



**SLOVENSKI STANDARD**  
**oSIST prEN 17328:2023**  
**01-januar-2023**

---

**Pravila za dopolnilne kategorije proizvodov za gradbene proizvode na osnovi mavca**

Complementary product category rules for gypsum-based construction products

Ergänzende Produktkategorieregeln für Bauprodukte auf Gipsbasis

Règles de catégories de produits complémentaires pour les produits de construction à base de plâtre

**Ta slovenski standard je istoveten z: prEN 17328**

---

**ICS:**

91.100.10      Cement. Mavec. Apno. Malta      Cement. Gypsum. Lime.  
Mortar

**oSIST prEN 17328:2023**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 17328**

November 2022

---

ICS 91.100.10

English Version

## Complementary product category rules for gypsum-based construction products

Ergänzende Produktkategorieregeln für Bauprodukte  
auf Gipsbasis

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 241.

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.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.

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.

**Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

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

---

<b>Contents</b>		<b>Page</b>
European foreword.....		4
Introduction .....		5
1	Scope.....	6
2	Normative references.....	6
3	Terms and definitions .....	6
4	Abbreviations .....	6
5	General aspects.....	7
5.1	Objective of the PCR for gypsum-based construction products .....	7
5.2	Types of EPD with respect to life cycle stages covered.....	7
5.3	Comparability of EPD for construction products .....	7
5.4	Additional information .....	8
5.4.1	General.....	8
5.4.2	Additional impact indicators .....	8
5.4.3	Additional information on carbon offset, carbon storage and delayed emissions .....	8
5.4.4	Additional information not derived from LCA.....	8
5.5	Ownership, responsibility and liability for the EPD.....	8
5.6	Communication formats .....	8
6	Product category rules for LCA .....	8
6.1	Product category .....	8
6.1.1	General.....	8
6.1.2	Board products .....	9
6.1.3	Powders products .....	9
6.1.4	Cast products .....	10
6.2	Life cycle stages and their information modules to be included .....	10
6.2.1	General.....	10
6.2.2	A1-A3, Product stage, information modules .....	10
6.2.3	A4-A5, Construction process stage, information modules.....	11
6.2.4	B1-B5, use stage, information modules related to the building fabric.....	11
6.2.5	B6-B7, use stage, information modules related to the operation of the building.....	11
6.2.6	C1-C4, end-of-life stage, information modules .....	11
6.2.7	D, benefits and loads beyond the system boundary, information module.....	11
6.3	Calculation rules for the LCA.....	11
6.3.1	Functional or declared unit.....	11
6.3.2	Functional unit.....	11
6.3.3	Declared unit .....	12
6.3.4	Reference service life (RSL).....	13
6.3.5	System boundaries .....	13
6.3.6	Criteria for the exclusion of inputs and outputs.....	17
6.3.7	Selection of data.....	17
6.3.8	Data requirements.....	17
6.3.9	Developing product level scenarios .....	17
6.3.10	Units .....	18
6.4	Inventory analysis .....	18
6.4.1	Collecting data.....	18
6.4.2	Calculation procedures .....	18

6.4.3	Allocation of input flows and output emissions .....	18
6.5	Impact assessment .....	20
6.5.1	General .....	20
6.5.2	Core environmental impact indicators.....	20
6.5.3	Additional environmental impact indicators.....	20
7	Content of the EPD.....	20
7.1	Declaration of general information .....	20
7.2	Declaration of environmental parameters derived from LCA.....	20
7.2.1	General .....	20
7.2.2	Rules for declaring LCA information per module .....	20
7.2.3	Indicators describing environmental impacts based on Life Cycle Impact Assessment (LCIA) .....	20
7.2.4	Indicators describing resource use and environmental information based on Life Cycle Inventory (LCI).....	20
7.2.5	Information on biogenic carbon content .....	21
7.3	Scenarios and additional technical information .....	21
7.3.1	General .....	21
7.3.2	Construction process stage .....	21
7.3.3	B1-B7 use stage .....	21
7.3.4	End-of-life .....	21
7.4	Additional information on release of dangerous substances to indoor air, soil and water during the use stage .....	21
7.4.1	Indoor air.....	21
7.4.2	Soil and water .....	22
7.5	Aggregation of information modules .....	22
8	Project report.....	22
8.1	General .....	22
8.2	LCA related elements of the project report.....	22
8.3	Documentation on additional information .....	22
8.4	Data availability for verification .....	22
9	Verification and validity of an EPD.....	22
Annex A	(normative) Requirements and guidance on the reference service life .....	23
Annex B	(informative) Waste .....	24
Annex C	(normative) Impact categories and related indicators, methodologies and characterization factors (CF).....	25
Annex D	(informative) End of life formulae .....	26
Annex E	(informative) Schemes to be applied for data quality assessment of generic and specific data .....	27
Annex F	(informative) Energy data for the drying process .....	28
Bibliography	.....	29

