

Product Environmental Profile

TV socket and power socket point Axolute series



BTICINO'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 | Connect / disconnect during 20 years the TV plug and the plug of a load consuming 16 A maximum under a voltage of 250 V, while protecting the user from direct contact with live parts. | |
| Reference Product |  |  |
| | BT-H4703 | BT-HA4803XC |
| | 3 modules support - screws equipped | 3 modules square cover plate - brushed aluminium |
| |  |  |
| | BT-HC4140/16 | BT-H4202D |
| | 2 P+E 16A 250 V a.c. socket - German/Italian standard | Screened coaxial TV socket |

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:

| BT-HA4803XC | BT-H4703 | BT-HC4140/16 | BT-H4202D |
|--|-----------|--------------|-------------|
| BT-HA4803XS - NX - CR - BR - AZ - HD - HC - HS - BG - RC - BM - VS - SAN | BT-H4703W | BT-HS4140/16 | BT-H4202P10 |
| BT-HB4803XC - XS - NR - SAN - HD - OR - TC - OSN | | BT-HD4140A16 | BT-H4202P14 |
| BT-HW4803HC - HD - HS - AW | | BT-H4140/16R | BT-H4202F |
| BT-HA4803VNN - VZS - VKA - VSA - VBB - VNB - VSW | | | |

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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 | | 282 g (with unit packaging) | | | |
|--|---------------|------------------------------------|---------------|----------------------------------|---------------|
| Plastics as % of weight | | Metals as % of weight | | Other (packaging) as % of weight | |
| Polycarbonate* | 27,6 % | Aluminium* | 18,1 % | Paper / cardboard | 19,5 % |
| ABS | 0,8 % | Zamak | 8,9 % | Wood | 14,3 % |
| Polypropylene | 0,2 % | Copper alloys | 4,2 % | PVC | 1,1 % |
| Polyamide | 0,2 % | Steel | 4,0 % | Polyethylene | 1,0 % |
| | | Other metals | 0,1 % | | |
| Total plastics | 28,8 % | Total metals | 35,3 % | Total other (packaging) | 35,9 % |

Estimated recycled material content: 27 % by mass.

* For the TV socket point with zamak elliptical cover plate (total weight 316 g): Polycarbonate: 21,9% - Zamak: 37,8%.

For the TV socket point with glass rectangular cover plates:

| Total weight of products: | | 412 g (unit packaging included) | | | |
|----------------------------------|---------------|--|---------------|----------------------------------|---------------|
| Plastics as % of weight | | Metals as % of weight | | Other as % of weight | |
| Polycarbonate | 18,5 % | Zamak | 6,2 % | Glass | 18,0 % |
| ABS | 0,6 % | Copper alloys | 2,9 % | Packaging as % of weight | |
| Polypropylene | 0,2 % | Steel | 2,8 % | Paper / cardboard | 39,2 % |
| Polyamide | 0,1 % | | | Wood | 10,0 % |
| | | | | PVC | 0,8 % |
| | | | | Polyethylene | 0,7 % |
| | | | | Polypropylene | < 0,1 % |
| Total plastics | 19,4 % | Total metals | 11,9 % | Total other and packaging | 68,7 % |

Estimated recycled material content: 34 % by weight



■ MANUFACTURE

This Reference Product comes from sites that have received ISO14001 certification.



■ DISTRIBUTION

The Group's products are distributed from logistics centres located to optimize transport efficiency. The Reference Product is therefore transported over an average distance of 780 km, essentially by road, representing a marketing in Europe.

Packaging is compliant with with european directive 2004/12/EC concerning packaging and packaging waste. At the packaging end of life, its recycling rate is of 92 % (as % 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 of the Reference Product:**

Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 95 %. This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for the end of life of this product.

Separated into:

- plastic materials (excluding packaging) : 27 %
- metal materials (excluding packaging) : 35 %
- packaging (all types of materials) : 33 %

• **Recyclability rate for the TV socket point with zamak elliptical cover plates:**

Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 96 %. This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for the end of life of this product.

Separated into:

- plastic materials (excluding packaging) : 22 %
- metal materials (excluding packaging) : 45 %
- packaging (all types of materials) : 29 %

• **Recyclability rate for the TV socket point with glass rectangular cover plates:**

Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 97 %. This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for the end of life of this product.

Separated into:

- plastic materials (excluding packaging) : 18 %
- metal materials (excluding packaging) : 12 %
- other materials (excluding packaging) : 18 %
- packaging (all types of materials) : 49 %



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.

