|  |
| --- |
| **EPD - ENVIRONMENTAL PRODUCT DECLARATION** |
| **as per ISO 14025 and EN 15804+A1** |
|  |
| **Publisher** **Bau EPD GmbH, A-1070 Wien, Seidengasse 13/3, www.bau-epd.at**  **Programme Operator Bau EPD GmbH, A-1070 Wien, Seidengasse 13/3, www.bau-epd.at**  **Owner of the Declaration Name of declaration owner**  **Declaration Number To be accorded with Bau EPD GmbH**  **Deklarationsnummer ECOPLATFORM To be accorded with Bau EPD GmbH**  **Issue Date Date**  **Valid To Date**  **NUMBER OF DATASETS Number**  **ENERGY MIX APPROACH MARKET BASED APPROACH** |

**Name and description of product**

**Name of declaration owner**

**picture**

**To be accorded with declaration owner and Bau EPD GmbH**

**Company logo**

**of declaration owner**

**Content of the EPD**

[1 General information 3](#_Toc57636853)

[2 Product 5](#_Toc57636854)

[2.1 General product description 5](#_Toc57636855)

[2.2 Application field 5](#_Toc57636856)

[2.3 Standards, guidelines and regulations relevant for the product 5](#_Toc57636857)

[2.4 Technical data 5](#_Toc57636858)

[2.5 Basic/auxiliary materials 5](#_Toc57636859)

[2.6 Production 6](#_Toc57636860)

[2.7 Packaging 6](#_Toc57636861)

[2.8 Conditions of delivery 6](#_Toc57636862)

[2.9 Transport 6](#_Toc57636863)

[2.10 Processing/ installation 6](#_Toc57636864)

[2.11 Use stage 6](#_Toc57636865)

[2.12 Reference service life (RSL) 6](#_Toc57636866)

[2.13 Reuse and recycling 6](#_Toc57636867)

[2.14 Disposal 6](#_Toc57636868)

[2.15 Further information 6](#_Toc57636869)

[3 LCA: Calculation rules 7](#_Toc57636870)

[3.1 Declared unit/ Functional unit 7](#_Toc57636871)

[3.2 System boundary 7](#_Toc57636872)

[3.3 Flow chart of processes/stages in the life cycle 8](#_Toc57636873)

[3.4 Estimations and assumptions 8](#_Toc57636874)

[3.5 Cut-off criteria 8](#_Toc57636875)

[3.6 Data sources 8](#_Toc57636876)

[3.7 Data quality 8](#_Toc57636877)

[3.8 Reporting period 8](#_Toc57636878)

[3.9 Allocation 8](#_Toc57636879)

[3.10 Comparability 8](#_Toc57636880)

[4 LCA: Scenarios and additional technical information 8](#_Toc57636881)

[4.1 A1-A3 product stage 8](#_Toc57636882)

[4.2 A4-A5 Construction process stage 8](#_Toc57636883)

[4.3 B1-B7 use stage 9](#_Toc57636884)

[4.4 C1-C4 End-of-Life stage 10](#_Toc57636885)

[4.5 D Potential of reuse and recycling 10](#_Toc57636886)

[5 LCA: results 11](#_Toc57636887)

[6 LCA: Interpretation 12](#_Toc57636888)

[7 Literature 12](#_Toc57636889)

[8 Directory and Glossary 12](#_Toc57636890)

[8.1 List of figures 12](#_Toc57636891)

[8.2 List of tables 12](#_Toc57636892)

[8.3 Abbreviations 13](#_Toc57636893)

[8.3.1 Abbreviations as per EN 15804 13](#_Toc57636894)

[8.3.2 Abbreviations as per corresponding PCR 13](#_Toc57636895)

