



# SLOVENSKI STANDARD

## SIST EN 16783:2024

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**Toplotnoizolacijski proizvodi - Okoljske deklaracije za proizvode (EPD) - Pravila za kategorije proizvodov (PCR) za proizvode, izdelane v obratu in na mestu vgradnje, ki dopolnjujejo EN 15804**

Thermal insulation products - Environmental Product Declarations (EPD) - Product Category Rules (PCR) complementary to EN 15804 for factory made and in-situ formed products

Wärmedämmstoffe - Umweltproduktdeklarationen (EPD) - Produktkategorieregeln (PCR) ergänzend zur EN 15804 für werksmäßig hergestellte und der Verwendungsstelle hergestellte Produkte

Produits isolants thermiques - Déclarations environnementales des produits (DEP) - Règles régissant les catégories de produits (RCP) complémentaires de l'EN 15804 pour les produits manufacturés et formés en place

**Ta slovenski standard je istoveten z: EN 16783:2024**

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EUROPEAN STANDARD

EN 16783

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ICS 91.120.10

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English Version

Thermal insulation products - Environmental Product  
Declarations (EPD) - Product Category Rules (PCR)  
complementary to EN 15804 for factory made and in-situ  
formed products

Produits isolants thermiques - Déclarations  
environnementales des produits (DEP) - Règles  
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Wärmedämmstoffe - Umweltproduktdeklarationen  
(EPD) - Produktkategorieregeln (PCR) ergänzend zur  
EN 15804 für werksmäßig hergestellte und an der  
Verwendungsstelle hergestellte Produkte

This European Standard was approved by CEN on 19 February 2024.

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

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## European foreword

This document (EN 16783:2024) has been prepared by Technical Committee CEN/TC 88 “Thermal insulating materials and products”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by October 2024, and conflicting national standards shall be withdrawn at the latest by October 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 16783:2017.

In comparison with the previous edition EN 16783:2017, the following technical modifications have been made:

- a) modification of the title;
- b) updated in relation to the latest revision of EN 15804:2012+A2:2019<sup>1</sup>.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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## EN 16783:2024 (E)

### Introduction

This document provides rules for the assessment and quantification of parameters describing the environmental impact of thermal insulation products to prepare environmental product declarations.

It defines complementary product category rules (PCR) for thermal insulation products based on the core rules for all construction products established in EN 15804:2012+A2:2019<sup>1</sup>. These rules are intended to be used in conjunction with EN 15804:2012+A2:2019<sup>1</sup>.

These PCR apply to all CEN/TC 88 thermal insulation product standards (EN 13162 to EN 13171, EN 14063-1, EN 14064-1, EN 14303 to EN 14309, EN 14313, EN 14314, EN 14315-1 to EN 14320-1, EN 14933, EN 14934, prEN 15100-1, EN 15101-1, EN 15501, EN 15599-1, EN 15600-1, EN 15732, EN 16025-1, EN 16069, prEN 16491, EN 16809-1, EN 16863, EN 16977, EN 17140) in order to minimize intra-sectoral deviations. These PCR are also valid for thermal insulation products outside of CEN/TC 88 and for thermal insulation products involved in other CEN/TCs.

As in EN 15804:2012+A2:2019<sup>1</sup>, the results from the assessment are expressed following the modularity principle in a form that allows aggregation (addition) to provide complete information for construction works. These PCR do not deal with aggregation at the construction works level nor does it describe the rules for applying the environmental parameters in a construction works assessment.

The reduction in energy used and the reduction of emissions produced during the installed life of insulation products exceed by far the energy used and in most cases the emissions occurring during the production, installation and disposal processes. 5.4 of this document provides the rules for declaration of any such benefits as additional information.

NOTE The titles of the clauses in this document follow EN 15804:2012+A2:2019<sup>1</sup> to enhance readability.

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## 1 Scope

This document provides the product category rules (PCR) for Type III environmental declarations (as in EN 15804:2012+A2:2019<sup>1</sup>) for factory made and *in situ* thermal insulation products.

Complementary to EN 15804:2012+A2:2019<sup>1</sup>, the PCR described in this document:

- specify the declared unit to be used;
- define the system boundaries for thermal insulation products;
- specify/describe the default scenarios and rules for defining scenarios for certain life cycle information modules.

These PCR are intended to be used for cradle to gate, cradle to gate with options or cradle to grave assessment, provided the intention is properly stated in the system boundary description.

## 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 13172, *Thermal insulation products — Evaluation of conformity*

EN 15804:2012+A2:2019<sup>1</sup>, *Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products*

EN 15941, *Sustainability of construction works — Data quality for environmental assessment of products and construction work — Selection and use of data*

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

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

EN ISO 9229, *Thermal insulation — Vocabulary (ISO 9229)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 9229 and EN 15804:2012+A2:2019<sup>1</sup> apply.

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

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

## 4 Abbreviations

For the purpose of this document, the abbreviations given in EN ISO 9229, EN 15804:2012+A2:2019<sup>1</sup> and the abbreviations given in Annex A apply.

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

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### 5 General aspects

#### 5.1 Objective of the core PCR for insulation products

The objective is as in EN 15804:2012+A2:2019<sup>1</sup> and the Scope of this document.

#### 5.2 Types of EPD with respect to life cycle stages covered

These PCRs identify two main families of EPDs:

- 1) EPDs for factory made thermal insulation products;
- 2) EPDs for *in situ* thermal insulation products including installation.

