

Product Environmental Profile

Mobiya Original Solar Lantern

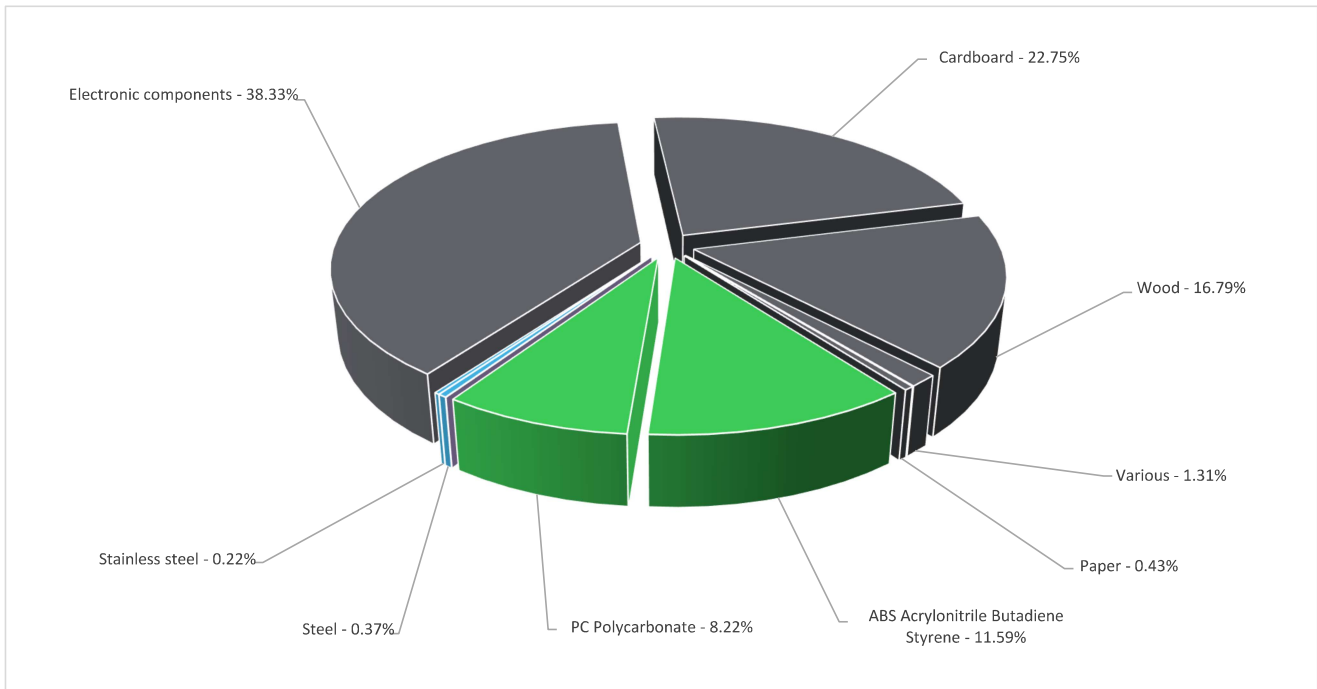


General information

| | |
|----------------------------|---|
| Reference product | Mobyia Original Solar Lantern - AEP-LR01-S2000 |
| Description of the product | The Mobyia Original is a robust and water-resistant solar powered lamp which is providing safe, reliable, and sustainable energy for lighting and designed with latest human-centric LED technology. Its white light with variable intensity and its innovative mounting options can conveniently light up all surroundings. |
| Description of the range | The products of the range are: AEP-LR01-S2000, AEP-LU01-S2000 The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology. |
| Functional unit | This Product has a combination of functions, a lamp supplying 300 Lumens of light for 4 hours if used continuously and a USB port, with a built Battery that can be charged using a Solar panel or a 5V DC and can be used for 10 years by product accordance with standards EN 61547:2009, IEC 60598-2-4:2017, IEC 62471:2006 and with protection class of IP65 by the standard IEC 60529. |

Constituent materials

| | |
|------------------------|--|
| Reference product mass | 1345 g including the product, its packaging, additional elements and accessories |
|------------------------|--|



| | |
|----------|-------|
| Plastics | 19.8% |
| Metals | 0.6% |
| Others | 79.6% |

Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website <https://www.se.com>

Additional environmental information

| | | | |
|-------------|--------------------------|----|---|
| End Of Life | Recyclability potential: | 1% | The recyclability rate was calculated from the recycling rates of each material making up the product based on REECYLAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability). |
|-------------|--------------------------|----|---|


