |                   |                   |             |    |     |                     |
| Water requirement   |           |                       |                   |                   |             |    |     |                     |
| Emission of fine particles  |           |                       |                   |                   |             |    |     |                     |
| Ionizing radiation, human health  |           |                       |                   |                   |             |    |     |                     |
| Ecotoxicity (fresh water)   |           |                       |                   |                   |             |    |     |                     |
| Human toxicity, carcinogenic effects  |           |                       |                   |                   |             |    |     |                     |
| Human toxicity, non-carcinogenic effects  |           |                       |                   |                   |             |    |     |                     |
| Impacts related to land use/soil quality  |           |                       |                   |                   |             |    |     |                     |
| Use of renewable primary energy, excluding renewable primary energy resources used as raw materials                     | 1,4       | 1,4                   | 1                 | 1                 | 1,6         | 1  | 1,6 | 1,1                 |
| Use of renewable primary energy resources used as raw materials   |           |                       |                   |                   |             |    |     |                     |
| Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)     |           |                       |                   |                   |             |    |     |                     |
| Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials             |           |                       |                   |                   |             |    |     |                     |
| Use of non-renewable primary energy resources used as raw materials   |           |                       |                   |                   |             |    |     |                     |
| Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) |           |                       |                   |                   |             |    |     |                     |
| Use of secondary materials  |           |                       |                   |                   |             |    |     |                     |
| Use of renewable secondary fuels  |           |                       |                   |                   |             |    |     |                     |
| Use of non-renewable secondary fuels  |           |                       |                   |                   |             |    |     |                     |
| Net use of fresh water  |           |                       |                   |                   |             |    |     |                     |
| Hazardous waste disposed of   |           |                       |                   |                   |             |    |     |                     |
| Non-hazardous waste disposed of   |           |                       |                   |                   |             |    |     |                     |
| Radioactive waste disposed of   |           |                       |                   |                   |             |    |     |                     |
| Components for re-use   |           |                       |                   |                   |             |    |     |                     |
| Materials for recycling   |           |                       |                   |                   |             |    |     |                     |
| Materials for energy recovery   |           |                       |                   |                   |             |    |     |                     |
| Exported energy   |           |                       |                   |                   |             |    |     |                     |
| Total use of primary energy during the life cycle   |           |                       |                   |                   |             |    |     |                     |
| Biogenic carbon content of the product  |           |                       |                   |                   |             |    |     |                     |
| Biogenic carbon content of the associated packaging   |           |                       |                   |                   |             |    |     |                     |

Registration number: **LGRP-01637-V01.01-EN**

Drafting rules: «**PEP-PCR-ed4-EN-2021 09 06**»

**Supplemented by «PSR-0005-ed2-2016 03 29»**

Verifier accreditation N°: **VH08**

Information and reference documents: **www.pep-ecopassport.org**

Date of issue: **11-2023**

Validity period: **5 years**

**Independent verification of the declaration and data, in compliance with ISO 14025 : 2006**

Internal ☐ External ☒

The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)

PEP are compliant with XP C08-100-1 :2016 or EN 50693 :2019

The elements of the present PEP cannot be compared with elements from another program

Document in compliance with ISO 14025 : 2006: «Environmental labels and declarations.

Type III environmental declarations»



Environmental data in alignment with EN 15804: 2012 + A2 : 2019