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Product category rules Part A

General product category rules for environmental product declarations according to EN ISO 14025 and EN 15804

according to the programme operation for the preparation of environmental product declarations (EPD) of the ift Rosenheim

key words: Environmental Product Declaration, Construction products, Life Cycle Assessment, Product Category Rules



Product category rules PCR-Part A

PCR-A-0.3: 2018

Note

The present document is only a rough translation. In case of doubt, the German version applies.

© ift Rosenheim Seite 1 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



Content

1	Prei	iminary remark	პ
2	Pro	duct category rules	3
	2.1	Content	
	2.2	Verification, validation and release of the PCR	
3	Con	tent of an environmental product declaration for construction products	
	3.1	Headline	
	3.2	Short version	
	3.3	Scope of application	4
4	Raw	v material	
	4.1	Declarable substances	4
5	Pro	duct life cycle	5
	5.1	Production stage	6
	5.2	Construction stage (optional)	6
	5.3	Use stage (optional)	7
	5.4	End-of-Life stage	. 8
6	Life	cycle Assessment	. 8
	6.1	Definiton of goal and scope	. 9
	6.2	Inventory analysis	
	6.3	Impact assessment	
	6.4	Evaluation, presentation of the balances and critival review	18
7	Gen	eral information regarding the EPD	
	7.1	Comparability	
	7.2	Communication	
	7.3	Verification	
8		iography	
9	Imp	rint	25

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



1 Preliminary remark

The product category rules of the ift Rosenheim are divided into two parts and marked accordingly. This Part A contains general product category rules, while Part B contains product group-specific rules. The valid versions can be obtained from ift Rosenheim. The PCRs must be used for the preparation of EPDs according to the programme operation for the preparation of environmental product declarations (EPD) of the ift Rosenheim.

2 Product category rules

2.1 Content

This PCR defines for specific product groups:

 Rules for calculating the life cycle assessment according to EN ISO 14040 and EN ISO 14044 and for preparing their life cycle assessment report.

The basis is EN 15804 "Sustainability of cunstuction works – Environmental product declarations for products – Core rules for product category of construction products".

In addition, the rules in the ift-Guidline NA-01 are mandatory.

2.2 Verification, validation and release of the PCR

The committee of experts "ift-EPD and PCR" carries out the validation and thus is responsible for its correctness.

Interested parties involved in the assessment:

ift Rosenheim

This PCR document with the document number PCR-A-0.3 was validated and released by the committee of experts (CE) of the ift Rosenheim GmbH in November 2018. The PCR document is valid according to ISO 14025, EN 15804 and the ift guideline NA-01 until January 2023.

Tracking of the editing / revisions:

Serial No.	Date	Editing comment	CE	Declaration code			
1	01/2018	Initial verification and release	released	PCR-A-0.1 : 2018			
2	11/2018	Content adjustment	released	PCR-A-0.2 : 2018			
3	09/2019	Editorial changes	released	PCR-A-0.2 : 2018			
4	10/2021	Content adjustments	released	PCR-A-0.3 : 2018			

© ift Rosenheim Seite 3 von 27

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



3 Content of an environmental product declaration for construction products

The title page of the EPD contains the following elements:

- Note: "Environmental product declaration according to EN ISO 14025 and EN 15804"; short version / long version,
- A note which type of EPD is covered:
 Model environmental product declaration, company environmental product declaration,
 specific environmental product declaration,
- The description of the product(s),
- Name oft the manufacturer(s),
- Name bzw. Logo of the program operator,
- ift declaration code and date of publication,
- Significant and product-related illustration.

3.1 Headline

The header contains the following elements:

- Description of the EPD,
- Description of the product group,
- Declaration code according to ift guideline NA-01,
- Preparation date.

3.2 Short version

According to the current ift guideline NA-01, a short version of the EPD can be prepared. This must contain at least the elements listed in the guideline.

3.3 Scope of application

The description for the scope of application can be found in the respective PCR Part B. It generally applies:

It must be pointed which type of EPD is concerned (e.g. company EPD, model EPD, ...). Futhermore, it must be indicated, which life cycle stages has been taken into account.