Environmental impacts

| | | | | |
|----------------------------------|---|--|--|--|
| Reference service life time | 10 years | | | |
| Product category | Other equipments - Active product | | | |
| Life cycle of the product | The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study | | | |
| Electricity consumption | The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption | | | |
| Installation elements | No special installation components need during installation phase, but transport of packaging to disposal and disposal of packaging accounted for during installation. | | | |
| Use scenario | Uses Solar Power | | | |
| Time representativeness | The collected data are representative of the year 2024 | | | |
| Technological representativeness | The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are Similar and representative of the actual type of technologies used to make the product. | | | |
| Final assembly site | Guangdong Province, China | | | |
| Geographical representativeness | Europe:50%, Middle East:10%, West and Central Africa 25%, India 10%, APAC 5% | | | |
| Energy model used | [A1 - A3] | [A5] | [B6] | [C1 - C4] |
| | Electricity Mix; Low voltage; 2020; China, CN | Electricity Mix; Low voltage; 2020; Europe, EU-27 | Electricity Mix; Low voltage; 2020; Europe, EU-27 | Electricity Mix; Low voltage; 2020; Europe, EU-27 |
| | | Electricity Mix; Low voltage; 2020; Egypt, EG | Electricity Mix; Low voltage; 2020; Egypt, EG | Electricity Mix; Low voltage; 2020; Egypt, EG |
| | | Electricity Mix; Low voltage; 2020; Morocco, MA | Electricity Mix; Low voltage; 2020; Morocco, MA | Electricity Mix; Low voltage; 2020; Morocco, MA |
| | | Electricity Mix; Low voltage; 2020; India, IN | Electricity Mix; Low voltage; 2020; India, IN | Electricity Mix; Low voltage; 2020; India, IN |
| | | Electricity Mix; Low voltage; 2020; Asia Pacific, APAC | Electricity Mix; Low voltage; 2020; Asia Pacific, APAC | Electricity Mix; Low voltage; 2020; Asia Pacific, APAC |

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.se.com/contact>

| Mandatory Indicators | | Mobiya Original Solar Lantern - AEP-LR01-S2000 | | | | | | | |
|--|---------------------------|--|---------------------------|---------------------|---------------------|-----------------|-------------------------|--------------------------|--|
| Impact indicators | Unit | Total (without Module D) | [A1 - A3] - Manufacturing | [A4] - Distribution | [A5] - Installation | [B1 - B7] - Use | [C1 - C4] - End of life | [D] - Benefits and loads | |
| Contribution to climate change | kg CO2 eq | 1.87E+01 | 1.60E+01 | 6.42E-01 | 3.90E-01 | 0* | 1.63E+00 | 8.77E-01 | |
| Contribution to climate change-fossil | kg CO2 eq | 1.85E+01 | 1.65E+01 | 6.42E-01 | 2.29E-02 | 0* | 1.34E+00 | 8.48E-01 | |
| Contribution to climate change-biogenic | kg CO2 eq | 1.41E-01 | 0* | 0* | 3.67E-01 | 0* | 2.90E-01 | 2.88E-02 | |
| Contribution to climate change-land use and land use change | kg CO2 eq | 1.53E-06 | 1.52E-06 | 0* | 0* | 0* | 1.22E-08 | 1.51E-04 | |
| Contribution to ozone depletion | kg CFC-11 eq | 3.65E-06 | 3.64E-06 | 9.85E-10 | 9.71E-10 | 0* | 2.66E-09 | 1.21E-09 | |
| Contribution to acidification | mol H+ eq | 1.09E-01 | 1.03E-01 | 4.29E-03 | 2.61E-04 | 0* | 1.17E-03 | 1.39E-03 | |
| Contribution to eutrophication, freshwater | kg (PO4) ³⁻ eq | 1.57E-03 | 1.54E-03 | 2.41E-07 | 0* | 0* | 3.95E-05 | 4.12E-06 | |
| Contribution to eutrophication, marine | kg N eq | 2.26E-02 | 2.00E-02 | 2.02E-03 | 1.08E-04 | 0* | 4.85E-04 | 5.42E-04 | |
| Contribution to eutrophication, terrestrial | mol N eq | 2.24E-01 | 1.95E-01 | 2.22E-02 | 1.20E-03 | 0* | 5.27E-03 | 5.56E-03 | |
| Contribution to photochemical ozone formation - human health | kg COVNM eq | 6.90E-02 | 6.18E-02 | 5.63E-03 | 2.72E-04 | 0* | 1.27E-03 | 1.70E-03 | |
| Contribution to resource use, minerals and metals | kg Sb eq | 1.26E-03 | 1.26E-03 | 0* | 0* | 0* | 5.29E-07 | -1.43E-05 | |
| Contribution to resource use, fossils | MJ | 2.76E+02 | 2.63E+02 | 8.96E+00 | 3.12E-01 | 0* | 3.41E+00 | 2.25E+01 | |
| Contribution to water use | m3 eq | 1.51E+02 | 1.51E+02 | 0* | 7.01E-02 | 0* | 1.18E-01 | 2.94E-01 | |

