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**Pravila za kategorije proizvodov za keramične ploščice**

Product category rules for ceramic tiles

Produktspezifische Regeln für keramische Fliesen und Platten

Règles de définition des catégories de produit pour les carreaux céramiques

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## Product category rules for ceramic tiles

Règles de définition des catégories de produit pour les  
carreaux céramiques

Produktspezifische Regeln für keramische Fliesen und  
Platten

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 67.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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**prEN 17160:2017 (E)**

## **European foreword**

This document (prEN 17160:2017) has been prepared by Technical Committee CEN/TC 67 “Ceramic tiles”, the secretariat of which is held by UNI.

This document is currently submitted to the CEN Enquiry.

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## Introduction

The European Standard EN 15804 provides the core product category rules for all construction products and services. It provides a structure to ensure that all Environmental Product Declarations (EPD) of construction products, construction services and construction processes are derived and presented in a harmonized way.

These Product Category Rules (PCR) provide rules for the creation of EPD for ceramic tiles. It complements the core product category rules for all construction products and services as established in EN 15804.

An EPD communicates verifiable, accurate, non-misleading environmental information for products and their applications, thereby supporting scientifically based, fair choices and stimulating the potential market-driven continuous environmental improvement.

The standardization process has taken place in accordance with EN ISO 14025. All common issues are covered horizontally for all product types in order to minimize vertical (branch specific) deviations.

As defined in EN 15804, the EPD information is expressed in information modules, allowing easy organization and expression of data packages throughout the life cycle of ceramic tiles. The approach requires that underlying data should be consistent, reproducible and comparable.

In order to comply with EN 15804, the EPD is expressed in a form that allows aggregation (addition) to provide complete information for buildings. This standard does not deal with aggregation at the building level nor does this standard describe the rules for applying EPD in a building assessment.

EN 15804 deals with a limited number of quantifiable predetermined parameters. Future revisions of EN 15804 may lead to the incorporation of additional predetermined parameters.

EN 15804 provides the means of developing a Type III environmental declaration of construction products in the context of the suite of standards that are intended to assess the sustainability of construction works.

This suite of standards includes:

EN 15643-1, *Sustainability of construction works – Sustainability assessment of buildings – Part 1: General framework*;

EN 15643-2, *Sustainability of construction works – Assessment of buildings – Part 2: Framework for the assessment of environmental performance*;

EN 15978, *Sustainability of construction works – Assessment of environmental performance of buildings – Calculation method*;

EN 15804, *Sustainability of construction works – Environmental product declaration – Core rules for the product category of construction products*;

CEN/TR 15941, *Sustainability of construction works – Environmental product declarations – Methodology for selection and use of generic data*;

EN 15942, *Sustainability of construction works – Environmental product declarations – Communication formats: business to business*.

## 1 Scope

This European Standard defines Product Category Rules (PCR) providing guidelines and rules for developing a type III EPD for ceramic tiles produced by extrusion and dry-pressing techniques, mainly used for internal and/or external floorings and walls coverings and façade cladding.

These PCR specify the calculation rules in accordance with EN 15804 for the Life Cycle Assessment (LCA) of ceramic tiles for developing an EPD, as well as the requirements on the background of the LCA.

These PCR:

- define the parameters to be declared and the way in which they are collated and reported;
- describe which stages of ceramic tiles's life cycle are considered in the EPD and which processes are to be included in the life cycle stages;
- defines rule for the development of scenarios;
- include the rules for calculating the Life Cycle Inventory and the Life Cycle Impact Assessment underlying the EPD, including the specification of the data quality to be applied;
- include the rules for reporting predetermined, environmental and health information, that is not covered by LCA for a ceramic tile, construction process and construction service where necessary;
- define the conditions under which ceramic tiles can be compared based on the information provided by EPD (see 5.3).

The EPD developed using these PCR will contain data from the product stages (A1-A3). Optionally, the manufacturer can include all modules of the product's life cycle stages (construction process, use, and end of life) (A4-C4), using the scenarios described in 7.3 when primary data are not available. The results of these stages shall be shown individually (without being added together).

Therefore, these PCR cover:

- EPD cradle-to-gate (only the product stage is considered);
- EPD cradle-to-grave (the whole life cycle of ceramic tiles is considered). In these type of EPD module D may be included.