**prEN 17328:2022 (E)**

## **European foreword**

This document (prEN 17328:2022) has been prepared by Technical Committee CEN/TC 241 “Gypsum and gypsum based products”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[oSIST prEN 17328:2023](https://standards.iteh.ai/catalog/standards/sist/15495708-4fb5-44f3-9319-da59cdda1b68/osist-pren-17328-2023)

<https://standards.iteh.ai/catalog/standards/sist/15495708-4fb5-44f3-9319-da59cdda1b68/osist-pren-17328-2023>

## Introduction

As in EN 15804:2012+A2:2019, in addition:

This document for gypsum-based products contributes to the further specification and harmonization of public information regarding the environmental impact of gypsum products. In this way, the current document also intends to contribute to a more transparent and smooth exchange of EPDs on a European scale. It offers a common reference for the review of existing PCRs, already developed by several EPD Program Operators, and a basis for the future development of PCRs, e.g. at the national level. It complements the core product category rules for all construction products and services as established in EN 15804:2012+A2:2019.

This document:

- specifies the functional and/or declared unit to be used;
- defines the default system boundaries for gypsum-based construction products;
- defines allocation procedures for the environmental impact of recycling and/or the use of by-products;
- describes the default scenarios and rules for defining scenarios for each of the life cycle information modules A-D;
- provides guidance for the determination of the reference service life (RSL) for gypsum-based construction products.

(standards.iteh.ai)

[oSIST prEN 17328:2023](https://standards.iteh.ai/catalog/standards/sist/15495708-4fb5-44f3-9319-da59cdda1b68/osist-pren-17328-2023)

<https://standards.iteh.ai/catalog/standards/sist/15495708-4fb5-44f3-9319-da59cdda1b68/osist-pren-17328-2023>

**prEN 17328:2022 (E)****1 Scope**

This document provides product category rules (c-PCR), that are complementary to EN 15804:2012+A2:2019, for Type III environmental declarations for gypsum-based products for the construction industry.

This document is intended to be used in conjunction with EN 15804:2012+A2:2019.

**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.

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

EN 16516:2017+A1:2020, *Construction products: Assessment of release of dangerous substances — Determination of emissions into indoor air*

EN ISO 14044:2006,<sup>1</sup> *Environmental management — Life cycle assessment — Requirements and guidelines (ISO 14044:2006)*

EN ISO 16000-9:2006,<sup>2</sup> *Indoor air — Part 9: Determination of the emission of volatile organic compounds from building products and furnishing — Emission test chamber method (ISO 16000-9:2006)*

EN ISO 16000-11:2006, *Indoor air — Part 11: Determination of the emission of volatile organic compounds from building products and furnishing — Sampling, storage of samples and preparation of test specimens (ISO 16000-11:2006)*

**3 Terms and definitions**

For the purposes of this document, the terms and definitions given in EN 15804:2012+A2:2019 apply.

**4 Abbreviations**

For the purposes of this document, the following abbreviations apply.

EPD	Environmental product declaration
PCR	Product category rules
c-PCR	complementary PCR
LCA	Life cycle assessment
RSL	Reference service life

---

<sup>1</sup> As impacted by EN ISO 14044:2006/A1:2018 and EN ISO 14044:2006/A2:2020.