# General information

|  |  |
| --- | --- |
| **Product name**  Name and description of product | **Declared Product / Declared Unit**  Description of the declared product and declared unit/functional unit  **Number of datasets in EPD Document(s):** XX  **Range of validity**  The product, the sites and location (region, country) on which the data of the LCA study is based must be cited.  In case of average EPD the calculation of the average must be described shortly. By doing so, the representativity of the declaration with regard to the product masses covered by the LCA and the used technologies must be described. . |
| **Declaration number**  To be accorded with Bau EPD GmbH |
| **Declaration data**  Specific data  Average data |
| **Declaration based on:**  MS-HB Version XX dated TT.MM.YYYY:  Name of PCR  PCR-Code  Version XX dated TT.MM.YYYY  (PCR tested and approved by the independent expert committee  = PKR-Gremium)  The owner of the declaration is liable for the underlying information and evidence; Bau EPD GmbH is not liable with respect to manufacturer  information, life cycle assessment data and evidence. |
| **Type of Declaration as per EN 15804**  From cradle to ... .....  LCA-method: (i.e. cut-off by classification) | **Database, Software, Version**  Declaration of backround database, Software used and both its versions |
| **Author of the Life Cycle Assessment**  Name of the author  Institution, Address  website | **The CEN standard EN 15804:2014+A1 serves as the core-PCR.**  **Independent verification of the declaration according to ISO 14025:2010**  internally  externally  **Verifier 1:** Name  **Verifier 2:** Name |
| **Owner of the Declaration**  Name of the manufacturer/owner  Institution, Address  website | **Publisher and Programme Operator**  Bau EPD GmbH  Seidengasse 13/3  1070 Vienna  Austria |

**DI (FH) DI DI Sarah Richter**

Head of Conformity Assessment Body

**Academic Title Name** **Academic Title Name,**

Verifier, **Institution** Verifier, **Institution**

**Note:** EPDs from similar product groups from different programmes might not be comparable.

# Product

## General product description

Content as defined in product specific PCR-B document.

## Application field

Content as defined in product specific PCR-B document.

## Standards, guidelines and regulations relevant for the product

Content as defined in product specific PCR-B document.

## Technical data

Content as defined in product specific PCR-B document.

Table 1: technical data of the declared construction product(s)

|  |  |  |
| --- | --- | --- |
| **Characterization** | **Value** | **Unit** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Basic/auxiliary materials

Content as defined in product specific PCR-B document.

Table 2: Basic and auxiliary materials in mass percentage

|  |  |  |
| --- | --- | --- |
| **Components** | **Function** | **Mass fraction in percent** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Production

Content as defined in product specific PCR-B document.

## Packaging

Content as defined in product specific PCR-B document.

## Conditions of delivery

Content as defined in product specific PCR-B document.

## Transport

Content as defined in product specific PCR-B document.

## Processing/ installation

Content as defined in product specific PCR-B document.

## Use stage

Content as defined in product specific PCR-B document.

## Reference service life (RSL)

Content as defined in product specific PCR-B document.

Table 3: Reference service life (RSL)

|  |  |  |
| --- | --- | --- |
| **Characterization** | **value** | **unit** |
| Mineral insulating slabs in EIFS |  | years |
|  |  |  |
| Other applications of mineral insulating products |  | years |
| Reference conditions on which the RSL is based (if relevant) |  | Individual units |
|  |  |  |

## Reuse and recycling

Content as defined in product specific PCR-B document.

## Disposal

Content as defined in product specific PCR-B document.

## Further information

Content as defined in product specific PCR-B document.

# LCA: Calculation rules

## Declared unit/ Functional unit

Content as defined in product specific PCR-B document.

Table 4: Declared unit

|  |  |  |
| --- | --- | --- |
| **Characterization** | **value** | **unit** |
| Declared unit |  |  |
| Other information |  |  |
| Other information |  |  |
| Other information |  |  |
|  |  |  |
| Calculation factor for conversion into kg |  | - |

Table 5: Functional unit

|  |  |  |
| --- | --- | --- |
| **Characterization** | **value** | **unit** |
| Functional unit |  |  |
| Other information |  |  |
| Other information |  |  |
| Other information |  |  |
|  |  |  |
| Calculation factor for conversion into kg |  | - |

## System boundary

Content as defined in product specific PCR-B document.

