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Your usual Sales office www.legrand.com

Product Environmental Profile

Nereya TM

1 Way Switch Screw Terminal - 10A - 250V





■ 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.

 $\cdot \text{Involve the environment in product design and provide informations in compliance with ISO\ 14025\ Reduce the environmental impact of products over their whole life cycle. } \\$

Provide our customers with all relevant information (composition, consumption, end of life, etc.).



■ REFERENCE PRODUCT

| Function | Establish, support and interrupt for 20 years rated currents in normal conditions of circuit characterized by the current of 10A, for the operating voltage of 250V. |
|-------------------|--|
| Reference Product | Cat. № 663100 1 Way Switch Screw Terminal - 10A - 250V |

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:

| Complete Solution | Support 3M - Horizontal 4x2 | Plate - Horizontal 4x2 | Modules |
|-------------------|-----------------------------|------------------------|--|
| • 663180 | • 663299 | • 663210 • 663213 | • 663000 • 663001 • 663015 • 663016 |
| | | | |



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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.

| Total weight of Reference Product | 75 g (with unit packaging) |
|--------------------------------------|----------------------------|
| | |

| Plastics as % of weight | | Metals as % of weight | | Packaging as % of weight | | |
|-------------------------|--------|-----------------------|---------|---------------------------|--------|--|
| PS | 46.5 % | Steel 7.3 | | Wood (packaging) | 20.9 % | |
| PP | 8.5 % | Copper alloys | 1.5 % | Paper (packaging) | 10.4 % | |
| PC | 0.8 % | Other metal | 0.9 % | PE (packaging) | 3.1 % | |
| | | Silver alloy | <0.1 % | PP (packaging) | 0.1 % | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | Al | < 0.1 % | | | |
| Total plastics | 55.8 % | Total metals | 9.7 % | Total other and packaging | 34.5 % | |

Estimated recycled material content: 10 % by mass.



■ MANUFACTURE

This Reference Product comes from sites that observe the applicable legislation for industrial sites.



DISTRIBUTION

Products are distributed from logistics centres located with a view to optimize transport efficiency. The Reference Product is therefore transported over a maximum distance of 4800 km by road from our warehouse to the local point of distribution into the market in Brazil.

Packaging is compliant with applicable regulation. At their end of life, its recyclability rate is 88 % (in % of the mass of the packaging).



■ INSTALLATION

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



USE |

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



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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 93 %. This value is based on data collected from a technological channel using industrial procedures. It does not pre-validate the effective use of this channel for end-of-life electrical and electronic products.

Separated into:

- plastic materials (excluding packaging):
- metal materials (excluding packaging):
- packaging (all types of materials):
30 %



■ ENVIRONMENTAL IMPACTS

 $The \, evaluation \, of \, environmental \, impacts \, examines \, the \, stages \, of \, the \, Reference \, Product \, life \, cycle: \, manufacturing, \, distribution, \, installation, \, use \, and \, end-of-life. \, It \, is \, representative \, from \, products \, marketed \, and \, used \, in \, Brazil.$

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 the farest delivery point in the sales area. |
| Installation | The end of life of the packaging. |
| Use | Product category: PSR005 product category: 3.5.1 - Switches Use scenario: non-continuous operation for 20 years at 50% of rated load, during 30% of the time. This modelling duration does not constitute a minimum durability requirement. Energy model: Electricity Mix; Brazil - 2009. |
| 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» |



