

# Product category rules Part B – for building products made of burnt clay

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

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

Key words: Environmental Product Declaration, Building products made of burnt clay, Life Cycle Assessment, Product Category Rules



Product category rules  
PCR-Part B:  
Building products made  
of burnt clay

PCR-PT-1.2 : 2020

### Note

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

## Content

1	Preliminary remark.....	3
2	Product category rules.....	3
2.1	Content.....	3
2.2	Verification, validation and release of the PCR.....	3
3	General product information.....	4
3.1	Product description / Product definition.....	4
3.2	Scope.....	4
3.3	Application.....	5
3.4	Quality assurance and management systems (optional).....	5
3.5	Technical data / performance of the product.....	6
4	Raw materials.....	7
4.1	Information on SVHC according to PCR Part A.....	7
4.2	Additional information.....	7
5	Life cycle assessment.....	7
5.1	Functional unit.....	7
5.2	Declared unit.....	7
5.3	Geographical and time-related system boundaries.....	8
5.4	Scope / System boundaries.....	8
5.5	Reference service life (RSL).....	9
5.6	Information on the product life cycle.....	9
6	Bibliography.....	10

## 1 Preliminary remark

The product category rules of the ift Rosenheim are divided into two parts and marked accordingly. Part A contains general product category rules, while this part B contains product group-specific rules. The valid versions can be obtained from ift Rosenheim.

## 2 Product category rules

### 2.1 Content

This PCR defines for specific product groups:

- Rules for the preparation of environmental product declarations (EPD) for building products made of burnt clay or other clay-like materials, which are burnt at high enough temperature to reach ceramic connection, e.g. clay roofing tiles or fittings according to EN 1304, application of building products in structures according to DIN 20000-401, masonry bricks according to EN 711-1, DIN 105-4 or EN 845-2, paving bricks according to EN 1344, beamed ceiling with ceramic intermediate components according to EN 15037 or clay blocks for chimneys according to EN 1806.

### 2.2 Verification, validation and release of the PCR

The committee of experts “ift-EPD and PCR” performs the validation and thus vouches for its correctness.

Interested Parties involved in the PCR assessment:

- Ift Rosenheim
- TU Darmstadt

This PCR document with the document number PCR-PT-1.2 was validated and released by the committee of experts (CE) of the ift Rosenheim GmbH. The PCR document is valid according to ISO 14025, EN 15804 and the ift guideline NA-01, five years.

Tracking of the editing / revisions:

Serial No.	Date	Editing comment	CE	Declaration code
1	05/2020	Initial verification and release	released	PCR-PT-1.0 : 2020
2	10/2021	Content changes	released	PCR-PT-1.2 : 2020

## 3 General product information

### 3.1 Product description / Product definition

The declared products must be described.

In doing so, the trade name of the products / product groups (including any product codes) to which the EPD applies must be stated in addition to a general product description. If it is not reasonably possible to name the products / product groups, e.g. in the context of association EPDs, the product description must clearly delimit the products / product groups to which the EPD applies.

Exemplary information:

- Building component /structure has to be specified)
- Format and dimensions
- Art, material
- surfaces (treatment, coating, structure)
- Fillings (material and structure have to be specified)
- reinforcements (material and structure have to be specified)
- plaster layer (material und structure have to be specified)

### 3.2 Scope

These product category rules (PCR-PT-1.2) can be applied to building products in different dimensions and formats made of burnt clay or other clay-like materials.

Examples for these products:

- clay roofing tiles and fittings
- protected and unprotected masonry bricks (Backing and facing bricks)
- façade panels, façade claddings including fasteners
- paving clinker
- Ceiling tiles and hanging tiles for brick ceilings
- Chimney bricks
- Brick shells for overlays and ceiling beams
- - Prefabricated brick, ceramic sub-roof constructions (coffin lid construction)
- - Insulation filled bricks (vertically perforated bricks)

The following system components are included: clay, sand, additional raw materials, coatings/impregnations, fillings, reinforcements, plaster.

## PCR Building products made of burnt clay

Product group: Products made of burnt clay  
Declaration code: PCR-PT-1.2 : 2020  
Date of release: 06.05.2020  
Next revision: 06.05.2025

---



### 3.3 Application

Brief description of the scope of the declared products.

