



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**

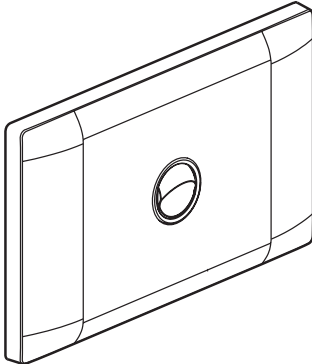
Provide our customers with all relevant information composition, consumption, end of life, etc.
Reduce the environmental impact of products over their whole life cycle.

• **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

| | |
|--------------------------|--|
| Function | Switches 16A: passive product which affords the making and breaking, in air, of a circuit low voltage 240 V, carrying a load current not exceeding 16A, according to the standards AS/NZS 3000 and 3133, for household or similar purposes, during 20 years. |
| Reference Product |  <p>Cat. No. EC770/1WE 1 gang switch white</p> |

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 represent the following Catalogue Numbers:

| Catalogue Numbers | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> • EC770/1WE • EC770/2WE • EC770/3WE | <ul style="list-style-type: none"> • EC770/4WE • EC770/5WE • EC770/6WE | <ul style="list-style-type: none"> • ED770/1WE • ED770/2WE • ED770/3WE | <ul style="list-style-type: none"> • ED770/4WE • ED770/5WE • ED770/6WE |

Product Environmental Profile

Excel Life
1 gang Switch White



■ 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 contains no substances to which the RoHS directives apply 2002/95/EC and no substances appearing on the list of candidates for authorisation of the European REACH regulation.

| Total weight of Reference Product | | 83 g unit packaging included | | | |
|-----------------------------------|--------------|------------------------------|--------------|----------------------------------|--------------|
| Plastics as % of weight | | Metals as % of weight | | Other as % of weight | |
| Polycarbonates (PC) | 60.4% | Copper (Cu) | 7.2% | Titanium dioxide (TiO2) | 1.4% |
| Polyamide (PA 66) | 3.6% | Steel | 7.0% | | |
| Polybutylene terephthalate (PBT) | 0.9% | Zinc (Zn) | 3.4% | Others miscellaneous | 0.1% |
| Polypropylene (PP) | 0.6% | Silver (Ag) | 0.2% | | |
| Polystyrene PS, (high impact) | < 0.1% | Iron (Fe) | < 0.1% | | |
| | | | | Packaging as % of weight | |
| | | | | Cardboard and paper | 11.5% |
| | | | | Polyethylene (LDPE) | 3.7% |
| Total plastics | 65.5% | Total metals | 17.8% | Total other and packaging | 16.7% |

Estimated recycled material content: 15% by weight



■ MANUFACTURE

The Reference Product comes from sites that have initiated an ISO 14001 environmental certification.



■ DISTRIBUTION

The Group's products are distributed from logistics centres located with a view to optimum transport efficiency. The Reference Product is therefore transported over an average distance of 1111 km, essentially by road representing a market in Australia.

Packaging is compliant with applicable regulations. At the end of packaging life, the theoretical recycling potential is 99% and their energy recovery potential is 100% as % of packaging weight.



■ INSTALLATION

No additional components are required to install the Reference Product.



■ 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.

Product Environmental Profile

Excel Life
1 gang Switch White



END OF LIFE

• Hazardous waste contained in the Reference Product:

This Reference Product contains no hazardous waste.

• Non-hazardous waste contained in the Reference Product: 70 g

• Theoretical recycling potential:

The theoretical recycling potential of a Reference 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 98% by weight of potentially recyclable material excluding packaging:

- Plastic materials : 77%
- Metal materials : 21%

• 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. 77% of the Reference Product mass can be recycled 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 of the Reference Product marketed and used in Australia. The following modelling elements were taken into account:

| | |
|----------------------|--|
| Manufacture | Unit packaging taken into account. |
| Distribution | Transport between the last Group distribution centre and an average delivery to the sales area. |
| Installation | No additional components are required to install the Reference Product. |
| Use | <ul style="list-style-type: none"> • Maintenance: Under normal conditions of use, this type of Reference Product requires no servicing or maintenance. • No consumables are necessary to use the products. • Reference Product category: passive Reference Product. • Use scenario: non-continuous operation for 20 years at 30% of rated load, for 30% of the time. This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity US/2000. |
| 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 version 4.1 and its database, version 11.3 |