<sup>2</sup> As impacted by EN ISO 16000-9:2006/AC:2007.



## 5 General aspects

### 5.1 Objective of the PCR for gypsum-based construction products

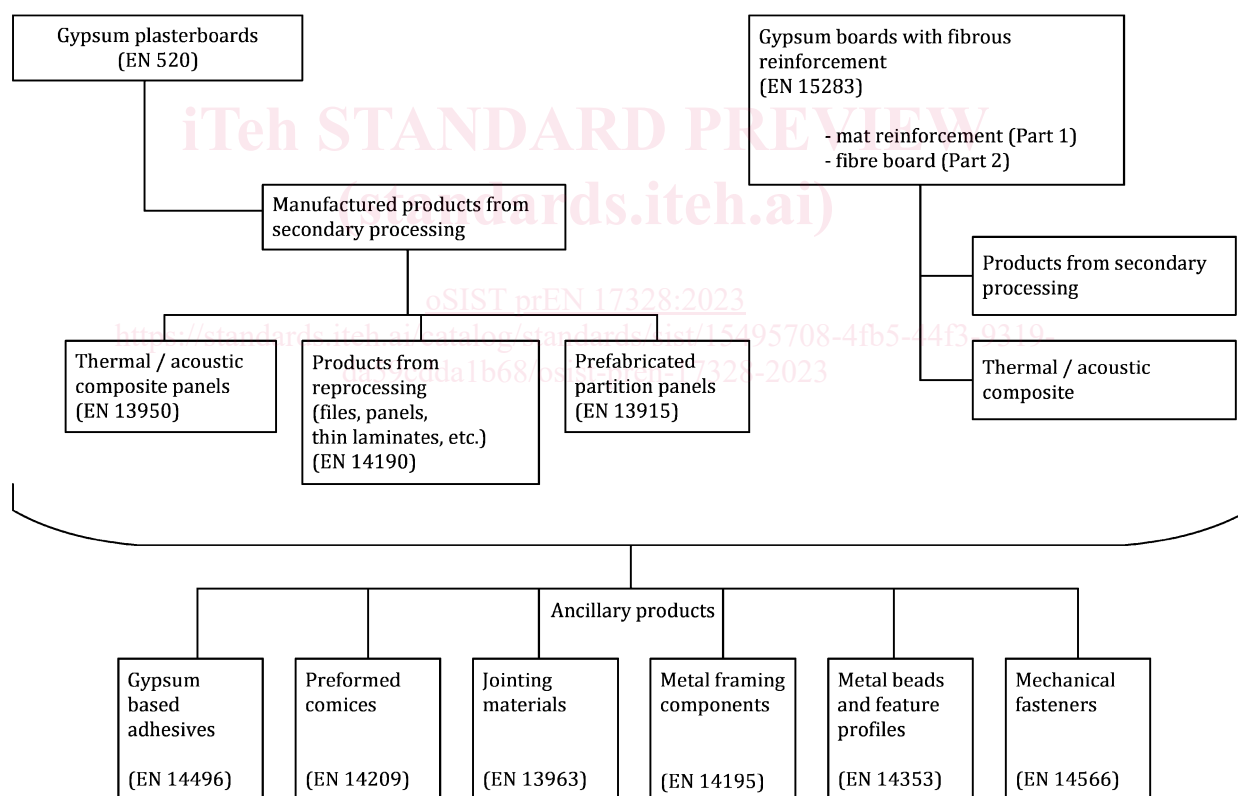
As outlined in EN 15804:2012+A2:2019, an EPD which is in line with the core PCR provides quantified environmental information for a construction product or service on a harmonized and scientific basis. The objective of this c-PCR is therefore to provide additional guidance and/or common rules specifically for gypsum-based construction products. These additional rules are intended to be used together with the core product category rules for construction products, which are outlined in EN 15804:2012+A2:2019.

