



SLOVENSKI STANDARD
oSIST prEN 16904:2024
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Cevni sistemi iz polimernih materialov znotraj stavbne strukture - Okoljske deklaracije za proizvode - Pravila za kategorije proizvodov, ki dopolnjujejo EN 15804

Plastics piping systems inside the building structure - Environmental product declarations - Product category rules complementary to EN 15804

Kunststoff-Rohrleitungssysteme innerhalb der Gebäudestruktur - Umweltproduktdeklarationen - Produktkategorieregeln entsprechend EN 15804

Systèmes de canalisations en plastique à l'intérieur de la structure du bâtiment - Déclarations environnementales des produits - Règles régissant les catégories de produits complémentaires de l'EN 15804

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Plastics piping systems inside the building structure - Product category rules complementary to EN 15804

Kunststoff-Rohrleitungssysteme -
Umweltproduktdeklarationen -
Produktkategorieregeln ergänzend zu EN 15804 für
Kunststoff-Rohrleitungssysteme innerhalb von
Gebäuden

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 155.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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prEN 16904:2024 (E)

European foreword

This document (prEN 16904:2024) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems”, the secretariat of which is held by NEN.

This document is currently submitted to the CEN Enquiry.

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Introduction

The European standard EN 15804+A2 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 harmonized way.

This document, based on EN 15804+A2, specifies the Product Category Rules for Environmental Product Declarations (EPD) for plastics piping systems inside the building structures and their main structural components.

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 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.

EPD information is expressed in information modules, as specified in EN 15804+A2, which allow easy organization and expression of data packages throughout the life cycle of the buried plastics piping systems (constructions work). 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 construction works. This standard does not deal with aggregation at the construction work level nor does this standard describes the rules for applying EPD in a construction work assessment.

The standard deals with a set of quantifiable predetermined parameters defined in EN 15804+A2. Future revisions may incorporate additional predetermined parameters in line with the changes of EN 15804+A2.

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prEN 16904:2024 (E)

1 Scope

This document provides product category rules (PCR) for Type III environmental product declarations, as described in EN ISO 14025 and EN 15942, for plastics piping systems inside the building structures and their main structural components, as specified by the list of product standards provided in Annex CC.

This document encompasses:

- both pressure and non-pressure applications;
- metal fittings which are used in a plastic piping system.

The intended function of the system considered is to convey liquids according to EN 806 (for potable water supply), EN 1264 (for heating and cooling systems), EN 12828 (for radiators), EN 12056 (for soil and waste discharge and for water traps).

In case there is no application standard available, this document can also be used for other plastics piping systems such as for example for rainwater gutters, ventilation systems or electrical conduits.

This document specifies product category rules of construction products as defined in and is intended to be used in conjunction with EN 15804+A2.

In addition to EN 15804+A2, this document specifies:

- the functional unit (consisting of pipes, fittings and ancillary components) and declared unit (consisting of pipes and/or fittings);
- the system boundaries and additional mandatory modules to be declared;
- the processes to be included in the installation phase;
- scenarios for module A4, A5;
- use conditions for the use phase (B modules);
- reference service life (RSL);
- end of life scenarios.

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 806 (all parts), *Specifications for installations inside buildings conveying water for human consumption*

EN 12056-1, *Gravity drainage systems inside buildings — Part 1: General and performance requirements*

EN 12056-2, *Gravity drainage systems inside buildings — Part 2: Sanitary pipework, layout and calculation*

EN 12056-3, *Gravity drainage systems inside buildings — Part 3: Roof drainage, layout and calculation*

EN 12056-5, *Gravity drainage systems inside buildings — Part 5: Installation and testing, instructions for operation, maintenance and use*

EN 15804:2012+A2:2019¹, *Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products*

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)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15804:2012+A2:2019 and the following apply. ISO and IEC maintain terminological databases for use in standardization at the following addresses:

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

3.1

application classes

classification system for common service conditions for pressurized hot and cold water systems

[SOURCE: ISO 10508:2006]