4 Raw material

4.1 Declarable substances

For substances and preparations applies according to the REACH regulation:

© ift Rosenheim Seite 4 von 27

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



- Compliance with use restrictions and authorisation requirements for safety data sheets for substances and mixtures containing dangerous substances, in accordance with Article 31
- Obligation to inform downstram actors in the supply chain for substances as such an in preparations for which no safety data sheet is required, in accordance with Article 32

For products applies according to the REACH regulation:

 Disclosure of information on substances in products, according to Article 33 of the chandidate list >0,1% (w/w)

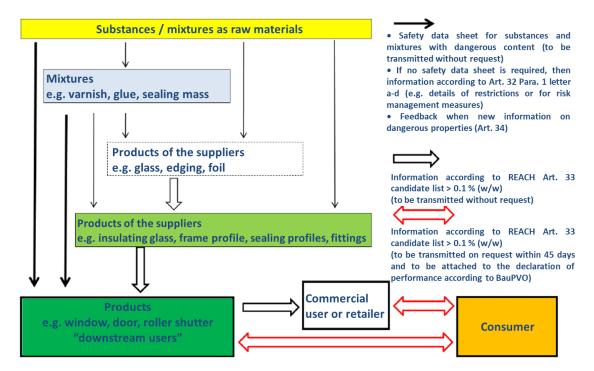


Figure 1: Information obligations according to REACH

5 Product life cycle

In the following, the Table 1 is shown to illustrate the life cycle phases under consideration. This must be used in the EPD and marked das follows:

- ✓ Part of the consideration
- Not part of the consideration

© ift Rosenheim Seite 5 von 27

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



Table 1 Life cycle phases according to EN 15804

	oducti stage	7	Co stru io proc sta	ict- n ess			Us	se sta	ge			Er	nd-of-li	ife stag	ge	Benefits and loads from beyond the system boundaries
A 1	A2	А3	A4	A5	B1	B2	В3	В4	В5	В6	В7	C1	C2	C3	C4	D
Raw material supply	Transport	Manufacture	Transport	Construction / Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction / demolition	Transport	Wase processingt	Disposal	Reuse Recovery Recycling potential
✓	✓	✓										 ✓*	✓*	✓*	✓*	 ✓*

[√] mandatory according to EN 15804 + A1 and EN 15804 + A2

5.1 Production stage

5.1.1 Product manufacture

The individual production steps are documented in a comprehensible manner. For illustration purposes, a clear graphic (e.g. flow diagram or process flow diagram) must be created from which the individual production steps can be seen.

If the EPD is valid for several production sites at the same time, the manufacturing processes of all sites must be explained and graphically represented.

Note:

Modules shall be described, if the corresponding phases of the life cycle are considered.

5.2 Construction stage (optional)

5.2.1 Processing recommendations / Installation

In order to ensure that the product is processed or installed in accordance with the relevant standards, information and instructions in accordance with the recognised rules of

© ift Rosenheim Seite 6 von 27

^{√*}mandatory according to EN 15804 + A2

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



technology in the respective country must be provided. Reference can be made to the respective rules of technology and of occupational safety and environmental protection.

Example: WTCB Guide: TV 188 (Belgium).

5.3 Use stage (optional)

5.3.1 Emissions to the environment

The effects of the product on the environment and health during the use stage must be described.

For additional information on the release of hazardous substances into indoor air, soil and water applies:

Emissions to indoor air, soil and water according to horizontal standards on the measurement of the release of regulated substances from construction products with harmonised test methods according to the requirements of the relevant Technical Committees of European Product Standardisation, where available.

5.3.2 Reference service life (RSL)

The RSL information must be given in accordance with EN 15804.

If the service life cannot be specified as RSL as described in EN 15804, the current BBSR table "Service lives of components for life cycle analysis according to BNB" can be used. Further information and explanations can be obtained at www.nachhaltigesbauen.de. Alternatively, the manufacturer's specifications apply.