Example:

- Building material made of burnt clay for application in residential and industrial buildings
- Products made of burnt clay for staggered laying on sloping roofs and for cladding exterior walls,
- Protection of exterior insulating products and load-bearing substance of a building against weathering
- - Brick units for paving or sidewalks,
- Blocks of clay for application in connection with precast concrete beams or reinforced concrete for use in ceiling and roof systems,
- - For window installation (e.g. window stop tile),
- - Aesthetic function (e.g. decorative elements, ridge tiles).
- 

### 3.4 Quality assurance and management systems (optional)

In order to guarantee the quality assurance of the product, certification systems can be used. Within the framework of the EPD, information can optionally be provided on quality assurance or QMS and EMS.

Exemplary information:

ift product certification

- QM 359 VOC emissions from construction products

Management systems

- Quality management DIN EN ISO 9001
- Environmental management DIN EN ISO 14001
- Energy management DIN EN ISO 50001
- Occupational health and safety management BS OHSAS 18001
- Integrated Management system (IMS)

#### Note

Existing data, e.g. from EMSs (environmental balances), can facilitate data collection in life cycle assessments.

### 3.5 Technical data / performance of the product

- Building products made of burnt clay or other clay-like materials, which are burnt at high enough temperature to reach ceramic connection

**Table 1** Characteristics and performance in the product category

	Characteristics and performance*	Unit
Obligation	Gross density	kg/m <sup>3</sup>
Obligation	Grammage	kg/m <sup>2</sup>
Obligation	Weight per piece	kg/pc
Optional	Requirement	Pieces/m <sup>2</sup>
Optional	Dimensional deviation	mm
Optional	Cover width	mm
Optional	Load-bearing capacity	N/mm <sup>2</sup>
Optional	Compressive strength	N/mm <sup>2</sup>
Optional	Thermal conductivity	W/(mK)
Optional	Flatness	mm
Optional	Moisture expansion	Mm/m
Optional	Shear strength	N/mm <sup>2</sup>
Optional	Water absorption	%
Optional	Water impermeability	-
Optional	Sound absorption	Kg/m <sup>3</sup>
Optional	Dimensions (width, height, length)	Length (mm, m etc).
	If applicable, further	

\* The reference product is described in the EPD with the mandatory information. The product characteristics can be given in a range to describe the reference product.

## 4 Raw materials

### 4.1 Information on SVHC according to PCR Part A

If products to which this PCR applies contain substances of very high concern (SVHC), these must be indicated in the EPD.

### 4.2 Additional information

The essential technical information on the product(s) or a reference to it shall be provided for the architect.

When considering the entire life cycle (cradle to grave), the product characteristics must be stated on the basis of the physical properties of the building or a reference to them.

Within the framework of the EPD, further information on building certification systems can be provided.

Example:

The physical properties of the flat glass can be found in the CE label or in the accompanying documentation.

## 5 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.

### 5.1 Functional unit

The functional unit indicates the quantified benefit of a product system used as a comparison unit (see EN 17074 and EN 15804).

### 5.2 Declared unit

Declared products must be described and optionally represented graphically (e.g. CAD drawing). A functional or declared unit to which the EPD data refer must be specified.

The following declared unit must be specified:

- One ton (t) of clay material
- One kg of clay material

Example:

The functional unit for building material made of clay material is given as a weight in t, with a piece- and area weight in kg and a gross density in kg/m<sup>3</sup>.

### 5.3 Geographical and time-related system boundaries

General information according to PCR Part A.

Example:

Reference period Year 2009-2010

Reference area Europe

### 5.4 Scope / System boundaries

Example building material made of burnt clay:

#### **Cradle to Gate according to EN 15804+A1:**

The system boundaries include the extraction of raw materials, the manufacture of the building material made of burnt clay and the assembly of the individual components to the finished packaged building material made of burnt clay at the factory gate.

#### **Cradle to Gate according to EN 15804+A2:**

The system boundaries include the extraction of raw materials, the manufacture of the building material made of burnt clay and the assembly of the individual components to the finished packaged building material made of burnt clay at the factory gate as well the ablation, deposition and material and thermal recycling of the products.

