

EPD - ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2



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PROGRAMME OPERATOR	Bau EPD GmbH, A-1070 Wien, Seidengasse 13/3, www.bau-epd.at
HOLDER OF THE DECLARATION	Name of declaration holder
DECLARATION NUMBER	To be accorded with Bau EPD GmbH
ISSUE DATE	Date
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ENERGY MIX APPROACH	MARKET BASED APPROACH
CLASSIFICATION FREECLASS SYSTEM	NUMBER-CLASS

Name and description of product

Name of declaration holder

picture

To be accorded with declaration holder and Bau EPD GmbH

Company logo of declaration holder

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1 General information

Product name Name and description of product	Declared Product / Declared Unit Description of the declared product and declared unit/functional unit
Declaration number To be accorded with Bau EPD GmbH	Number of datasets in EPD Document(s): XX
Type of EPD as per EN 15941 <input type="checkbox"/> e.g specific EPD <input type="checkbox"/> e.g average EPD	Range of validity The product, the sites/distribution locations and sales 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 temporal, geographical and technological representativity of the declaration regarding to the product masses covered by the LCA and the used technologies must be described.
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) M-Dok 14A2 EPD-Format-Template Version XX dated TT.MM.YYY The holder 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.	Goal of the LCA-study Description of the goal of the study: 'This life cycle assessment serves as the basis for issuing an environmental product declaration (EPD). The results are intended to be published in an EPD. The data is intended for an EPD for 'business-to-business' (B2B) and/or 'business-to-consumer' (B2C) communication.' If there are additional objectives of the study, these must be stated.
Type of Declaration as per EN 15804 From cradle to LCA-method: (i.e. cut-off by classification)	Database, Software, Version Declaration of background database, Software used and both its versions Version Characterisation Factors: Quelle, Version
Author of the Life Cycle Assessment Name of the author Institution, Address COUNTRY	The CEN standard EN 15804:2012+A2:2019+AC:2021 serves as the core-PCR. The c-PCR of CEN xxxxxx has been applied. Independent verification of the declaration according to ISO 14025:2010 <input type="checkbox"/> internally <input checked="" type="checkbox"/> externally Verifier 1: Name Verifier 2: Name
Holder of the Declaration Name of the manufacturer/owner Institution Address COUNTRY	Owner, Publisher and Programme Operator Bau EPD GmbH Seidengasse 13/3 1070 Vienna Austria

We hereby confirm that all program-related requirements were met at the time of issue with reference to the aforementioned regulations in the version cited.

DI (FH) DI DI Sarah Richter
Head of Conformity Assessment Body

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Verifier

Information on comparability: Comparison or benchmarking of EPD data is only possible, if all compared data sets are calculating following EN 15804 in the same version, the same programme specific PCR-rules or other additional rules. The same background data sources and software versions must be applied. Moreover, the context of the function in the building or product specific features of performance must be considered. With that, EPDs from similar product groups from different programmes might not be comparable.

2 Product description

2.1 General product description

Content as defined in product specific PCR-B document.

2.2 Application field

Content as defined in product specific PCR-B document.

2.3 Product-related standards, guidelines and regulations relevant for placing products on the market

Content as defined in product specific PCR-B document.

2.4 Technical data

Content as defined in product specific PCR-B document.

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

Characterization	Value	Unit

2.5 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

2.6 Further information

Content as defined in product specific PCR-B document.

3 LCA: Description of the LCA over all Life Cycle Stages: system boundary, processes and scenarios, LCA-modelling

3.1 System boundary

Content as defined in product specific PCR-B document.

Table 3: 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; ND = Not declared

3.2 Declared unit/ Functional unit

Content as defined in product specific PCR-B document.

Table 4: Declared unit

characterization	value	unit
declared unit	1	m ³
Bulk density ¹⁾		kg/m ²
Weight for conversion into kg		kg

¹⁾ If the gross density corresponds to the conversion factor to 1 kg, the last line is omitted. In the last line, instead of 'weight', the usual term for the weight in question can be stated (e.g. weight per unit area, weight per piece, etc.).