**Table 6: Declared life cycle stages**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PRODUCT STAGE** | | | **CON-STRUCTION PROCESS STAGE** | | **USE STAGE** | | | | | | | **END-OF-LIFE STAGE** | | | | **BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES** |
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| Raw material supply | Transport | Manufacturing | Transport from the gate  to the site | Construction, installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction, demolition | Transport | Waste processing | Disposal | Reuse-  Recovery-  Recycling-  potential |
| x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |

X = included in LCA; MND = Module not declared

## Flow chart of processes/stages in the life cycle

Content as defined in product specific PCR-B document.

## Estimations and assumptions

Content as defined in product specific PCR-B document.

## Cut-off criteria

Content as defined in product specific PCR-B document.

## Data sources

Content as defined in product specific PCR-B document.

## Data quality

Content as defined in product specific PCR-B document.

## Reporting period

Content as defined in product specific PCR-B document.

## Allocation

Content as defined in product specific PCR-B document.

## Comparability

Content as defined in product specific PCR-B document.

# LCA: Scenarios and additional technical information

Content as defined in product specific PCR-B document.

## A1-A3 product stage

Content as defined in product specific PCR-B document.

## A4-A5 Construction process stage

Content as defined in product specific PCR-B document.

Table 7: Description of the scenario „Transport to building site (A4)“ x)

|  |  |  |
| --- | --- | --- |
| **Parameters to describe the transport to the building site (A4)** | **Value** | **Unit** |
| Average transport distance |  | km |
| vehicle type, Commission Directive 2007/37/EC (European Emission Standard) |  | - |
| Fuel type and average consumption of vehicle |  | l/100 km |
| Maximum transport mass |  | tons |
| Capacity utilisation (including empty returns) |  | % |
| Bulk density of transported products |  | kg/m3 |
| Volume capacity utilisation factor (factor: =1 or <1 or ≥ 1 for compressed or nested packaged products) |  | - |

x) The table must be filled with available information from chosen datasets resp. must be adapted (e.g. transport by ship). The used datasets must be indicated in a footnote.

Table 8: Description of the scenario „Installation of the product in the building (A5)“

|  |  |  |
| --- | --- | --- |
| **Parameters to describe the installation of the product in the building (A5)** | **Value** | **Unit** |
| Ancillary materials for installation (specified by material); |  | Meaningful unit |
| Water use |  | m3 |
| Other resource use |  | kg |
| Electricity demand |  | kWh or MJ |
| Other energy carrier(s): ……………. |  | kWh or other unit  (e.g. litres) |
| Wastage of materials on the building site before waste processing, generated by the product’s installation (specified by type) |  | kg |
| Output materials (specified by type) as result of waste processing at the building site e.g. of collection for recycling, for energy recovery, disposal (specified by route) |  | kg |
| Direct emissions to ambient air, soil and water |  | kg |

## B1-B7 use stage

Content as defined in product specific PCR-B document.

Table 9: Description of the scenario „maintenance (B2)“

|  |  |  |
| --- | --- | --- |
| **Parameters maintenance (B2)** | **Value** | **Unit** |
| Maintenance process |  | Description or source where description can be found - |
| Maintenance cycle |  | Number per RSL or year (not applicable if only B2 is declared) |
| Net freshwater consumption during maintenance |  | [m3] |
| Ancillary materials for maintenance, (e.g. cleaning  agent, specify materials) |  | [kg, cycle] |
| Other resources |  | [kg] |
| Electricity consumption |  | [kWh] |
| Other energy carriers |  | [MJ] |
| Loss of material |  | [kg] |
| Wastage material during maintenance (specify  materials) |  | [kg] |

Table 10: Description of the scenario „repair (B3)“

|  |  |  |
| --- | --- | --- |
| **Parameters repair (B3)** | **Value** | **Unit** |
| Repair process |  | Description or source where description can be found |
| Inspection process |  | Description or source where description can be found- |
| Repair cycle |  | Number per RSL or year |
| Net freshwater consumption during repair |  | [m3] |
| Ancillary materials (e.g. lubricant, specify materials) |  | [kg] |
| Other resources |  | [kg] |
| Electricity consumption |  | [kWh] |
| Other energy carriers |  | [MJ] |
| Loss of material |  | [kg] |
| Wastage material during repair (specify  materials) |  | [kg] |