3.2

nominal size

DN

numerical designation of the size of a component, which is a convenient round number, approximately equal to the manufacturing dimensions in millimetres (mm)

[SOURCE: ISO 10508:2006]

3.3

nominal size

DN/OD

nominal size, related to outside diameter

[SOURCE: ISO 10508:2006]

3.4

nominal wall thickness

e_n

text of the definition

[SOURCE: ISO 10508:2006]

¹ As impacted by EN 15804:2012+A2:2019/AC:2021.

prEN 16904:2024 (E)**3.5****pipe series****S**

dimensionless number for pipe designation conforming to ISO 4065

[SOURCE: ISO 10508:2006]

3.6**design temperature****TD**

temperature or combination of temperatures and times of the conveyed water, dependent on the service conditions for which the system has been designed

[SOURCE: ISO 10508:2006]

3.7**wall thickness****e**

measured wall thickness at any point around the circumference of a component, rounded up to the nearest 0,1 mm

[SOURCE: ISO 10508:2006]

3.8**inside building structure**

for non-pressure application the inside building structure is defined according to the application area "BD" which encompasses the application area B, intended for used above ground inside building or components outside buildings fixed onto the wall, and the area under and within 1 m from the building where the pipes and fittings are buried in the ground and are connected to the soil and waste discharge system of the building

4 Abbreviations

For the purposes of this document, the abbreviations given in in EN 15804+A2 apply.

5 General aspects**5.1 Objective of the PCR for plastics piping systems inside buildings**

Shall be according to EN 15804+A2.

5.2 Types of EPD with respect to life cycle stages covered

The types of the EPDs that can be developed according to this document are listed below (Figure 1):

- cradle to gate with options, modules C1-C4 and module D (A1-A3, C, D and additional modules. The additional module that shall be declared is A4, A5 is optional). This type of EPD shall be based on a declared unit (consisting of pipes and/or fittings);
- cradle to gate with options, modules C1-C4 and module D (A1-A3, C, D and additional modules. The additional modules shall be declared is A4, A5 and/or B1–B7 are optional.). This type of EPD shall be based on a functional unit or a declared unit. If B-modules and use scenario are not declared the EPD shall be based on a declared unit; see 6.3.5.4.2 for the definition of B-modules;

- cradle to grave and module D (A, B, C and D). This declaration shall be based on a functional or declared unit;
- cradle to gate (A1–A3). These stages are the minimum to be declared for all the main components that are exempt from declaring modules C and D, as specified in 5.2 of EN 15804:2012+A2:2019, and shall be based on a declared unit. This type of EPD is not allowed for products containing biogenic carbon.

CONSTRUCTION WORK ASSESSMENT INFORMATION												SUPPLEMENTARY INFORMATION BEYOND CONSTRUCTION WORKS LIFE CYCLE					
CONSTRUCTION WORKS LIFE CYCLE INFORMATION											D						
A1-A3 PRODUCT STAGE			A4-A5 CONSTRUCTION PROCESS STAGE		B1-B7 USE STAGE							C1-C4 END OF LIFE STAGE				D BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
Raw material supply	Transport	Manufacturing	Transport	Construction- installation process	Use	Maintenance	Repair	Replacement ¹	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse, recovery, recycling potential	
scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	
Mand.	Mand.	Mand.	Mand.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Mand.	Mand.	Mand.	Mand.	Mandatory	
Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mandatory

cradle to gate with options, module C1-C4 and module D cradle to grave and module D cradle to gate 1

Key

- 1 replacement of components, parts or systems
- 2 only possible if the conditions to exclude the declaration of modules C1-C4 and module D are met

Figure 1 —Types of EPD with respect to life cycle stages covered and life cycle stages and modules for the construction works assessment

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5.3 Comparability of EPD for construction products

Shall be according to EN 15804+A2.

5.4 Additional information

Shall be according to EN 15804+A2.

5.5 Ownership, responsibility and liability for the EPD

Shall be according to EN 15804+A2.

5.6 Communication formats

Shall be according to EN 15804+A2.