Table 5: Functional unit

characterization	value	unit
functional unit	1	m ³
Bulk density ¹⁾		kg/m ²
Weight for conversion into kg		kg

¹⁾ If the gross density corresponds to the conversion factor to 1 kg, the last line is omitted. In the last line, instead of 'weight', the usual term for the weight in question can be stated (e.g. weight per unit area, weight per piece, etc.).

3.3 Flow chart of processes/stages in the life cycle

Content as defined in product specific PCR-B document.

3.4 Product stage Modules A1-A3

Content as defined in product specific PCR-B document.

Energy data modelling description as defined in product specific PCR-B document.

3.5 Packaging

Content as defined in product specific PCR-B document.

3.6 Conditions of delivery

Content as defined in product specific PCR-B document.

3.7 Transport to site Module A4

Content as defined in product specific PCR-B document.

Table 1: Description of the scenario „Transport to building site (A4)“

Parameters to describe the transport to the building site (A4) ¹⁾	Unit (expressed per functional unit or per declared unit)
Average transport distance	km
vehicle type, Commission Directive 2007/37/EC (European Emission Standard)	-
Fuel type and average consumption of vehicle ²⁾	l/100 km
Maximum transport mass	tons
Capacity utilisation (including empty returns)	%
Bulk density of transported products	kg/m ³
Volume capacity utilisation factor (factor: =1 or <1 or ≥ 1 for compressed or nested packaged products)	-

¹⁾ The table must be filled with reference to the information available from the datasets used (i.e. in case of transport by ship). The datasets used must be noted in a footnote.

²⁾ Fuel consumption must be related to the declared/functional unit, as it makes a difference whether light or mass-intensive products are being transported.

3.8 Construction product stage Module A5

Content as defined in product specific PCR-B document.

Table 2: Description of the scenario „Installation of the product in the building (A5)“

Parameters to describe the installation of the product in the building (A5)	Unit (expressed per functional unit or per declared unit)
Ancillary materials for installation (specified by material);	kg or units as appropriate
Water use	m ³
Other resource use	kg
Electricity demand	kWh or MJ

Other energy carrier(s):	kWh or MJ or other units
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

3.9 Reference service life (RSL)

Content as defined in product specific PCR-B document.

Table 6: Reference service life (RSL)

Characterization	value	unit
Product name		years
Differentiation indoor and outdoor etc. so relevant		years
Reference conditions on which the RSL is based (if relevant)		Individual units

3.10 Use stage Module B

B1: Content as defined in product specific PCR-B document.

Table 3: Description of the scenario „maintenance (B2)“ based on table 9 in EN 15804

Parameters maintenance (B2)	value	Unit (expressed per functional unit or per declared unit)
Maintenance process		Description or source where description can be found
Maintenance cycle		Number per RSL or year ^a
Ancillary materials for maintenance, e.g. cleaning agent, specify materials		Kg/cycle
Waste material resulting from maintenance (specify materials)		kg
Net freshwater consumption during maintenance		m ³
Energy input during maintenance, e.g. vacuum cleaning, energy carrier type, e.g. electricity, and amount, if applicable and relevant		kWh

Table 4: Description of the scenario „repair (B3)“

Parameters repair (B3)	value	Unit (expressed per functional unit or per declared 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
Ancillary materials, e.g. lubricant, specify materials		Kg or kg/cycle

Waste material resulting from repair, (specify materials)		kg
Net freshwater consumption during repair		m ³
Energy input during repair, e.g. crane activity, energy carrier type, e.g. electricity, and amount		kWh