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

The declaration of the product stage modules A1-A3, A4, A5, B, C1, C2, C3, C4 and D is mandatory<sup>3</sup>, as per EN 15804:2012+A2:2019.

### 5.3 Comparability of EPD for construction products

As in EN 15804:2012+A2:2019. When comparing EPDs for construction products or assembled product components, one should also consider standards of ancillary products, such as illustrated in Figure 1.



**Figure 1 — Overview of standards related to plasterboards, products from secondary processing and ancillary products (cf. EN 520:2004+A1:2009 and EN 15283:2008+A1:2009)**

<sup>3</sup> Wherever tables under module B are filled in with 0, programme operators should have the possibility to delete the respective tables.

## prEN 17328:2022 (E)

### 5.4 Additional information

#### 5.4.1 General

As in EN 15804:2012+A2:2019.

#### 5.4.2 Additional impact indicators

As in EN 15804:2012+A2:2019.

#### 5.4.3 Additional information on carbon offset, carbon storage and delayed emissions

As in EN 15804:2012+A2:2019.

#### 5.4.4 Additional information not derived from LCA

As in EN 15804:2012+A2:2019.

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

As in EN 15804:2012+A2:2019, in addition:

In the EPD, it should be clearly indicated whether the EPD is based on site-specific data or whether it contains average data for a sector/group of plants from the same or different companies.

NOTE A group of manufacturers can be represented by an European and/or National Association with gypsum product manufacturers on the members list.

### 5.6 Communication formats

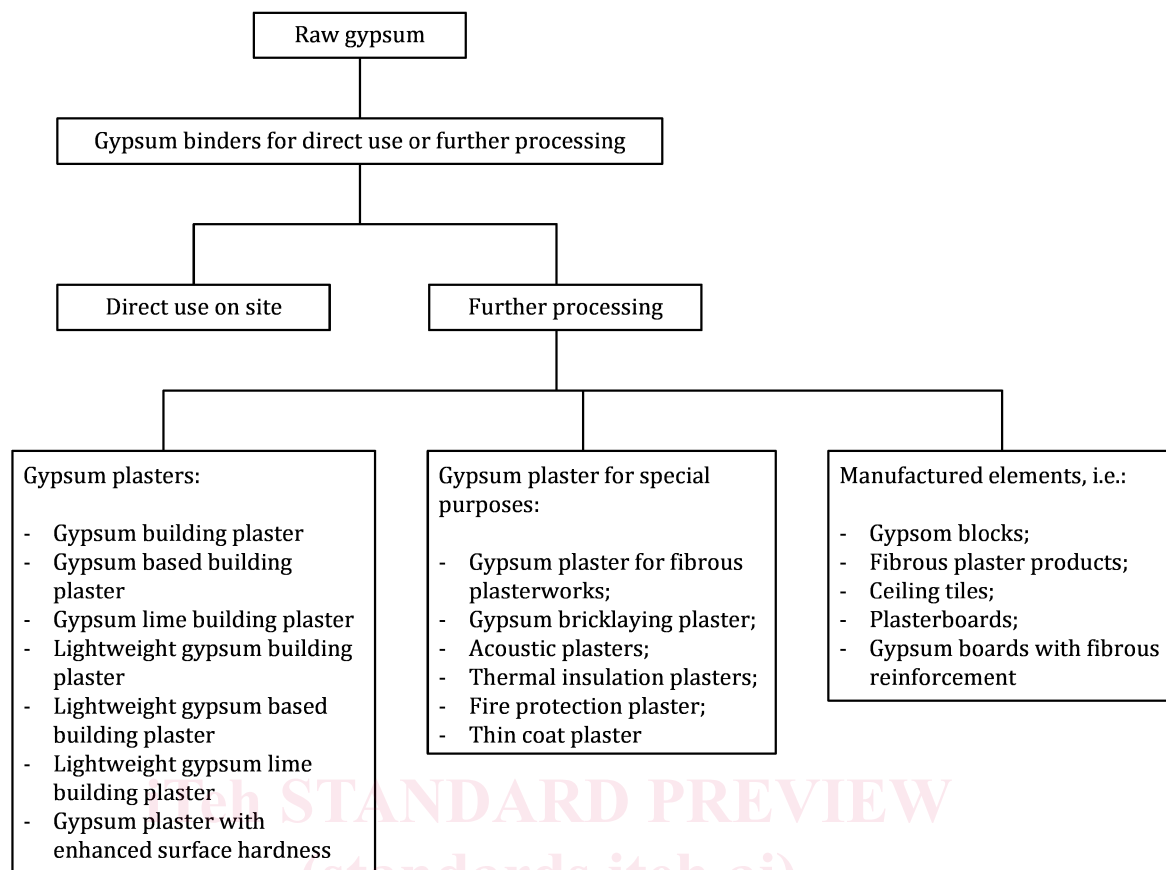
As in EN 15804:2012+A2:2019.