The following requirements of EN 15804 must be observed for the reference service life:

5.3.3 Information on incident risks (optional)

Through the targeted use of products, measures to increase safety or to reduce the risk of accidents can be facilitated. It is possible to describe these properties accordingly:

Examples of incidents:

- Fire
- Smoke and flue gas development
- Flooding
- burglary

© ift Rosenheim Seite 7 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



5.4 End-of-Life stage (optional according to EN 15804 + A1, mandatory according to EN 15804 + A2)

5.4.1 Possible end-of-life stages

Strategies and possibilities for reuse / recycling, material recovery and thermal utilisation of the product are indicated.

Note:

For construction products and materials permitted as exceptions according to EN 15804+A2, it is allowed to neglect the EoL-stage.

5.4.2 Disposal routes (optional according to EN 15804 + A1, mandatory according to EN 15804 + A2)

For the period after use of the product, information is provided on deconstrucction, separability of the individual components and their sorted collection, as well as on waste treatment if necessary.

The potential disposal routes refer either to the complete system or to the individual components and are to be named accordingly. Where relevant, graphics may be used for illustration purposes.

Note:

For construction products and materials permitted as exceptions according to EN 15804+A2, it is allowed to neglect the disposal routes.

6 Life cycle assessment

For the preparation of an EPD, a life cycle assessment according to ISO 14040 and ISO 14044 is prepared as a basis. The data on which the life cycle assessment is based should be precise, complete and consistent. This life cycle assessment must be representative of the products presented in the declaration. The scope and limits of the life cycle assessment must be specified.

The "ift guideline for the preparation of life cycle assessments and application of the Rules for ÖKOBAUDAT, CE decisions and relevant standards" must be followed.

© ift Rosenheim Seite 8 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



6.1 Definiton of goal and scope

6.1.1 Goal

According to EN ISO 14040, the goal of the life cycle assessment must be defined. For that matter the following information must be provided:

- Intended use,
- Reasons for processing the study,
- Addressed target group,
- Use of the study for public comprasions.

6.1.2 Data quality and availability

The data quality must be described in accordance with ISO 14044. The data must be as up-to-date as possible. According to EN 15804, the last revision for production-specific data should not be more than 5 years and for generic data not more than 10 years ago. Furthermore, the sources of the data used must be indicated.

In the case of existing data based on environmental management systems, these can be used for the life cycle assessment.

Generic data must be used for data gaps.

Generic data may only be used if the manufacturer cannot provide information on specific data.

Note

If average products are described in the EPD, data must be used for calculating that describe a representative average of the declared products.

6.1.3 Geographical and time-related system boundaries

Facilities and site countries on whose data the life cycle assessment is based must be indicated. At least to be listed: Production sites, origin of raw materials and reference countries of the energy used.

The reference period for data collection shall be provided.

Note

The weighting (assessment) of the data for several or different products under consideration shall not be applied in a life cycle assessment determined for the use in comparative statements intended for publication

© ift Rosenheim Seite 9 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



6.1.4 Scope / System boundaries

Based on the predefined goal, the scope is to be defined. For that matter the depth and width of the balance area must be defined, i.e. it must be determined which processes are included in the studies and which are excluded from them. For the data collection, extent, type (specific, average) and quality must be specified. Cut-off criteria and allocations as well as the functional unit as defined in the product definition module must also be defined.

6.1.5 Cut-off criteria

A sensitivity analysis is used to determine which material flows can be cut off. Cut-off criteria, which fulfilment must be comprehensibly proven, can be mass and energy flows as well as environmentally relevant criteria. If processes are neglected, they must be named. A process that contributes less than 1% to the final result in terms of mass and primary energy consumption (renewable and non-renewable) can be neglected. In total, the sum of neglected processes per life cycle stage must not exceed 5% of mass and primary energy according to EN 15804. The proportions may be estimated, but must be documented accordingly.

6.2 Inventory analysis

6.2.1 Goal

All material and energy flows must be recorded over the selected life cycle (observe system boundaries). The collected processes are recorded as input and output variables and refer to the declared or functional unit.

All processes relevant to the life cycle assessment must be listed precisely and exactly. A purely quantitative presentation is not sufficient. Corresponding processes must also be presented using flowcharts.