Table 11: Description of scenarios „replacement (B4)“ resp. „refurbishment (B5)“

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameters replacement (B4) resp. refurbishment (B5)** | **value** | | **unit** | |
| Replacement cycle | |  | | Number per RSL or year |
| Electricity consumption | |  | | [kWh] |
| Liters of fuel | |  | | [l/100 km] |
| Exchange of worn parts during the product’s life  Cycle, specify materials | |  | | [kg] |

Table 12: Description of scenarios „energy (B6)“ resp. „Water (B7)“

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameters energy (B6) and water (B7)** | **value** | | **unit** | |
| Net fresh water consumption | |  | | [m3] |
| Electricity consumption | |  | | [kWh] |
| Other energy carriers | |  | | [MJ] |
| Power output of equipment | |  | | [kW] |

## C1-C4 End-of-Life stage

Content as defined in product specific PCR-B document.

Table 13: Description of the scenario „Disposal of the product (C1 to C4)“

(Procedures of collection and recovery must be described in a footnote (including technical features).

|  |  |  |
| --- | --- | --- |
| **Parameters for End-of-Life stage (C1-C4)** | **value** | **Quantity per m3 insulation material** |
| Collection process specified by type |  | kg collected separately |
|  | kg collected with mixed construction waste |
| Recovery system specified by type |  | kg for re-use |
|  | kg for recycling |
|  | kg for energy recovery |
| Disposal specified by type |  | kg product or material for final deposition |

## D Potential of reuse and recycling

Content as defined in product specific PCR-B document.

Table 14: Description of the scenario „re-use, recovery and recycling potential (module D)“

(Substituted primary materials resp. technologies must be declared in a separate footnote (including technical information).

|  |  |  |
| --- | --- | --- |
| **Parameters for module D** | **value** | **unit** |
| Materials for reuse, recovery or recycling from A4-A5 |  | % |
| Energy recovery or secondary fuels from A4-A5 |  | MJ/t resp. kg/t |
| Materials for reuse, recovery or recycling from B2-B5 |  | % |
| Energy recovery or secondary fuels from B2-B5 |  | MJ/t resp. kg/t |
| Materials for reuse, recovery or recycling from C1-C4 |  | % |
| Energy recovery or secondary fuels from C1-C4 |  | MJ/t resp. kg/t |

# LCA: results

Table 15: Parameters to describe the environmental impact

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Para-meter** | **Unit in equivalents** | | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B5** | **B6** | **B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| GWP | kg CO2 | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ODP | kg CFC-11 | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AP | kg SO2 | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EP | kg PO43- | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| POCP | kg C2H4 | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ADPE | kg Sb | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ADPF | MJ Hu | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Legend | | GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential;  POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources | | | | | | | | | | | | | |

Table 16: Parameters to describe the use of resources

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Para-meter** | **unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B5** | **B6** | **B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| PERE | MJ Hu |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PERM | MJ Hu |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PERT | MJ Hu |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PENRE | MJ Hu |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PENRM | MJ Hu |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PENRT | MJ Hu |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SM | kg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RSF | MJ Hu |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NRSF | MJ Hu |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FW | m3 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Legend | | PERE = Renewable primary energy as energy carrier; PERM = Renewable primary energy resources as material utilization; PERT = Total use of renewable primary energy resources; PENRE = Non-renewable primary energy as energy carrier; PENRM = Non-renewable primary energy as material utilization; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material;  RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels;  FW = Use of fresh water | | | | | | | | | | | | |

**Table 17: Parameters describing LCA-output flows and waste categories**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Para-meter** | **unit** | **A1-A3** | **A4** | **A5** | **B1** | **B2** | **B5** | **B6** | **B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| HWD | kg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NHWD | kg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RWD | kg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CRU | kg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MFR | kg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MER | kg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EEE | MJ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EET | MJ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Legend | | HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed;  CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electric energy; EET = Exported thermal energy | | | | | | | | | | | | |

Note: Here is the place to declare optional indicators and results, impact and/or LCI (Waterscarcity, Humantox, Landuse, Biogenic Carbon…)

# LCA: Interpretation

Content as defined in product specific PCR-B document.