Table 5: Description of scenario „replacement (B4)“

Parameters replacement (B4)	value	Unit (expressed per functional unit or per declared unit)
Replacement cycle		Number per RSL or year
Energy input during replacement e.g. crane activity, energy carrier type, e.g. electricity and amount if applicable and relevant		kWh
Exchange of worn parts during the product's life cycle, e.g. zinc galvanised steel sheet, specify materials		kg

Table 6: Description of scenario „refurbishment (B5)“

Parameters refurbishment (B5)	value	Unit (expressed per functional unit or per declared unit)
Refurbishment process		Description or source where description can be found
Refurbishment cycle		Number per RSL or year
Energy input during refurbishment e.g. crane activity, energy carrier type, e.g. electricity, and amount if applicable and relevant		kWh
Material input for refurbishment, e.g. bricks, including ancillary materials for the refurbishment process e.g. lubricant, (specify materials)		kg or kg / cycle
Waste material resulting from refurbishment (specify materials)		kg
Further assumptions for scenario development, e.g. frequency and time period of use, number of occupants		Units as appropriate

Table 7: Description of scenarios „energy (B6)“ resp. „Water (B7)“

Parameters energy (B6) and water (B7)	value	Unit (expressed per functional unit or per declared unit)
Ancillary materials, e.g. lubricant, specify materials		Kg or kg/cycle
Net fresh water consumption		m ³
Type of energy carrier, e.g. electricity, natural gas, district heating		kWh or m ³
Power output of equipment		kW
Characteristic performance, e.g. energy efficiency, emissions, variation of performance with capacity utilisation etc.		units as appropriate
Further assumptions for scenario development, e.g. frequency and period of use, number of occupants		units as appropriate

3.11 End of life stage

Content as defined in product specific PCR-B document.

Table 8: 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 (expressed per functional unit or per declared unit of components products or materials and by type of 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
Assumptions for scenario development, e.g. transportation		Appropriate units

3.12 Potential of reuse and recycling Module D

Content as defined in product specific PCR-B document.

Table 9: 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 (expressed per functional unit or per declared 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

3.13 LCA Calculation rules

3.13.1 Estimations and assumptions

Content as defined in product specific PCR-B document.

3.13.2 Cut-off criteria

Content as defined in product specific PCR-B document.

3.13.3 Allocation

Content as defined in product specific PCR-B document.

4 Information on data quality and data selection in accordance with EN 15941

4.1 Principles for the description of data quality

Content as defined in product specific PCR-B document.

4.2 Description of the temporal, geographical and technological representativeness of the product data

Content as defined in product specific PCR-B document.

4.3 Explanation of the averaging process

Content as defined in product specific PCR-B document.

4.4 Assessment of the data quality of the Life Cycle Inventory data

Content as defined in product specific PCR-B document.

5 LCA: results

Table 7: Parameters to describe the environmental impact

Parameter	unit	A1-A3	A4	A5	B1	B2	B5	B6	B7	B1-B7	C1	C2	C3	C4	C1-C4	A-C	D
GWP total	kg CO ₂ eq.																
GWP fossil fuels	kg CO ₂ eq.																
GWP biogenic	kg CO ₂ eq.																
GWP luluc	kg CO ₂ eq.																
ODP	kg CFC-11 eq.																
AP	mol H ⁺ eq.																
EP freshwater	kg P eq.																
EP marine	kg N eq.																
EP terrestrial	mol N eq.																
POCP	kg NMVOC eq.																
ADPE	kg Sb eq.																
ADPF	MJ H _u																
WDP	m ³ Welt eq. entz.																
Legende	GWP = Global warming potential; luluc = land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; 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 WDP = Water (user) deprivation potential, deprivation-weighted water consumption																