After verification an EPD is valid for a 5 year period from the date of issue, after which it shall be reviewed and verified.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 14411:2016, *Ceramic tiles - Definition, classification, characteristics, assessment and verification of constancy of performance and marking*



EN 15804:2012+A1:2013, *Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products*

CEN/TR 15941, *Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data*

EN 15942, *Sustainability of construction works - Environmental product declarations - Communication format business-to-business*

EN ISO 14025, *Environmental labels and declarations - Type III environmental declarations - Principles and procedures (ISO 14025)*

EN ISO 14040, *Environmental management - Life cycle assessment - Principles and framework (ISO 14040)*

EN ISO 14044:2006, *Environmental management - Life cycle assessment - Requirements and guidelines (ISO 14044:2006)*

ISO 15686-1, *Buildings and constructed assets — Service life planning — Part 1: General principles and framework*

ISO 15686-2, *Buildings and constructed assets — Service life planning — Part 2: Service life prediction procedures*

ISO 15686-7, *Buildings and constructed assets — Service life planning — Part 7: Performance evaluation for feedback of service life data from practice*

ISO 15686-8:2008, *Buildings and constructed assets — Service-life planning — Part 8: Reference service life and service-life estimation* [SIST EN 17160:2019](https://standards.iteh.ai/catalog/standards/sist/8d60c15a-2de5-40d0-8a1c-)

ISO 21930:2007, *Sustainability in building construction — Environmental declaration of building products*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15804:2012+A1:2013 and the following apply.

#### 3.1

##### **additional technical information**

information that forms part of the EPD by providing a basis for the development of scenarios

[SOURCE: EN 15804:2012+A1:2013]

#### 3.2

##### **allocation**

partitioning the input or output flows of a process or a product system between the product system under study and one or more other product systems

[SOURCE: EN ISO 14040:2006]

**prEN 17160:2017 (E)****3.3****ancillary material**

input material or product that is used by the unit process producing the product, but which does not constitute part of the product

Note 1 to entry: Example of ancillary material (oil used in the press, batteries, lime used into purification systems)

[SOURCE: EN ISO 14040:2006]

**3.4****average data**

data representative of a product, product group or construction service, provided by more than one supplier

Note 1 to entry: The product group or construction service can contain similar products or construction services

[SOURCE: EN 15804:2012+A1:2013]

**3.5****by-product**

A production material that is not waste and process characteristics that make it ready for further use in the market place without any further processing

Note 1 to entry: Example of by-product (fired and unfired production solid discharge materials)

[SOURCE: ISO 14021:2016]

**3.6****ceramic tile**

tile made from clays and/or other inorganic raw materials

Note 1 to entry: Tiles are usually shaped by extruding (Method A) or dry-pressing (Method B) at room temperature followed by drying and firing at temperatures sufficient to develop the required properties, but can be formed by other processes (these are not covered by EN 14411). Tiles can be glazed (GL) or unglazed (UGL)

[SOURCE: EN 14411:2016]

**3.7****comparative assertion**

environmental claim regarding the superiority or equivalence of one product versus a competing product that performs the same function

[SOURCE: EN ISO 14044:2006]

**3.8****construction element**

part of a construction containing a defined combination of products

[SOURCE: EN 15804:2012+A1:2013]

**3.9****construction product**

item manufactured or processed for incorporation in construction works

Note 1 to entry: to entry: Construction products are items supplied by a single responsible body.

Note 2 to entry: to entry: Adapted from the definition in ISO 6707-1:2014 according to the recommendation of ISO/TC 59/AHG Terminology.

[SOURCE: EN 15643-1:2010]

**3.10****construction service**

activity that supports the construction process or subsequent maintenance

[SOURCE: EN 15804:2012+A1:2013]

**3.11****co-product**

any of two or more marketable materials, products or fuels from the same unit process, but which is not the object of the assessment

Note 1 to entry: to entry: Co-product, by-product and product have the same status and are used for identification of several distinguished flows of products from the same unit process. From co-product, by-product and product, waste is the only output to be distinguished as a non-product.

Note 2 to entry: to entry: Example of by-product (spry dry powder sold to a third company).

[SOURCE: EN 15804:2012+A1:2013]

**3.12****declared unit**

quantity of a construction product for use as a reference unit in an EPD for an environmental declaration based on one or more information modules

EXAMPLE Surface (1 m<sup>2</sup>).

[SOURCE: ISO 21930:2007, modified]

**3.13****environmental aspect**

element of an organisation's activities or products or services that interacts or can interact with the environment

[SOURCE: EN ISO 14001:2015]

**3.14****environmental impact**

change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects

[SOURCE: EN ISO 14001:2015]

**prEN 17160:2017 (E)****3.15****environmental performance**

performance related to environmental impacts and environmental aspects

[SOURCE: ISO 15392:2008]

[SOURCE: ISO 21931-1:2010]

**3.16****functional equivalent**

quantified functional requirements and/or technical requirements for a building or an assembled system (part of works) for use as a basis for comparison

Note 1 to entry: Adapted from the definition in ISO 21931-1:2010

**3.17****functional unit**

quantified performance of a product system for use as a reference unit

[SOURCE: EN ISO 14040:2006]

**3.18****impact category indicator**

quantifiable representation of an impact category

[SOURCE: EN ISO 14040:2006]