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. The end of life of the two additional TV covers is considered together with all the rest of the articles. |
| Use | <ul style="list-style-type: none"> • Product category: passive product. • Use scenario: non-continuous operation for 20 years at 50% of rated load, during 50% of the time. The TV socket dissipation is neglected regarding socket power consumption. This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity Mix, Europe 27 - 2002. |
| End of life | The default end of life scenario maximizing the impacts. |
| Software and database used | EIME V5 and its database «CODDE-2015-04» |

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SELECTION OF ENVIRONMENTAL IMPACTS

| | Total for Life cycle | | Raw material and manufacture | | Distribution | | Installation | | Use | | End of life | |
|--|----------------------|--|------------------------------|-----|--------------|------|--------------|------|----------|------|-------------|------|
| Global warming | 1.31E+01 | kgCO ₂ eq. | 2.58E+00 | 20% | 1.09E-02 | < 1% | 6.12E-03 | < 1% | 1.05E+01 | 80% | 1.61E-02 | < 1% |
| Ozone depletion | 2.93E-06 | kgCFC-11 eq. | 3.71E-07 | 13% | 2.22E-11 | < 1% | 4.59E-11 | < 1% | 2.56E-06 | 87% | 2.88E-10 | < 1% |
| Acidification of soils and water | 8.55E-02 | kgSO ₂ eq. | 5.80E-03 | 7% | 4.92E-05 | < 1% | 2.84E-05 | < 1% | 7.96E-02 | 93% | 6.39E-05 | < 1% |
| Water eutrophication | 4.20E-03 | kg(PO ₄) ³⁻ eq. | 1.09E-03 | 26% | 1.13E-05 | < 1% | 2.31E-05 | < 1% | 2.98E-03 | 71% | 8.73E-05 | 2% |
| Photochemical ozone formation | 4.25E-03 | kgC ₂ H ₄ eq. | 4.76E-04 | 11% | 3.50E-06 | < 1% | 2.03E-06 | < 1% | 3.76E-03 | 89% | 4.91E-06 | < 1% |
| Depletion of abiotic resources - elements | 5.41E-05 | kgSb eq. | 5.36E-05 | 99% | 4.38E-10 | < 1% | 2.74E-10 | < 1% | 4.79E-07 | < 1% | 8.92E-10 | < 1% |
| Total use of primary energy | 2.14E+02 | MJ | 3.17E+01 | 15% | 1.47E-01 | < 1% | 7.91E-02 | < 1% | 1.82E+02 | 85% | 1.79E-01 | < 1% |
| Net use of fresh water | 6.09E-02 | m ³ | 3.34E-02 | 55% | 9.80E-07 | < 1% | 1.88E-06 | < 1% | 2.74E-02 | 45% | 1.02E-05 | < 1% |
| Depletion of abiotic resources - fossil fuels | 1.37E+02 | MJ | 2.81E+01 | 21% | 1.54E-01 | < 1% | 8.56E-02 | < 1% | 1.08E+02 | 79% | 2.22E-01 | < 1% |
| Water pollution | 1.19E+03 | m ³ | 7.40E+02 | 62% | 1.80E+00 | < 1% | 9.35E-01 | < 1% | 4.42E+02 | 37% | 2.01E+00 | < 1% |
| Air pollution | 8.70E+02 | m ³ | 4.17E+02 | 48% | 4.49E-01 | < 1% | 5.96E-01 | < 1% | 4.51E+02 | 52% | 1.51E+00 | < 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 are calculated for a configuration composed by 2P+E German/Italian standard socket, Coaxial TV socket, Support and Cover plate. Using a different TV socket (attenuated or SAT), the environmental impacts for each phase of the lifecycle do not register significant variations, while using different cover plates, the environmental impacts for each phase of the lifecycle are obtained multiplying those of Reference Product for these coefficients:

| TV socket point with cover plates: | Total | | | Manufacturing | | | Distribution | Installation | Use | End of life |
|------------------------------------|-----------------------------|---------------|------------------|-----------------------------|---------------|------------------|----------------|----------------|----------------|----------------|
| | Depletion abiotic resources | Air pollution | Other indicators | Depletion abiotic resources | Air pollution | Other indicators | All indicators | All indicators | All indicators | All indicators |
| Zamak elliptical | 2,2 | 1,7 | 1,0 | 2,2 | 2,5 | 0,8 | 1,1 | 1,0 | 1,0 | 1,1 |
| Axolute AIR | 2,0 | 1,6 | 0,9 | 2,0 | 2,2 | 0,7 | 1,1 | 1,2 | 1,0 | 1,0 |

| TV socket point with cover plates: | Total | Manufacturing | | Distribution | Installation | Use | End of life |
|------------------------------------|----------------|-------------------------------|----------------|----------------|----------------|----------------|----------------|
| | All indicators | Acidification soils and water | All indicators |
| Glass rectangular | 0,9 | 0,3 | 0,8 | 1,5 | 2,1 | 1,0 | 1,4 |

| | |
|---|--|
| Registration N°: LGRP-00311-V01.01-EN | Drafting rules: PEP-PCR-ed3-EN-2015 04 02 Supplemented by PSR-0005-ed2-2016 03 29 |
| Verifier accreditation N°: VH02 | Information and reference documents : www.pep-ecopassport.org |
| Date of issue: 12-2016 | Validity period: 5 years |
| Independent verification of the declaration and data, in compliance with ISO 14025:2010 Internal <input checked="" type="checkbox"/> External <input type="checkbox"/> | |
| The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN) | |
| 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. Type III environmental declarations» | |
| Environmental data in alignment with EN 15804 : 2012 + A1 : 2013 | |

