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Pravila za kategorije proizvodov za keramične ploščice

Product category rules for ceramic tiles

Produktkategorieregeln für keramische Fliesen und Platten

Règles de définition des catégories de produits pour les carreaux céramiques

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Règles de définition des catégories de produits pour les carreaux céramiques

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 17160:2019) has been prepared by Technical Committee CEN/TC 67 “Ceramic tiles”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2019, and conflicting national standards shall be withdrawn at the latest by August 2019.

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Introduction

The European Standard EN 15804:2012+A1:2013 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 15804:2012+A1:2013.

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 14025:2010. All common issues are covered horizontally for all product types in order to minimize vertical (branch specific) deviations.

As defined in EN 15804:2012+A1:2013, 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 15804:2012+A1:2013, the EPD is expressed in a form that allows aggregation (addition) to provide complete information for buildings. EN 15804:2012+A1:2013 does not deal with aggregation at the building level nor does this standard describe the rules for applying EPD in a building assessment.

EN 15804:2012+A1:2013 deals with a limited number of quantifiable predetermined parameters. Future revisions of EN 15804:2012+A1:2013 may lead to the incorporation of additional predetermined parameters.

EN 15804:2012+A1:2013 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 15804:2012+A1:2013, *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 format business-to-business.*

1 Scope

This document defines Product Category Rules (PCR) providing guidelines and rules for developing a type III environmental declaration (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 15804:2012+A1:2013 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.

The EPD developed using these PCR will contain data from the product stages (A1 to A3). Optionally, the manufacturer can include all modules of the product's life cycle stages (construction process, use, and end of life) (A4 to 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 14025:2010, *Environmental labels and declarations - Type III environmental declarations - Principles and procedures (ISO 14025:2006)*

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*

ISO/TS 15686-9, *Buildings and constructed assets — Service-life planning — Part 9: Guidance on assessment of service-life data*

ISO 21930:2017, *Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

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]

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
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: Construction products are items supplied by a single responsible body.

Note 2 to entry: Adapted from the definition in ISO 6707-1:2004 according to the recommendation of ISO/TC 59/AHG Terminology.

[SOURCE: EN 15643-1:2010, 3.11]

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: 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: 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^2).

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

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]

3.15
environmental performance
performance related to environmental impacts and environmental aspects

[SOURCE: ISO 15392:2008, 3.12, modified – Note 1 to entry deleted]

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
any piece that can fit into a square the side of which is less than 7 cm

[SOURCE: EN 14411:2016]

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 21930:2017]

3.27
performance
expression relating to the magnitude of a particular aspect of the object of consideration relative to specified requirements, objectives or targets

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]

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 21930:2017]

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 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: Directive 2009/28/EC, Art. 2, (a), 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 21930:2017]

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]