# Literature

Content as defined in product specific PCR-B document.

EN ISO 14040 Environmental management - Life cycle assessment -- Principles and framework

EN ISO 14044 Environmental management - Life cycle assessment -- Requirements and guidelines

EN ISO 14025 Environmental labels and declarations -Type III environmental declarations -- Principles and procedures

EN 15804 Sustainability of construction works - environmental product declarations. Core rules for the product category of construction products

General Principles and Guidelines Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report. Bau-EPD GmbH, in current version

# Directory and Glossary

## List of figures

**Es konnten keine Einträge für ein Abbildungsverzeichnis gefunden werden.**

## List of tables

[Table 1: technical data of the declared construction product(s) 5](#_Toc57636896)

[Table 2: Basic and auxiliary materials in mass percentage 5](#_Toc57636897)

[Table 3: Reference service life (RSL) 6](#_Toc57636898)

[Table 4: Declared unit 7](#_Toc57636899)

[Table 5: Functional unit 7](#_Toc57636900)

[**Table 6: Declared life cycle stages** 7](#_Toc57636901)

[Table 7: Description of the scenario „Transport to building site (A4)“ 8](#_Toc57636902)

[Table 8: Description of the scenario „Installation of the product in the building (A5)“ 8](#_Toc57636903)

[Table 9: Description of the scenario „maintenance (B2)“ 9](#_Toc57636904)

[Table 10: Description of the scenario „repair (B3)“ 9](#_Toc57636905)

[Table 11: Description of scenarios „replacement (B4)“ resp. „refurbishment (B5)“ 10](#_Toc57636906)

[Table 12: Description of scenarios „energy (B6)“ resp. „Water (B7)“ 10](#_Toc57636907)

[Table 13: Description of the scenario „Disposal of the product (C1 to C4)“ 10](#_Toc57636908)

[Table 14: Description of the scenario „re-use, recovery and recycling potential (module D)“ 10](#_Toc57636909)

[Table 15: Parameters to describe the environmental impact 11](#_Toc57636910)

[Table 16: Parameters to describe the use of resources 11](#_Toc57636911)

[Table 17: Parameters describing LCA-output flows and waste categories 12](#_Toc57636912)

## Abbreviations

### Abbreviations as per EN 15804

EPD environmental product declaration

PCR product category rules

LCA life cycle assessment

LCI life cycle inventory analysis

LCIA life cycle impact assessment

RSL reference service life

ESL estimated service life

EPBD Energy Performance of Buildings Directive

GWP global warming potential

ODP depletion potential of the stratospheric ozone layer

AP acidification potential of soil and water

EP eutrophication potential

POCP formation potential of tropospheric ozone

ADP abiotic depletion potential

### Abbreviations as per corresponding PCR

CE-mark french: Communauté Européenne or Conformité Européenne = EC certificate of conformity

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals

|  |  |  |
| --- | --- | --- |
|  | **Publisher**  Bau EPD GmbH  Seidengasse 13/3  1070 Wien  Österreich | Tel +43 699 15 900 500  Mail [office@bau-epd.at](mailto:office@bau-epd.at)  Web www.bau-epd.at |
|  | **Programme Operator**  Bau EPD GmbH  Seidengasse 13/3  1070 Wien  Österreich | Tel +43 699 15 900 500  Mail [office@bau-epd.at](mailto:office@bau-epd.at)  Web www.bau-epd.at |
| Logo | **Author of the Life Cycle Assessment**  Name of creator in person  Name of Institution (if rel.)  Address  Postcode, Location | Mail Person creator  Tel  Fax  Mail  Web |
| Logo | **Owner of the declaration**  Name of creator in person  Name of Institution (if rel.)  Address  Postcode, Location | Tel  Fax  Mail  Web |
|  |  |  |