Product Environmental Profile

Excel Life
1 gang Switch White



ENVIRONMENTAL IMPACTS continued

| | | Total for Life cycle | | Raw material and manufacture | | Distribution | | Installation | | Use | | End of life | |
|----------------------|-----------------------------------|----------------------|---------------------------------|------------------------------|------|--------------|------|--------------|----|----------|------|-------------|------|
| Mandatory indicators | Contribution to greenhouse effect | 1.93E+03 | G~CO ₂ | 5.82E+02 | 30% | 1.36E+01 | < 1% | 0.00E+00 | 0% | 1.32E+03 | 69% | 9.77E+00 | < 1% |
| | Damage to the ozone layer | 1.25E-04 | g~CFC-11 | 6.55E-05 | 52% | 9.60E-06 | 8% | 0.00E+00 | 0% | 4.32E-05 | 35% | 6.91E-06 | 6% |
| | Eutrophisation of water | 6.42E-02 | g~PO ₄ ³⁻ | 6.07E-02 | 95% | 2.32E-04 | < 1% | 0.00E+00 | 0% | 3.04E-03 | 5% | 1.62E-04 | < 1% |
| | Photochemical ozone formation | 5.49E-01 | g~C ₂ H ₄ | 2.60E-01 | 47% | 1.16E-02 | 2% | 0.00E+00 | 0% | 2.70E-01 | 49% | 8.35E-03 | 2% |
| | Acidification of the air | 3.74E-01 | g~H+ | 1.22E-01 | 33% | 1.70E-03 | < 1% | 0.00E+00 | 0% | 2.49E-01 | 67% | 1.25E-03 | < 1% |
| | Total energy consumed | 3.14E+01 | MJ | 1.10E+01 | 35% | 1.71E-01 | < 1% | 0.00E+00 | 0% | 2.01E+01 | 64% | 1.23E-01 | < 1% |
| | Consumption of water | 6.21E+00 | dm ³ | 3.87E+00 | 62% | 1.63E-02 | < 1% | 0.00E+00 | 0% | 2.31E+00 | 37% | 1.17E-02 | < 1% |
| Optional indicators | Depletion of natural resources | 1.17E-14 | y ⁻¹ | 1.17E-14 | 100% | 2.34E-19 | < 1% | 0.00E+00 | 0% | 1.82E-17 | < 1% | 1.68E-19 | < 1% |
| | Toxicity of the air | 4.84E+05 | m ³ | 1.86E+05 | 38% | 2.51E+03 | < 1% | 0.00E+00 | 0% | 2.94E+05 | 61% | 1.84E+03 | < 1% |
| | Toxicity of the water | 4.35E+02 | dm ³ | 3.06E+02 | 70% | 1.70E+00 | < 1% | 0.00E+00 | 0% | 1.25E+02 | 29% | 1.22E+00 | < 1% |
| | Production of hazardous waste | 3.48E-02 | kg | 5.90E-03 | 17% | 4.68E-06 | < 1% | 0.00E+00 | 0% | 2.89E-02 | 83% | 3.63E-06 | < 1% |

The environmental impacts of the Reference Product are representative of the products covered by the PEP which therefore constitute a homogeneous environmental family. All the catalogue number have the same impacts than the Reference 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.

The environmental impacts of products other than the Reference Product are calculated as follows:

- the **use phase** is proportional to the number of gangs
 - the **distribution and end of life phases** are calculated by taking the value specified for the Reference Product plus 15% for each added gang.
- For the raw material and manufacture phase:
- depletion of natural resources is proportional to the number of gangs
 - for other indicator impacts add the % specified in the table below for each added gang.

| 1 gang to 2 gang | 2 gang to 3 gang | 3 gang to 4 gang | 4 gang to 5 gang | 5 gang to 6 gang |
|------------------|------------------|------------------|------------------|------------------|
| + 33% | + 25% | + 20% | + 17% | + 14% |

| | |
|--|---|
| Registration number: LGRP-2011-503-V1-en | Drafting rule: PCR PEP ecopassport 2010: 1.0 |
| Authorisation number of checker: VH02 | Programme information: www.pep-ecopassport.org |
| Date of issue: 12-2011 | 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 | |