| Inventory flows Indicators | | | Mobiya Original Solar Lantern - AEP-LR01-S2000 | | | | | | |
|---|------|--------------------------|--|---------------------|---------------------|-----------------|-------------------------|--------------------------|--|
| Inventory flows | Unit | Total (without Module D) | [A1 - A3] - Manufacturing | [A4] - Distribution | [A5] - Installation | [B1 - B7] - Use | [C1 - C4] - End of life | [D] - Benefits and loads | |
| Contribution to renewable primary energy used as energy | MJ | 3.83E+00 | 3.80E+00 | 1.20E-02 | 3.68E-03 | 0* | 1.74E-02 | 8.24E-01 | |
| Contribution to renewable primary energy used as raw material | MJ | 5.96E+00 | 5.96E+00 | 0* | 0* | 0* | 0* | 0.00E+00 | |
| Contribution to total renewable primary energy | MJ | 9.79E+00 | 9.76E+00 | 1.20E-02 | 3.68E-03 | 0* | 1.74E-02 | 8.24E-01 | |
| Contribution to non renewable primary energy used as energy | MJ | 2.74E+02 | 2.61E+02 | 8.96E+00 | 3.12E-01 | 0* | 3.41E+00 | 1.27E+01 | |
| Contribution to non renewable primary energy used as raw material | MJ | 1.86E+00 | 1.86E+00 | 0* | 0* | 0* | 0* | 9.79E+00 | |
| Contribution to total non renewable primary energy | MJ | 2.76E+02 | 2.63E+02 | 8.96E+00 | 3.12E-01 | 0* | 3.41E+00 | 2.25E+01 | |
| Contribution to use of secondary material | kg | 6.03E-01 | 6.03E-01 | 0* | 0* | 0* | 0* | 0.00E+00 | |
| Contribution to use of renewable secondary fuels | MJ | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 | |
| Contribution to use of non renewable secondary fuels | MJ | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 | |
| Contribution to net use of fresh water | m³ | 3.52E+00 | 3.51E+00 | 0* | 1.63E-03 | 0* | 2.74E-03 | 6.85E-03 | |
| Contribution to hazardous waste disposed | kg | 3.13E+01 | 3.11E+01 | 0* | 0* | 0* | 1.18E-01 | -1.20E+00 | |
| Contribution to non hazardous waste disposed | kg | 7.99E+00 | 6.70E+00 | 2.26E-02 | 5.58E-01 | 0* | 7.15E-01 | 4.84E-01 | |
| Contribution to radioactive waste disposed | kg | 2.97E-03 | 2.93E-03 | 1.61E-05 | 8.20E-06 | 0* | 1.22E-05 | 2.87E-04 | |
| Contribution to components for reuse | kg | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 | |
| Contribution to materials for recycling | kg | 1.73E-02 | 5.82E-03 | 0* | 0* | 0* | 1.14E-02 | 0.00E+00 | |
| Contribution to materials for energy recovery | kg | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 | |
| Contribution to exported energy | MJ | 2.11E-02 | 2.10E-02 | 0* | 0* | 0* | 7.76E-05 | 0.00E+00 | |

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

Contribution to biogenic carbon content of the product kg of C 0.00E+00

Contribution to biogenic carbon content of the associated packaging kg of C 1.79E-01

* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)

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

Life cycle assessment performed with EIME version v6.2.4-11, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology 0/0 is used

The extrapolation rules have been defined as follows: the LCA of all products (AEP-LR01-S2000,AEP-LU01-S2000) have been performed. The impacts results have been compared. The extrapolation factors in the table below are the ratio between the two results for each phase and each indicator.

