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# Product Environmental Profile

## Raventi™

## One way switch 10AX 250V~ white

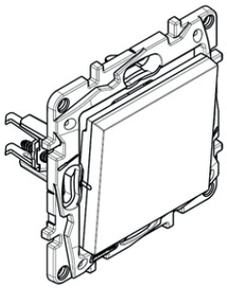
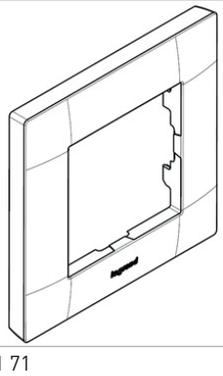
## LEGRAND'S ENVIRONMENTAL COMMITMENTS

**• 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

| | | |
|---|---|---|
| **Function** | Establish, support and interrupt for 20 years rated currents in normal conditions of circuit characterized by a 250 V low voltage with rated load not exceeding 10A. | |
| **Reference Product** |  |  |
| | Cat. No 7 681 00 | Cat. No 7 681 71 |
| | One way switch 10AX | White Plate |

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:

| One way switch mechanism | Two way switch mechanism | 1 Gang plate | 2 Gang plate | 3 Gang plate | 4 Gang plate | 5 Gang plate | 6 Gang plate |
|---|---|---|---|---|---|---|---|
| • 7 681 00<br>• 7 682 00<br>• 7 683 00<br>• 7 684 00<br>• 7 685 00<br>• 7 686 00<br>• 7 688 00<br>• 7 689 00 | • 7 681 01<br>• 7 682 01<br>• 7 683 01<br>• 7 684 01<br>• 7 685 01<br>• 7 686 01<br>• 7 688 01<br>• 7 689 01 | • 7 681 71<br>• 7 682 71<br>• 7 683 71<br>• 7 684 71<br>• 7 685 71<br>• 7 686 71<br>• 7 687 71<br>• 7 688 71<br>• 7 689 71<br>• 7 682 81<br>• 7 683 81 | • 7 681 72<br>• 7 682 72<br>• 7 683 72<br>• 7 684 72<br>• 7 685 72<br>• 7 686 72<br>• 7 687 72<br>• 7 688 72<br>• 7 689 72<br>• 7 682 82<br>• 7 683 82 | • 7 681 73<br>• 7 682 73<br>• 7 683 73<br>• 7 684 73<br>• 7 685 73<br>• 7 686 73<br>• 7 687 73<br>• 7 688 73<br>• 7 689 73<br>• 7 682 83<br>• 7 683 83 | • 7 681 74<br>• 7 682 74<br>• 7 683 74<br>• 7 684 74<br>• 7 685 74<br>• 7 686 74<br>• 7 687 74<br>• 7 688 74<br>• 7 689 74<br>• 7 682 84<br>• 7 683 84 | • 7 681 75<br>• 7 682 75<br>• 7 683 75<br>• 7 684 75<br>• 7 685 75<br>• 7 686 75<br>• 7 687 75<br>• 7 688 75<br>• 7 689 75<br>• 7 682 85<br>• 7 683 85 | • 7 681 76<br>• 7 682 76<br>• 7 683 76<br>• 7 684 76<br>• 7 685 76<br>• 7 686 76<br>• 7 688 76<br>• 7 689 76 |

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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** | **102 g** (all packaging included) |

| **Plastics as % of weight** | | **Metals as % of weight** | | **Other as % of weight** | |
|---|---|---|---|---|---|
| PC | **21.1 %** | Steel | **6.4 %** | | |
| ABS | **19.2 %** | Copper Alloys | **1.8 %** | | |
| | | Other metal | **1.2 %** | | |
| | | Al | **< 0.1 %** | | |
| PS | **< 0.1 %** | Silver Alloy | **< 0.1 %** | | |
| **Packaging as % of weight** | | | | | |
| PP (packaging) | **4.6 %** | | | Wood (packaging) | **24.6 %** |
| PE (packaging) | **0.2 %** | | | Paper (packaging) | **20.9 %** |
| | | | | | |
| **Total plastics** | **45.1 %** | **Total metals** | **9.4 %** | **Total others** | **45.5 %** |

Estimated recycled material content: 18 % by mass.

## MANUFACTURE

The Reference Product comes from sites 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 300 km by road from our warehouse to the local point of distribution into the market in Turkey.

Packaging is compliant with European directive 2004/12/EU concerning packaging and packaging waste. At their end of life, its recyclability rate is 88 % (in % of packaging weight).

