SLOVENSKI STANDARD

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Trajnostnost gradbenih objektov - Okoljske deklaracije za proizvode - Skupna pravila za kategorije proizvodov za gradbene proizvode

Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

Nachhaltigkeit von Bauwerken - Umweltproduktdeklarationen - Grundregeln für die Produktkategorie Bauprodukte

Contribution des ouvrages de construction au développement durable - Déclarations environnementales sur les produits - Règles régissant les catégories de produits de construction

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EUROPEAN STANDARD

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Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

Contribution des ouvrages de construction au développement durable - Déclarations environnementales sur les produits - Règles régissant les catégories de produits de construction

Nachhaltigkeit von Bauwerken - Umweltproduktdeklarationen - Grundregeln für die Produktkategorie Bauprodukte

This European Standard was approved by CEN on 13 November 2011 and includes Amendment 1 approved by CEN on 10 September 2013.

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Contents

Page

Foreword

This document (EN 15804:2012+A1:2013) has been prepared by Technical Committee CEN/TC 350 “Sustainability of construction works”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by May 2014, and conflicting national standards shall be withdrawn at the latest by May 2014.

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This document supersedes EN 15804:2012.

This document includes Amendment 1 approved by CEN on 2013-09-10.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A1] ⟨A1⟩.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This European standard provides 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, verified and presented in a harmonised way.

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

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

EPD information is expressed in information modules, which allow easy organisation and expression of data packages throughout the life cycle of the product. The approach requires that the underlying data should be consistent, reproducible and comparable.

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.

The standard deals with a limited number of quantifiable predetermined parameters. Future revisions may incorporate additional predetermined parameters.

This European Standard provides the means for developing a Type III environmental declaration of construction products and is part of a 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*;

— 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 provides core product category rules (PCR) for Type III environmental declarations for any construction product and construction service.

NOTE The assessment of social and economic performances at product level is not covered by this standard.

The core PCR:

— defines the parameters to be declared and the way in which they are collated and reported,

— describes which stages of a product's life cycle are considered in the EPD and which processes are to be included in the life cycle stages,

— defines rules for the development of scenarios,

— includes 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,

— includes the rules for reporting predetermined, environmental and health information, that is not covered by LCA for a product, construction process and construction service where necessary,

— defines the conditions under which construction products can be compared based on the information provided by EPD.

For the EPD of construction services the same rules and requirements apply as for the EPD of construction products.

2 Normative references

The following referenced documents are indispensable for the application 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.

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*

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

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

3 Terms and definitions

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

3.1
additional technical information
information that forms part of the EPD by providing a basis for the development of scenarios

3.2
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

[EN ISO 14040:2006]

3.3
average data

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

NOTE The product group or construction service can contain similar products or construction services.

3.4
comparative assertion
environmental claim regarding the superiority or equivalence of one product versus a competing product that performs the same function

[EN ISO 14044:2006]

3.5
construction product
item manufactured or processed for incorporation in construction works

NOTE 1 Construction products are items supplied by a single responsible body.

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

[EN 15643-1:2010]

3.6
construction service
activity that supports the construction process or subsequent maintenance

3.7
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 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.

3.8
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 Mass (kg), volume (m^3).

NOTE Adapted from the definition in [A1] ISO 21930:2007 [A1].

3.9
construction element
part of a construction containing a defined combination of products

3.10
environmental performance
performance related to environmental impacts and environmental aspects

[ISO 15392:2008]

[ISO 21931-1:2010]

3.11
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 Adapted from the definition in ISO 21931-1:2010.

3.12
functional unit
quantified performance of a product system for use as a reference unit

[EN ISO 14040:2006]

3.13
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

[EN ISO 14025:2010]

3.14
life cycle assessment
LCA
compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle

[EN ISO 14044:2006]

3.15
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

[EN ISO 14040:2006]

3.16
non-renewable energy
energy from sources which are not defined as *renewable energy* sources

3.17
non-renewable resource
resource that exists in a finite amount that cannot be replenished on a human time scale

[ISO 21930:2007]

3.18
performance
expression relating to the magnitude of a particular aspect of the object of consideration relative to specified requirements, objectives or targets

NOTE Adapted from the definition in ISO 6707-1:2004 according to the draft recommendation of ISO/TC 59 Terminology.

3.19
product category
group of construction products that can fulfil equivalent functions

NOTE Adapted from EN ISO 14025:2010.

3.20
product category rules
PCR
set of specific rules, requirements and guidelines for developing Type III environmental declarations for one or more product categories

[EN ISO 14025:2010]

3.21
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

[EN ISO 14040:2006]

3.22
programme operator
body or bodies that conduct a Type III environmental declaration programme

NOTE 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.