The entire life cycle can be represented using scenarios as follows:

The indicators declared in the information modules of the life cycle of a product A1 to A5, B1 to B7, C1 to C4 and module D may not be added in any combination of the individual information modules to form a sum or partial sum of the stages of the life cycle A, B, C or D. The indicators which are declared in the information modules of the life cycle of a product A1 to A5, B1 to B7, C1 to C4 and module D must not be added together in any combination of the individual information modules to form a sum or partial sum of the phases of the life cycle A, B, C or D. As an exception, modules A1, A2, and A3 may be added together.

© ift Rosenheim Seite 10 von 27

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



6.2.2 Production stage

The following scenarios of the production stage are mandatory according to EN 15804:

- A1, raw material extraction and processing, processing of secondary material input (e.g. recycling processes),
- A2, Transport to the manufacturer,
- A3, Manufacturing,

including provision of all materials, products and energy, as well as waste processing up to the end of waste state (EN 15804+A1 chapter 6.3.4.5 respectively EN 15804+A2 chapter 6.3.5.5 and EN 15804 Annex B) or disposal of final residues during the product stage.

Module A1, A2 and A3 may be declared as one aggregated module A1-3.

Note

The following modules shall be described if the corresponding stages of the life cycle are considered. It is recommended to provide information on the complete life cycle.

6.2.3 Construction stage

According to EN 15804, the following scenarios of the construction stage are optional:

- A4: Transport (factory gate to building site), incl. fuel type and consumption and vehicle type, distance (inkl. deadheads), utilisation, bulk density (or weiht and volume) of the transported products and volume ustilisation factor.
- A5: Installation into the building, incl. auxiliary materials, fresh water resources, other resources, energy source and consumption, waste materials, output materials as well as direct emissions into ambient airg, soil and water.

These information modules also include all impacts and aspects related to any losses during this construction process stage (i.e. production, transport, and waste processing and disposal of the lost products and materials).

6.2.4 Use stage

According to EN 15804, the following scenarios of the use stage for the building fabric are to be optionally specified:

B1: Use or application of the installed product

B2: maintenance incl. maintenance cycle, auxiliary materials, waste, freshwater resources and energy input (type and quantity)

© ift Rosenheim Seite 11 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



- B3: Repair, incl. repair cycle, auxiliary materials, waste materials, freshwater reserves and energy input (type and quantity)
- B4: Replacement, incl. replacement cycle, energy input (type and quantity) and replacement of components during life cycle
- B5: refurbishment, incl. refurbish cycle, energy input (type and quantity), material input (incl. auxiliary materials), waste materials and other assumptions for scenario development

These information modules also include all impacts and aspects related to any losses during this construction process stage (i.e. production, transport, and waste processing and disposal of the lost products and materials).

According to EN 15804, the following scenarios of the use stage for the operation of the building are to be optionally specified:

- B6: Operational energy use, incl. auxiliary materials, fresh water resources, type of energy source, equipment performance, performance characteristics and other assumptions for scenario development
- B7: Operational water use, incl. auxiliary materials, fresh water resources, type of energy source, equipment performance, performance characteristics and other assumptions for scenario development.

6.2.5 End-of-Life stage

The following scenarios of the End-of-Life stage are to be specified optionally according to EN 15804+A1 and mandatory according to EN 15804+A2:

- C1: De-construction, demolition
- C2: Transport to waste processing
- C3: Waste processing for reuse, recovery and/or recycling (according to CEN/TR 16970)
- C4: Disposal (according to CEN/TR 16970)

including provision and all transport, provision of all materials, products and related energy and water use.

© ift Rosenheim Seite 12 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



Note:

For construction products and materials permitted as exceptions according to EN 15804+A2, it is allowed to neglect the modules C1-C4.

6.2.6 Benefits and loads beyond the system boundary

The following benefits are to be specified optionally according to EN 15804+A1 and mandatory according to EN 15804+A2:

D: Reuse, recovery and/or recycling potentials expressed as net impacts and benefits.