Table 8: Additional environmental impact indicators

Parameter	Einheit	A1-A3	A4	A5	B1	B2	B5	B6	B7	B1-B7	C1	C2	C3	C4	C1-C4	A-C	D
PM	Auftreten von Krankheiten																
IRP	kBq U235 äquiv																
ETP-fw	CTUe																
HTP-c	CTUh																
HTP-nc	CTUh																
SQP	dimensionslos																
Legend	PM = Potential incidence of disease due to Particulate Matter emissions; IRP = Potential Human exposure efficiency relative to U235; ETP-fw = Potential Comparative Toxic Unit for ecosystems; HTP-c = Potential Comparative Toxic Unit for humans – cancer effect; HTP-nc = Potential Comparative Toxic Unit for humans – non-cancer effect; SQP = Potential soil quality index																

Table 9 presents disclaimers which shall be declared in the project report and in the EPD with regard to the declaration of relevant core and additional environmental impact indicators according to the following classification. That can be declared in a footnote in the EPD.

Table 9: Classification of disclaimers to the declaration of core and additional environmental impact indicators

ILCD-classification	Indicator	disclaimer
ILCD-Type 1	Global warming potential (GWP)	none
	Depletion potential of the stratospheric ozone layer (ODP)	none
	Potential incidence of disease due to PM emissions (PM)	none
ILCD-Type 2	Acidification potential, Accumulated Exceedance (AP)	none
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	none
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	none
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	none
	Formation potential of tropospheric ozone (POCP)	none
	Potential Human exposure efficiency relative to U235 (IRP)	1
ILCD-Type 3	Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2
	Potential Comparative Toxic Unit for humans (HTP-c)	2
	Potential Comparative Toxic Unit for humans (HTP-nc)	2
	Potential Soil quality index (SQP)	2
Disclaimer 1 – This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.		
Disclaimer 2 – The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.		

Table 10: Parameters to describe the use of resources

Parameter	Einheit	A1- A3	A4	A5	B1	B2	B5	B6	B7	B1- B7	C1	C2	C3	C4	C1- C4	A-C	D
PERE	MJ H _u																
PERM	MJ H _u																
PERT	MJ H _u																
PENRE	MJ H _u																
PENRM	MJ H _u																
PENRT	MJ H _u																
SM	kg																
RSF	MJ H _u																
NRSF	MJ H _u																
FW	m ³																
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 11: Parameters describing LCA-output flows and waste categories

Parameter	Einheit	A1- A3	A4	A5	B1	B2	B5	B6	B7	B1- B7	C1	C2	C3	C4	C1- C4	A-C	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																

Table 12: Information describing the biogenic carbon content at the factory gate

Biogenic carbon content	Unit
Biogenic carbon content in product	kg C
Biogenic carbon content in accompanying packaging	kg C
NOTE 1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

6 LCA: Interpretation

Content as defined in product specific PCR-B document.

7 Description of representativity of average EPDs or worst case EPDs (List of all sites and products)

Content as defined in product specific PCR-B document.

8 Literature

Relevant standards and sources for the preparation of the EPD resp. for the definition of the product must be listed here. The full documentation of references is to be done as follows:

Author, First name. and Author, First name. (year). Title of article. subtitle. location: publishing company.

Author, First name. (year). Title of article. In: Surname, First name. and Surname, First name. (Publishing company): Name of paper. Bd. 2 or year number, 207-210.

Organisation (Year): Full name of standard or rule. Date of Issue. Location. Legal institution.

Always to be quoted:

EN ISO 14025:2006-07 Environmental labels and declarations -Type III environmental declarations -- Principles and procedures

EN ISO 14040:2006+A1:2020 Environmental management - Life cycle assessment -- Principles and framework

EN ISO 14044:2006+A1:2017+A2:2020 Environmental management - Life cycle assessment -- Requirements and guidelines

EN 15941:2024 Sustainability of construction works - Data quality for the assessment of environmental quality of products and construction works - Selection and application of data

General Principles and Guidelines = MS-HB and applicable M-Docs of Bau-EPD GmbH, in the current version

9 Directory and Glossary

9.1 List of figures

none

9.2 List of tables

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9.3 Abbreviations

9.3.1 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

9.3.2 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



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