To be in compliance with this document, the mandatory and voluntary product stages to be declared for both families are described in Figure 1. This table applies as well for factory made thermal insulation products, that have their applicable technical characteristics (e.g. thermal resistance) at the factory gate as well as for *in situ* formed thermal insulation products that establish their applicable technical characteristics after activities on site.

For an EPD type “Cradle to gate with options” the declaration of modules A4, “Transport” and A5 “Installation” of the construction process stage is optional. Also, the modules B1 to B7 covering the use phase are optional. The declaration of the modules of the other life cycle stages is mandatory.

For an EPD type “Cradle to grave” all modules are mandatory.

For each of these EPD, mandatory and voluntary stages are described as in Figure 1.

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CONSTRUCTION WORKS ASSESSMENT INFORMATION																		
CONSTRUCTION WORKS LIFE CYCLE INFORMATION														SUPPLEMENTARY INFORMATION BEYOND CONSTRUCTION WORKS LIFE CYCLE				
A1 - A3 Product stage			A4 - A5 Construction process stage		B1 - B7 Use stage							C1 - C4 End of life stage				D Benefits and load 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	Use	Maintenance	Repair	Replacement <sup>1</sup>	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		
EPD cradle to grave with options, modules C1-C4 and module D																		
Factory made products	m	m	m	o	m							m	m	m	m	Mandatory		
In situ products before installation	m	m	m	o	m	o	o	o	o	o	o	m	m	m	m	Mandatory		
Installed in situ products	m	m	m	o	m							m	m	m	m	Mandatory		
EPD cradle to grave and module D																		
Any insulation product	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	Mandatory		

### Key

- m Mandatory
- o Optional
- i Mandatory provision of scenario description and technical information

**Figure 1 — Modules applicable for factory made and *in situ* products (including installation)**

## 5.3 Comparability of EPD for construction products

In principle, the comparison of products on the basis of their EPD is defined by the contribution they make to the environmental performance of the construction works. The comparison of the environmental performance of construction products using the EPD information should meet both the required functional and technical requirements. In some cases, construction products are not functionally equivalent; if so, the EPDs could be still used, not to compare but to evaluate the environmental performance and its impacts on the construction works, and shall consider the complete life cycle (all information modules). End use applications are defined in Annex A. Cradle to grave analyses can describe all relevant requirements for the end-use application of the product.

The main purpose of incorporating thermal insulation products is to reduce the energy consumption in the use stage of buildings. Since the reduction of the environmental impacts due to energy savings during the use stage is in most cases much higher than the environmental impacts of the insulation products themselves, focus on good performance on building level during use is more important than comparing insulation products.

## 5.4 Additional environmental information

Additional environmental information shall be as in EN 15804:2012+A2:2019<sup>1</sup> and Annex A of this document.

If benefits of thermal insulation products due to energy saving during the installed life are reported in relation to the environmental performance of a building, they shall be reported as additional information. The environmental impacts shall be calculated using EN 15978. The benefit is the difference between the

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impacts of at least two thermal insulation performances for the same building considered over the whole life cycle. The scenarios shall be fully described in the EPD and sufficient information given to the verifier to verify this.

**5.5 Ownership, responsibility and liability for the EPD**

The ownership, responsibility and liability for the EPD shall be as in EN 15804:2012+A2:2019<sup>1</sup> Communication formats.

The communication format of the EPD shall be in accordance with EN 15942.

**6 Product Category Rules for LCA****6.1 Product category**

The product category referred to in this document includes all the thermal insulation products.

**6.2 Life cycle stages and their information modules to be included**

The life cycle stages shall be as in EN 15804:2012+A2:2019<sup>1</sup> and in addition 5.2 of this document.

**6.3 Calculation rules for the LCA****6.3.1 Functional or declared unit**

The functional or declared unit shall be as in EN 15804:2012+A2:2019<sup>1</sup>.

**6.3.2 Functional unit**

The functional unit shall be as in EN 15804:2012+A2:2019<sup>1</sup> and in addition 5.2 of this document, a functional unit shall contain the thermal resistance (R-value) for the applications as listed in Annex A. If the thermal resistance (R-value) is not relevant for a specific building equipment or a specific civil engineering application, the relevant function for that application shall be defined instead.

**6.3.3 Declared unit**

The declared unit is defined as:

1. For batts, boards and similar:

1 m<sup>2</sup> thermal insulation product for a specific R<sub>D</sub>-value of the product as placed on the market intended to be used for any of the application(s) listed in Annex A or used as generic insulation. Calculation rules can be added for other R<sub>D</sub>-values.

Conversion factors may be added to translate from m<sup>2</sup> and R-value to one or more of the other required unit types in EN 15804:2012+A2:2019<sup>1</sup>: item, mass (kg), volume (m<sup>3</sup>).

2. For pipe sections:

1 m thermal insulation pipe section product with the declared lambda, diameter and thickness, as placed on the market or used to insulate a pipe. Calculation rules can be supplied to account for the various thicknesses, diameters and densities.

Conversion factors may be added to translate from m<sup>1</sup> to one or more of the other required unit types in EN 15804:2012+A2:2019<sup>1</sup>: item, mass (kg), area (m<sup>2</sup>), volume (m<sup>3</sup>).