Note:

For construction products and materials permitted as exceptions according to EN 15804+A2, it is allowed to neglect module D.

6.2.7 Allocation Procedures / Allocation of co-products

If allocations occur during manufacture, they must be indicated.

If it is not prossible to conduct an allocation of co-products (e.g. no product specific assignment of scraps / offcuts or thermally recovered pre-customer production wastes), flows leaving the production stage shall be decalred as outputs. All benefits and loads outside the system's boundaries shall be assessed in module D.

Note

Allocations occur as soon as co-products occur in the investigated system. These are production processes in which, in addition to the desired outputs, other products are created that can be used in other processes.

The allocation of the effort and the environmental discharges (emissions) of the respective process chain takes place according to the economic value of the products or other outputs representing a value. An allocation of resources based on physical properties can be conducted, if the differences in revenues gained through the products is low. The allocation of material flows, which show specific inherent properties, always have to be assigned related to physical flows.

In general, the principle applies that the allocation should reflect the goal of the process.

6.2.8 Allocations for recovery and recycling

The allocation principles and procedures shall also be specified for recovery and recycling.

© ift Rosenheim Seite 13 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



Note

Different products are jointly recycled within a process, such as in a waste incineration plant or a combined heat and power plant. The allocation is based on a physical allocation of the material flows. Where appropriate, the environmental impacts associated with the inputs are distributed according to the way they affect the subsequent production process.

6.2.9 Allocations beyond life cycle boundaries

When using recycled material (e.g. used glass) in the manufacture, the current marketspecific situation must be set. At the same time, a recycling potential can be represented which reflects the economic value of the product after processing (recyclate). The system boundary of recycled material must be drawn during collection.

6.2.10 Secondary materials

Secondary materials shall be indicated:

Secondary materials shall be represented in the respective life cycle stage.

In Module D the substitution effects are calculated only for the resulting net output flows. The amount of output of secondary material that is able to actually substitute one to one the input of secondary material as "closed loop" is part of the investigated product system and is not assigned to module D.

6.2.11 Inputs

Energy

The electricity mix or thermal energy mix used must be indicated (e.g. electricity mix Germany). A percentage representation of the composition of the non-renewable or renewable primary energy can optionally be shown in tabular or graphical form.

Examples of non-renewable energy sources:

Brown coal (11 %), hard coal (13 %), crude oil (33 %), natural gas (22 %), nuclear energy (12 %)

Examples of renewable energy sources:

Hydropower (0.8 %), wind power (1.6 %), biomass (6.1 %), remaining energy sources e.g. solar energy or geothermal energy (0.5 %)

Both electrical and thermal energy must be taken into account.

Water

The water consumption including upstream chains must be stated.

© ift Rosenheim Seite 14 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



Raw material / pre-products

Resources, raw materials and pre-roducts used in the manufacture of the product shall be stated. A distinction must be made between renewable and non-renewable raw materials.

Land use

Sealed areas or the demand of area of unspoiled nature can be specified optionally.

Further information

Other inputs may include compressed air, fuels or auxiliary materials. These should also be reported. Renewable fuels (e.g. biodiesel) and non-renewable fuels (e.g. heating oil) shall be indicated separately.

6.2.12 Outputs

All outputs must be specified. These are waste heat, emissions to air, water and soil, waste water incurred, waste and products and by-products produced (see Allocations). In addition, the thermal and electrical energy generated per energy source must be expressed in MJ (see table below). Waste must be subdivided into hazardous waste for landfilling, non-hazardous waste for landfilling and radioactive waste for disposal.

6.3 Impact assessment

6.3.1 Goal

According to EN ISO 14040/44, the goal of the impact assessment is to identify and assess the size and significance of potential environmental impacts of a product system over the course of the life cycle stages considered in the life cycle assessment. For this purpose, reference must be made to inputs and outputs of the life cycle inventory.

6.3.2 Impact categories

According to EN 15804, the following impact categories are to be presented in tabular form with regard to the declared or functional unit and interpreted with regard to the most important contributions to each balance size. Optionally, these can also be represented graphically.