#### **Note:**

In the case of construction products and materials that are permitted as exceptions according to EN 15804+A2, the information on disposal may be omitted.

#### **Cradle to Grave according to EN 15804+A1:**

The system boundaries also include the use, deconstruction, disposal and material and energy recovery of the building material made of burnt clay and its individual parts.

#### **Cradle to Grave according to EN 15804+A2:**

The system boundaries also include the stage-of-life-phases application and use.



## PCR Building products made of burnt clay

Product group: Products made of burnt clay  
Declaration code: PCR-PT-1.2 : 2020  
Date of release: 06.05.2020  
Next revision: 06.05.2025

---



### 5.5 Reference service life (RSL)

It applies EN 15804.

### 5.6 Information on the product life cycle

Regulations to be observed during the life cycle:

Exemplary information:

Product manufacture:

- Product standard
- Applicable certification programs

Construction stage:

- Assembly guideline / instruction

Use stage:

- Information on the useful life
- Information on VOC emissions (certification programmes)
- Information on use

End-of-Life stage:

- Recycling initiatives or normal recovery and disposal systems
- Recycling rates in line with the industry standard
- Legal requirements for recovery

## 6 Bibliography

- [1] DIN EN 1304:2013-08  
Clay roofing tiles and fittings - Product definitions and specifications.  
Beuth Verlag GmbH, Berlin
- [2] DIN 20000-401:2017-01 Application of building products in structures - Part 401: Rules for the application of clay masonry units according to DIN EN 771-1:2015-11.  
Beuth Verlag GmbH, Berlin
- [3] DIN EN 771-1:2015-11  
Specification for masonry units - Part 1: Clay masonry units.  
Beuth Verlag GmbH, Berlin
- [4] DIN EN 1344:2015-10  
Clay pavers - Requirements and test methods.  
Beuth Verlag GmbH, Berlin
- [5] DIN EN 15037-3:2011-07  
Precast concrete products - Beam-and-block floor systems - Part 3: Clay blocks.  
Beuth Verlag GmbH, Berlin
- [6] DIN EN 1806:2006-10  
chimneys - Clay/ceramic flue blocks for single wall chimneys - Requirements and test methods.  
Beuth Verlag GmbH, Berlin
- [7] DIN EN 845-2:2016-12  
Specification for ancillary components for masonry - Part 2: Lintels.  
Beuth Verlag GmbH, Berlin
- [8] DIN 105-4:2019-01  
Clay bricks - Part 4: Ceramic bricks  
Beuth Verlag GmbH, Berlin
- [9] Research project "EPDs für transparente Bauelemente" (EPDs for transparent building components), ift Rosenheim, 2011

## PCR Building products made of burnt clay

Product group: Products made of burnt clay  
Declaration code: PCR-PT-1.2 : 2020  
Date of release: 06.05.2020  
Next revision: 06.05.2025

---



### **Publisher**

ift Rosenheim GmbH  
Theodor-Gietl-Str. 7-9  
83026 Rosenheim  
Phone: 0 80 31/261-0  
Fax: 0 80 31/261 290  
E-mail: [info@ift-rosenheim.de](mailto:info@ift-rosenheim.de)  
[www.ift-rosenheim.de](http://www.ift-rosenheim.de)

### **Publication**

**PCR** Building products made of burnt clay PCR-PT-1.2  
Product Category Rules according to EN ISO 14025 und EN 15804

Bibliographic information of the German Library. The German Library lists this publication in the German national bibliography; detailed bibliographic data can be found on the Internet:  
<http://dnb.ddb.de>

### **Layout**

ift Rosenheim GmbH

© ift Rosenheim, 2021

## PCR Building products made of burnt clay

Product group: Products made of burnt clay  
Declaration code: PCR-PT-1.2 : 2020  
Date of release: 06.05.2020  
Next revision: 06.05.2025

---



ift Rosenheim GmbH  
Theodor-Gietl-Straße 7-9  
83026 Rosenheim  
Phone: +49 (0) 80 31 / 261-0  
Fax: +49 (0) 80 31 / 261-290  
E-Mail: [info@ift-rosenheim.de](mailto:info@ift-rosenheim.de)  
[www.ift-rosenheim.de](http://www.ift-rosenheim.de)