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■ SELECTION OF ENVIRONMENTAL IMPACTS

| | Total for L | ife cycle | Raw material and manufacture | | Distribution | | Installation | | Use | | End of life | |
|---|-------------|--|------------------------------------|------|--------------|------|--------------|------|----------|------|-------------|------|
| Global warming | 2.31E+00 | kgCO ₂ eq. | 3.06E-01 | 13% | 1.78E-02 | < 1% | 1.53E-03 | < 1% | 1.98E+00 | 86% | 5.46E-03 | < 1% |
| Ozone depletion | 2.72E-07 | kgCFC-11 eq. | 2.15E-08 | 8% | 3.61E-11 | < 1% | 1.17E-11 | < 1% | 2.50E-07 | 92% | 1.31E-10 | < 1% |
| Acidification of soils and water | 1.96E-03 | kgSO ₂ eq. | 3.92E-04 | 20% | 8.01E-05 | 4% | 6.90E-06 | < 1% | 1.46E-03 | 75% | 2.10E-05 | 1% |
| Water eutrophication | 5.62E-04 | kg(PO ₄) ³⁻ eq. | 1.23E-04 | 22% | 1.84E-05 | 3% | 4.54E-06 | < 1% | 3.91E-04 | 70% | 2.50E-05 | 4% |
| Photochemical ozone formation | 4.70E-04 | kgC ₂ H ₄ eq. | 6.60E-05 | 14% | 5.69E-06 | 1% | 4.97E-07 | < 1% | 3.96E-04 | 84% | 1.63E-06 | < 1% |
| Depletion of abiotic resources - elements | 4.20E-05 | kgSb eq. | 4.18E-05 | 100% | 7.14E-10 | < 1% | 6.95E-11 | < 1% | 1.43E-07 | < 1% | 3.41E-10 | < 1% |
| Total use of primary energy | 6.49E+01 | MJ | 6.24E+00 | 10% | 2.39E-01 | < 1% | 1.97E-02 | < 1% | 5.83E+01 | 90% | 5.85E-02 | < 1% |
| Net use of fresh water | 4.82E-03 | m³ | 2.10E-03 | 44% | 1.60E-06 | < 1% | 4.58E-07 | < 1% | 2.71E-03 | 56% | 4.52E-06 | < 1% |
| Depletion of abiotic resources - fossil fuels | 2.59E+01 | WJ | 5.64E+00 | 22% | 2.51E-01 | < 1% | 2.15E-02 | < 1% | 1.99E+01 | 77% | 7.75E-02 | < 1% |
| Water pollution | 1.02E+02 | m³ | 1.53E+01 | 15% | 2.93E+00 | 3% | 2.34E-01 | < 1% | 8.27E+01 | 81% | 6.31E-01 | < 1% |
| Air pollution | 1.70E+02 | m³ | 3.87E+01 | 23% | 7.31E-01 | < 1% | 1.25E-01 | < 1% | 1.30E+02 | 76% | 6.19E-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 obtained by multiplying those of the Reference Product by the following coefficients:

| | Manufacturing | | | | | | | | | |
|--------------------------|---------------|------|-----|-----|-----|-------------------|--------------|--------------|-----|-------------|
| | SUM | ADPe | AP | ODP | WP | Others indicators | Distribution | Installation | Use | End of Life |
| 663180 1 way screw gloss | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 |
| 663001 2 way screw | 1.1 | 1.3 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1 |
| 663015 1 way autom. con. | 1.1 | 1.2 | 1.2 | 1.1 | 1.4 | 1 | 1 | 1 | 1 | 1 |
| 663016 2 way autom. con. | 1.1 | 1.9 | 1.4 | 1.2 | 1.5 | 1.1 | 1 | 1 | 1.1 | 1 |

| Registration N°: LGRP-00369-V01-01-EN | Drafting rules: «PEP-PCR-ed3-EN-2015 04 02» Supplemented by «PSR-0005-ed2-2016 03 29» |
|---|--|
| Verifier accreditation N°: VH23 | Information and reference documents: www.pep-ecopassport.org |
| Date of issue: 11-2017 | Validity period: 5 years |
| Independent verification of the declaration and data, in compliance wit Internal ☑ External □ The PCR review was conducted by a panel of experts chaired by Philipp | (PED |
| The elements of the present PEP cannot be compared with elements from | |
| Document in compliance with ISO 14025 : 2010: «Environmental labels a declarations» | |
| Environmental data in alignment with EN 15804 : 2012 + A1 : 2013 | |