Environmental impacts according to EN 15804+A1

Abbreviation	Environmental parameters						
Environmental impacts							
GWP	GWP global warming potential total						
ODP ozone depletion potential							

© ift Rosenheim Seite 15 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



AP	acidification potential of soil and water						
EP	eutrophication potential						
POCP	photochemical ozone creation potential						
ADPE	abiotic depletion potential – non fossil resources						
ADPF	abiotic depletion potential – fossil ressources						
WDP	Water (user) deprivation potential						
Resource in	nput						
PERE	Use of renewable primary energy						
PERM	use of renewable primary energy resources						
PERT	total use of renewable primary energy resources						
PENRE	use of non renewable primary energy						
PENRM	use of non renewable primary energy resources						
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	net use of fresh water						
Waste cate	gories and output flows						
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 electrical energy						
EET	Exported thermal energy						

© ift Rosenheim Seite 16 von 27

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



Environmental impacts according to EN 15804+A2:

Abbreviation	Environmental parameters						
Environmenta	Environmental impacts						
GWP-t	global warming potential total						
GWP-f	global warming potential from fossil carbon						
GWP-b	global warming potential from biogenic carbon						
GWP-I	global warming potential from land use and land use transformation						
ODP	ozone depletion potential						
AP	acidification potential of soil and water						
EP-t	eutrophication potential terrestrial						
EP-fw	eutrophication potential aquatic freshwater						
EP-m	eutrophication potential aquatic marine						
POCP	photochemical ozone creation potential						
ADPE	abiotic depletion potential – minerals & metals						
ADPF	abiotic depletion potential – fossil ressources						
WDP	Water (user) deprivation potential						
Resource in	nput						
PERE	Use of renewable primary energy						
PERM	use of renewable primary energy resources						
PERT	total use of renewable primary energy resources						
PENRE	use of non renewable primary energy						
PENRM	use of non renewable primary energy resources						
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	net use of fresh water						
Waste categories and output flows							
HWD	Hazardous waste disposed						
NHWD	Non hazardous waste disposed						

© ift Rosenheim Seite 17 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



RWD	Radioactive waste disposed					
CRU	Components for re-use					
MFR	Materials for recycling					
MER	Materials for energy recovery					
EEE	Exported electrical energy					
EET	Exported thermal energy					
Additional e	Additional environmental impacts (only in the LCA report)					
HTP-c	Human toxicity, cancer effects					
HTP-nc	Human toxicity, non-cancer effects					
ETP-fw	Eco-toxicity (freshwater)					
SQP	Land use related impacts / Soil quality					
PM	Particulate Matter emissions					
IRP	Ionizing radiation, human health					

Note:

If average products are described, a safety surcharge have to be applied to the environmental impacts. Material inherent properties represent exceptions.

6.4 Evaluation, presentation of the balances and critival review

6.4.1 Evaluation

Conclusions are to be drawn from the results of the life cycle inventory and impact assessment. According to EN ISO 14044, the evaluation is to be subdivided as follows:

- Identification of significant parameters,
- Assessment,
- Conclusions, limitations, recommendations.

6.4.2 Report

According to EN ISO 14040 and EN ISO 14044 as well as EN 15804 a report shall be prepared. Type and format must be specified in the definition of the goal and the scope. In doing so the report must contain at least the following elements:

© ift Rosenheim Seite 18 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



General aspects:

- Orderer of the life cycle assessment, internal or external preparer of the life cycle assement study;
- · Report date;
- Declaration that the life cycle assessment study has been carried out in accordance with the requirements of.

Goal of the study:

 Reasons for implementation the study and ist intended use and target group, i.e. whether the information and data are intended for an EPD for "business-to-business"and/or for "business-to-consumer" communication.

Scope of the study:

- Declared/functional unit, including
 - Definition, including all relevant technical specifications;
 - Calculation rules for average data, e.g. if the declared/functional unit has been defined for:
 - a group of similar products from different manufacturers or
 - the same product from different production sites;
- System boundaries in accordance with the modular approach, including:
 - Omissions of life cycle stages, processes or data requirements;
 - Quantification of inputs and outputs of energy and material, taking into account how individual plant data are assigned to the declared product;
 - Assumptions about electricity generation and other relevant background data;
- Cut-off criteria for the initial inclusion of inputs and outputs, including
 - Description of the application of cut-off criteria and assumptions;
 - A list of the processes not considered.