3.23
renewable energy
energy from renewable non-fossil sources

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

NOTE Adapted from the definition in Directive 2009/28/EC.

3.24
renewable resource
resource that is grown, naturally replenished or naturally cleansed, on a human time scale

NOTE 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.

[ISO 21930:2007]

3.25
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

[ISO 21930:2007]

3.26
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.

[ISO 15686-8:2008]

3.27
scenario
collection of assumptions and information concerning an expected sequence of possible future events

3.28
secondary fuel
fuel recovered from previous use or from waste which substitutes primary fuels

NOTE 1 Processes providing a secondary fuel are considered from the point where the secondary fuel enters the system from the previous system.

NOTE 2 Any combustible material recovered from previous use or from waste from the previous product system and used as a fuel in a following system is a secondary fuel.

NOTE 3 Examples for primary fuels are: coal, natural gas, biomass, etc.

NOTE 4 Examples for secondary fuels recovered from previous use or as waste are: solvents, wood, tyres, oil, animal fats.

3.29
secondary material
material recovered from previous use or from waste which substitutes primary materials

NOTE 1 Secondary material is measured at the point where the secondary material enters the system from another system.

NOTE 2 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 Examples for secondary materials (to be measured at the system boundary) are recycled scrap metal, crushed concrete, glass cullet, recycled wood chips, recycled plastic.

3.30
specific data
data representative of a product, product group or construction service, provided by one supplier

3.31
third party
person or body that is recognized as being independent of the parties involved, as concerns the issues in question

NOTE "Parties involved" are usually supplier ("first party") and purchaser ("second party") interests.

[EN ISO 14024:2000]

3.32
type III environmental declaration
environmental declaration providing quantified environmental data using predetermined parameters and, where relevant, additional environmental information

NOTE 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).

3.33
upstream, downstream process
process(s) that either precedes (upstream) or follows (downstream) a given life cycle stage

3.34
waste
substance or object which the holder discards or intends or is required to discard

NOTE Adapted from the definition in the European Waste Directive 2008/98/EC.

3.35
unit process
the smallest element considered in the life cycle inventory analysis for which input and output data are quantified

[EN ISO 14040:2006]

4 Abbreviations

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

A1

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 A1

5 General aspects

5.1 Objective of the Core PCR

An EPD according to this standard provides quantified environmental information for a construction product or service on a harmonized and scientific basis. It also provides information on health related emissions to indoor air, soil and water during the use stage of the building. The purpose of an EPD in the construction sector is to provide the basis for assessing buildings and other construction works, and identifying those, which cause less stress to the environment.

Thus, the objective of the core PCR is to ensure:

— the provision of verifiable and consistent data for an EPD, based on LCA;

— the provision of verifiable and consistent product related technical data or scenarios for the assessment of the environmental performance of buildings;

— the provision of verifiable and consistent product related technical data or scenarios potentially related to the health of users for the assessment of the performance of buildings;

— that comparisons between construction products are carried out in the context of their application in the building;

— the communication of the environmental information of construction products from business to business;

— the basis, subject to additional requirements, for the communication of the environmental information of construction products to consumers.

Declarations based on this standard are not comparative assertions.

NOTE A1 See definition 3.4 and ISO 14044:2006, 5.3 A1 for more information concerning LCA used for comparative assertion.

5.2 Types of EPD with respect to life cycle stages covered

The LCA based information in an EPD may cover (see Figure 1):

— The product stage only. Such an EPD covers raw material supply, transport, manufacturing and associated processes; this EPD is said to be “cradle to gate” and becomes an EPD based on information modules A1 to A3;

— The product stage and selected further life cycle stages. Such an EPD is said to be “cradle to gate with options” and becomes an EPD based on information modules A1 to A3 plus other selected optional modules, e.g. end-of-life information modules C1 to C4. Information module D may be included in this EPD;

— The life cycle of a product according to the system boundary (see 6.3.4). In this case the EPD covers the product stage, installation into the building, use and maintenance, replacements, demolition, waste processing for re-use, recovery, recycling and disposal, and disposal and is said to be 'cradle to grave' and becomes an EPD of construction products based on a LCA, i.e. covering all information modules A1 to C4. In this EPD the information module D may be included.

NOTE 1 Information modules can supply information for processes for which there is no EPD available, e.g. a cleaning process.

NOTE 2 An information module may contain: the values of the pre-determined parameters and the technical information underlying their quantification, relevant technical information for further calculation of the environmental performance, scenarios for further calculation of the environmental performance.

NOTE 3 It is possible to have an EPD for a substance or preparation (e.g. cement), for a product (e.g. window), for a construction service (e.g. cleaning service as part of maintenance) and for an assemblage of products and/or a construction element (e.g. wall) for technical equipment (e.g. lift).