## 6 Product category rules for LCA

### 6.1 Product category

#### 6.1.1 General

The product category referred to in this standard includes all gypsum-based construction products (Figure 2). In this product category, based on the main differences between physical form and application, three product families can be defined: board products, powders products and cast products.



**Figure 2 — Gypsum-based product families (cf. EN 520:2004+A1:2009)**

### 6.1.2 Board products

The board products include:

- gypsum plasterboard (EN 520:2004+A1:2009);
- gypsum board with fibrous mat reinforcement (EN 15283-1:2008+A1:2009);
- gypsum fibre board (EN 15283-2:2008+A1:2009);
- gypsum plasterboard products from reprocessing (EN 14190:2014);
- gypsum plasterboard thermal/acoustic insulation composite or sandwich panels (EN 13950:2014)<sup>4</sup>;
- prefabricated gypsum plasterboard panels with a cellular paperboard core (EN 13915:2017).

### 6.1.3 Powders products

The powders products include:

- gypsum binders and gypsum plasters (EN 13279-1:2008 / EN 13279-2:2014);

<sup>4</sup> Please note that product category rules available for the insulation part of composite or sandwich panels should be considered as well.

**prEN 17328:2022 (E)**

- jointing materials for gypsum plasterboards (EN 13963:2014);
- gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards (EN 14496:2017);
- gypsum based adhesives for gypsum blocks (EN 12860:2001<sup>8</sup>);
- Binders, composite binders and factory-made mixtures for floor screed based on calcium sulfate (EN 13454-1:2004/ EN 13454-2:2019).

**6.1.4 Cast products**

The cast products include:

- gypsum blocks (EN 12859:2011 and EN 15318:2007);
- gypsum elements for suspended ceilings (EN 14246:2006<sup>8</sup>);
- fibrous gypsum plaster casts (EN 13815:2006 and EN 15319:2007);
- preformed plasterboard cornices (EN 14209:2017).

**6.2 Life cycle stages and their information modules to be included****6.2.1 General**

As in EN 15804:2012+A2:2019.

**6.2.2 A1-A3, Product stage, information modules**

As in EN 15804:2012+A2:2019, in addition:

NOTE Product stage A1 includes raw material extraction and processing, and processing of secondary material. For the gypsum industry, this covers - but is not limited to - the provision of natural and synthetic gypsum, natural and synthetic anhydrite and recycled gypsum. In this module raw materials like recycled gypsum (from construction and demolition waste) or potential waste paper use are accounted for as secondary material (indicator SM).

Other types of synthetic gypsum, like FGD gypsum, fluoric acid anhydrite, and other types of gypsum which are generated in other industrial processes are not declared as secondary material (see Table 1), although they substitute the use of natural gypsum and therefore reduce the environmental impacts of excavating natural gypsum tremendously. Since synthetic types of gypsum apart from recycled gypsum are by-products from other industrial processes, they are not wastes and therefore cannot be accounted for as secondary material after purification and reaching end-of-waste status<sup>5</sup>.

---

<sup>5</sup> FGD gypsum is identified as a by-product from combustion. Reference: [1] in bibliography.