Life cycle inventory:

- Qualitative and quantitative description of the unit processes necessary to model the different stages of the life cycle of the declared unit, taking into account EN ISO 14025 concerning tdata confidentiality regulations;
- Sources of generic data or literature used to carry out the Life cycle assessment;
- Validation of data, including
 - Assessments of data quality;
 - Treatment of missing data;
- · Allocation rules and procedures, including
 - Documentation and reasons of allocation procedures;
 - The uniform application of allocation procedures.

Impact assessment:

The impact assessment procedures, calculations and results of the life cycle assessment;

© ift Rosenheim Seite 19 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



- · The relationship between life cycle inventory results and
- Impact assessment results;
- Reference to all characterisation models and factors used, as defined in this European Standard;
- A statement that the impact assessment results are only relative statements that do not include statements on "endpoints" of impact categories, exceedances of thresholds, safety margins or risks.

Interpretation:

- · The results:
- Assumptions and limitations with regard to the interpretation of results in the EPD, both methodological and data-related;
- The deviation from the average of the impact assessment results must be presented if generic data from several sources are reported or refer to a number of similar products;
- · Assessment of data quality;
- Full transparency regarding value decisions, justifications and expert judgments.

Documentation:

 Documentation on the further environmental impacts according to EN 15804, which are contained in the EPD.

In addition, the following information must be provided:

- Description of data quality,
- Endpoints to be protected,
- Selection of impact categories,
- · Characterization models.
- Factors and environmental impact mechanisms,
- · Profile of indicator values,
- Modification of the initial scope together with its reason,
- Inclusive system boundaries,
- Description of the process modules including decisions on allocation,
- Data (decisions, details, quality),
- Selection of impact categories and impact indicators.

Results and conclusions must be communicated to the target group in a complete, correct, unbiased and understandable way. If the report is addressed to third parties, confidential information must also be kept confidential.

6.4.3 Critival review

The critical review of the life cycle assessment is carried out in accordance with ift guideline NA-01.

© ift Rosenheim Seite 20 von 27

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



7 General information regarding the EPD

7.1 Comparability

Description that the EPD was prepared in accordance with EN 15804 and can therefore only comparable to other EPDs that also comply with the requirements set out in EN 15804.

For comparing EPDs of construction products, the rules set out in EN 15804 (Clause 5.3) apply.

7.2 Communication

Note if applicable that the EPD serves the communication format of EN 15942 and is therefore suitable as a basis for B2B or B2C communication.

7.3 Verification

The verification of the environmental product declaration shall be documented according to the ift guideline NA-01 in accordance with the requirements of EN ISO 14025 and EN 15804.

The product category rules on which the environmental product declaration is based are to be named including the version.

Example:

This declaration is based on the ift document PCR-Part A and Part B Doors and Gates PCR-TT-1.1:2013.

The european standard EN 15804 serves as the core PCR a)

Independent verification of the declaration and statement according to EN ISO 14025:2010

□ internal ☑ external

Independent third party verifier: b)

Vorname Name

a) Product category rules
b) Opitonal for business-to-business communication, mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4).

© ift Rosenheim Seite 21 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



8 Bibliography

The literature used in the Environmental Product Declaration shall be cited completely (see also references in this document).

The standards and legal texts used in the environmental product declaration shall be cited correctly (see e.g. www.beuth.de or references in this document).

© ift Rosenheim Seite 22 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



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© ift Rosenheim Seite 23 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



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© ift Rosenheim Seite 24 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018 Date of release: 29.11.2018 29.11.2023 Next revision:



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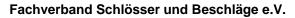
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© ift Rosenheim Seite 25 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023



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© ift Rosenheim Seite 26 von 27

General product category rules:

Declaration code: PCR-A-0.3:2018
Date of release: 29.11.2018
Next revision: 29.11.2023





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