**3.19****information module**

compilation of data to be used as a basis for a Type III environmental declaration covering a unit process or a combination of unit processes that are part of the life cycle of a product

[SOURCE: EN ISO 14025:2010]

**3.20****life cycle**

consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to disposal

[SOURCE: EN ISO 14040:2006]

**3.21****life cycle assessment****LCA**

compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle

[SOURCE: EN ISO 14044:2006]

**3.22****life cycle inventory analysis****LCI**

phase of life cycle assessment involving the compilation and quantification of inputs and outputs for a product throughout its life cycle

[SOURCE: EN ISO 14040:2006]

### 3.23

#### **life cycle impact assessment**

##### **LCIA**

phase of life cycle assessment aimed at understanding and evaluating the magnitude and significance of the potential environmental impacts for a product system throughout the life cycle of the product

[SOURCE: EN ISO 14040:2006]

### 3.24

#### **mosaic**

piece of ceramic tile that can fit into an area of 49 cm<sup>2</sup>

### 3.25

#### **non-renewable energy**

energy from sources which are not defined as *renewable energy* sources

[SOURCE: EN 15804:2012+A1:2013]

### 3.26

#### **non-renewable resource**

resource that exists in a finite amount that cannot be replenished on a human time scale

[SOURCE: ISO 21930:2007]

### 3.27

#### **performance**

expression relating to the magnitude of a particular aspect of the object of consideration relative to specified requirements, objectives or targets

[SOURCE: ISO 6707-1:2004, modified according to the draft recommendation of ISO/TC 59 Terminology]

### 3.28

#### **product category rules**

##### **PCR**

set of specific rules, requirements and guidelines for developing Type III environmental declarations for one or more product categories

[SOURCE: EN ISO 14025:2010]

### 3.29

#### **product system**

collection of unit processes with elementary and product flows, performing one or more defined functions, and which models the life cycle of a product

[SOURCE: EN ISO 14040:2006]

**prEN 17160:2017 (E)****3.30****programme operator**

body or bodies that conduct a Type III environmental declaration programme

Note 1 to entry: A program operator can be a company or a group of companies, industrial sector or trade association, public authorities or agencies, or an independent scientific body or other organization.

[SOURCE: EN 15804:2012+A1:2013]

**3.31****reference service life****RSL**

service life of a construction product which is known to be expected under a particular set, i.e., a reference set, of in-use conditions and which may form the basis of estimating the service life under other in-use conditions

[SOURCE: ISO 21930:2007]

**3.32****reference service life data****RSL data**

information that includes the reference service life and any qualitative or quantitative data describing the validity of the reference service life

Example Typical data describing the validity of the RSL include the description of the component (3.10) for which it applies, the reference in-use conditions under which it applies, and its quality.

[SOURCE: ISO 15686-8:2008]

**3.33****renewable energy**

energy from renewable non-fossil sources

Example Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.

[SOURCE: 2009/28/EC, modified]

**3.34****renewable resource**

resource that is grown, naturally replenished or naturally cleansed, on a human time scale

Note 1 to entry: A renewable resource is capable of being exhausted, but may last indefinitely with proper stewardship. Examples include: trees in forests, grasses in grassland, fertile soil

[SOURCE: ISO 21930:2007]

**3.35****scenario**

collection of assumptions and information concerning an expected sequence of possible future events

[SOURCE: EN 15804:2012+A1:2013]

**3.36****secondary material**

material recovered from previous use or from waste which substitutes primary materials

Note 1 to entry: Secondary material is measured at the point where the secondary material enters the system from another system.

Note 2 to entry: Materials recovered from previous use or from waste from one product system and used as an input in another product system are secondary materials.

Note 3 to entry: Examples for secondary materials: recovered glass and sludge coming from external plant.

[SOURCE: EN 15804:2012+A1:2013]

**3.37****specific data**

data representative of a product, product group or construction service, provided by one supplier

[SOURCE: EN 15804:2012+A1:2013]

**3.38****system boundary**

set of criteria specifying which unit processes are part of a product system

[SOURCE: EN ISO 14044:2006]

**3.39****third party**

person or body that is recognized as being independent of the parties involved, as concerns the issues in question

Note 1 to entry: "Parties involved" are usually supplier ("first party") and purchaser ("second party") interests

[SOURCE: EN ISO 14024:2000]

**3.40****type III environmental declaration**

environmental declaration providing quantified environmental data using predetermined parameters and, where relevant, additional environmental information

Note 1 to entry: The calculation of predetermined parameters is based on the ISO 14040 series of standards, which is made up of ISO 14040, and ISO 14044. The selection of the predetermined parameters is based on ISO 21930 (adapted from ISO 14025)

[SOURCE: EN 15804:2012+A1:2013]

**3.41****upstream process**

process that precedes a given life cycle stage

[SOURCE: EN 15804:2012+A1:2013, modified]