## 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 91 %. 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) : 38 %
- metal materials (excluding packaging) : 9 %
- packaging (all types of materials) : 44 %

## 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 Turkey, 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** | • Product category: PSR0005-ed2-2016 03 29 - § 3.5 Switches<br>• 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.<br>• Energy model: Electricity Mix, Turkey 2005 |
| **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 Life cycle | | Raw material and manufacture | | Distribution | | Installation | | Use | | End of life | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Global warming** | **8.09E+00** | **kgCO2 eq.** | 3.52E-01 | **4%** | 1.52E-03 | **< 1%** | 3.14E-03 | **< 1%** | 7.73E+00 | **96%** | 5.52E-03 | **< 1%** |
| **Ozone depletion** | **2.81E-07** | **kgCFC-11 eq.** | 1.77E-08 | **6%** | 3.07E-12 | **< 1%** | 2.63E-11 | **< 1%** | 2.63E-07 | **94%** | 1.29E-10 | **< 1%** |
| **Acidification of soils and water** | **7.33E-03** | **kgSO2 eq.** | 8.02E-04 | **11%** | 6.82E-06 | **< 1%** | 1.42E-05 | **< 1%** | 6.49E-03 | **88%** | 2.13E-05 | **< 1%** |
| **Water eutrophication** | **2.94E-03** | **kg(PO4)3- eq.** | 1.19E-03 | **41%** | 1.57E-06 | **< 1%** | 1.07E-05 | **< 1%** | 1.71E-03 | **58%** | 2.57E-05 | **< 1%** |
| **Photochemical ozone formation** | **1.37E-03** | **kgC2H4 eq.** | 6.92E-05 | **5%** | 4.84E-07 | **< 1%** | 1.02E-06 | **< 1%** | 1.30E-03 | **95%** | 1.65E-06 | **< 1%** |
| **Depletion of abiotic resources - elements** | **9.11E-05** | **kgSb eq.** | 9.10E-05 | **100%** | 6.07E-11 | **< 1%** | 1.44E-10 | **< 1%** | 7.16E-08 | **< 1%** | 3.42E-10 | **< 1%** |
| **Total use of primary energy** | **9.73E+01** | **MJ** | 6.94E+00 | **7%** | 2.15E-02 | **< 1%** | 4.20E-02 | **< 1%** | 9.02E+01 | **93%** | 6.12E-02 | **< 1%** |
| **Net use of fresh water** | **4.93E-02** | **m3** | 4.33E-02 | **88%** | 1.36E-07 | **< 1%** | 1.03E-06 | **< 1%** | 6.02E-03 | **12%** | 4.48E-06 | **< 1%** |
| **Depletion of abiotic resources - fossil fuels** | **7.95E+01** | **MJ** | 5.07E+00 | **6%** | 2.13E-02 | **< 1%** | 4.07E-02 | **< 1%** | 7.43E+01 | **93%** | 5.53E-02 | **< 1%** |
| **Water pollution** | **3.87E+02** | **m3** | 1.12E+02 | **29%** | 2.49E-01 | **< 1%** | 4.73E-01 | **< 1%** | 2.74E+02 | **71%** | 6.42E-01 | **< 1%** |
| **Air pollution** | **5.92E+02** | **m3** | 4.25E+01 | **7%** | 6.22E-02 | **< 1%** | 2.86E-01 | **< 1%** | 5.48E+02 | **93%** | 6.17E-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 the lighting position with the two-way Switch, for Distribution, Installation, Use and End of Life phases take the same values of those of the Reference Product. For the environmental impacts of the Total Life cycle and of the Production phase take the same values of those of the Reference Product, except for the «Depletion of abiotic resources - elements». For this indicator the environmental impacts are obtained by multiplying those of the Reference Product by the coefficient 1.4.

For the socket-outlets with a color plate, the environmental impacts are assimilated to the impacts of the Reference Product. For the multi-gang socket-outlets, the full environmental impacts of the Reference Product have to be multiplied by the number of installed products.

| | |
|---|---|
| Registration N°: LGRP-01144-V01.01-EN | Drafting rules: «PEP-PCR-ed3-EN-2015 04 02»<br>Supplemented by «PSR-0005-ed2-2016 03 29» |
| Verifier accreditation N°: VH23 | Information and reference documents : **www.pep-ecopassport.org** |
| Date of issue: 12-2019 | Validity period: 5 years |
| Independent verification of the declaration and data, in compliance with ISO 14025:2010<br>Internal ☒ External ☐ | |
| The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN) | |
| PEP are compliant with XP C08-100-1 : 2014<br>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.<br>Type III environmental declarations» | |
| Environmental data in alignment with EN 15804: 2012 + A1 : 2013 | |