| Mandatory Indicators | | | Mobiya Original Solar Lantern - AEP-LU01-S2000 | | | | | |
|--|---------------------------|-------|--|-------------------|-------------------|---------------|-----------------------|--------------|
| Impact indicators | Unit | Total | Manufacturing [A1 - A3] | Distribution [A4] | Installation [A5] | Use [B1 - B7] | End of Life [C1 - C4] | Benefits [D] |
| Contribution to climate change | kg CO2 eq | 101% | 105% | 8% | 100% | 0% | 100% | 100% |
| Contribution to climate change-fossil | kg CO2 eq | 101% | 104% | 8% | 100% | 0% | 100% | 100% |
| Contribution to climate change-biogenic | kg CO2 eq | 100% | 0% | 0% | 0% | 0% | 100% | 100% |
| Contribution to climate change-land use and land use change | kg CO2 eq | 100% | 100% | 0% | 0% | 0% | 100% | 0% |
| Contribution to ozone depletion | kg CFC-11 eq | 101% | 101% | 0% | 100% | 0% | 100% | 100% |
| Contribution to acidification | mol H+ eq | 98% | 101% | 8% | 100% | 0% | 100% | 100% |
| Contribution to eutrophication, freshwater | kg (PO4) ³⁻ eq | 100% | 100% | 0% | 0% | 0% | 100% | 100% |
| Contribution to eutrophication marine | kg N eq | 92% | 100% | 8% | 100% | 0% | 100% | 100% |
| Contribution to eutrophication, terrestrial | mol N eq | 91% | 100% | 8% | 100% | 0% | 100% | 100% |
| Contribution to photochemical ozone formation - human health | kg COVNM eq | 93% | 101% | 8% | 100% | 0% | 100% | 100% |
| Contribution to resource use, minerals and metals | kg Sb eq | 101% | 101% | 0% | 0% | 0% | 100% | 100% |
| Contribution to resource use, fossils | MJ | 103% | 106% | 8% | 100% | 0% | 100% | 100% |
| Contribution to water use | m3 eq | 100% | 100% | 0% | 100% | 0% | 100% | 100% |

Additional indicators for the French regulation are available as well

| Inventory flows Indicators | | | Mobyia Original Solar Lantern - AEP-LU01-S2000 | | | | | |
|---|---------|-------|--|----------------------|----------------------|------------------|--------------------------|-----------------|
| Inventory flows | Unit | Total | Manufact. [A1 - A3] | Distribution [A4] | Installation [A5] | Use [B1 - B7] | End of Life [C1 - C4] | Benefits [D] |
| Contribution to use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 110% | 110% | 8% | 100% | 0% | 100% | 100% |
| Contribution to use of renewable primary energy resources used as raw material | MJ | 100% | 100% | 0% | 0% | 0% | 0% | 0% |
| Contribution to total use of renewable primary energy resources | MJ | 104% | 104% | 0% | 100% | 0% | 100% | 100% |
| Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 103% | 106% | 8% | 100% | 0% | 100% | 100% |
| Contribution to use of non renewable primary energy resources used as raw material | MJ | 100% | 100% | 0% | 0% | 0% | 0% | 0% |
| Contribution to total use of non-renewable primary energy resources | MJ | 103% | 106% | 8% | 100% | 0% | 100% | 100% |
| Contribution to use of secondary material | kg | 100% | 100% | 0% | 0% | 0% | 0% | 0% |
| Contribution to use of renewable secondary fuels | MJ | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Contribution to use of non renewable secondary fuels | MJ | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Contribution to net use of freshwater | m³ | 100% | 100% | 0% | 0% | 0% | 100% | 100% |
| Contribution to hazardous waste disposed | kg | 100% | 100% | 0% | 0% | 0% | 100% | 100% |
| Contribution to non hazardous waste disposed | kg | 101% | 102% | 8% | 100% | 0% | 0% | 100% |
| Contribution to radioactive waste disposed | kg | 101% | 101% | 8% | 100% | 0% | 0% | 100% |
| Contribution to components for reuse | kg | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Contribution to materials for recycling | kg | 100% | 100% | 0% | 0% | 0% | 100% | 0% |
| Contribution to materials for energy recovery | kg | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Contribution to exported energy | MJ | 100% | 100% | 0% | 0% | 0% | 0% | 0% |
| Contribution to biogenic carbon content of the product | kg de C | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Contribution to biogenic carbon content of the associated packaging | kg de C | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

| | | | |
|---|------------------|-------------------------------------|--|
| Registration number : | ENVPEP2202004_V2 | Drafting rules | PCR-4-ed4-EN-2021 09 06 |
| Date of issue | 11-2024 | Supplemented by | PSR-0005-ed3.1-EN-2023 12 08 |
| | | Information and reference documents | www.pep-ecopassport.org |
| | | Validity period | 5 years |
| Independent verification of the declaration and data, in compliance with ISO 14021 : 2016 | | | |
| Internal | X | External | |
| The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain) | | | |
| PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022 | | | |
| The components of the present PEP may not be compared with components from any other program. | | | |
| Document complies with ISO 14021:2016 "Environmental labels and declarations. Type II environmental declarations" | | | |

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