
Trajnostnost gradbenih objektov - Okoljske deklaracije za proizvode - Pravila za kategorije proizvodov za montažni lahki beton z odprto strukturo in montažni avtoklavirani celični beton

Sustainability of construction works - Environmental product declarations - Product Category Rules for precast lightweight concrete with an open structure and precast autoclaved aerated concrete

Nachhaltigkeit von Bauwerken - Umweltproduktdeklarationen - Produktkategorieregeln für vorgefertigten haufwerksporigen Leichtbeton und vorgefertigten dampfgehärteten Porenbeton

Contribution des ouvrages de construction au développement durable - Déclarations environnementales sur les produits - Règles régissant les catégories de produits pour le béton préfabriqué de granulats légers à structure ouverte et le béton cellulaire autoclavé préfabriqué

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 18185

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ICS 13.020.50; 91.100.30

English Version

**Sustainability of construction works - Environmental
product declarations - Product Category Rules for precast
lightweight concrete with an open structure and precast
autoclaved aerated concrete**

Contribution des ouvrages de construction au
développement durable - Déclarations
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Nachhaltigkeit von Bauwerken -
Umweltproduktdeklarationen -
Produktkategorieregeln für vorgefertigten
haufwerksporigen Leichtbeton und vorgefertigten
dampfgehärteten Porenbeton

This European Standard was approved by CEN on 22 June 2026.

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Contents	Page
European foreword	4
Introduction	5
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions.....	7
4 Abbreviations.....	9
5 General aspects.....	9
5.1 Objective of the c-PCR.....	9
5.2 Types of EPD with respect to life cycle stages covered	10
5.3 Comparability of EPD for construction products	10
5.4 Additional environmental information	10
5.5 Ownership, responsibility, and liability for the EPD.....	10
5.6 Communication formats.....	11
6 Product category rules for LCA	11
6.1 Product category	11
6.2 Life cycle stages and their information modules to be included	11
6.2.1 General.....	11
6.2.2 A1-A3, Product stage, information modules	11
6.2.3 A4-A5, Construction process stage, information modules	13
6.2.4 B1-B5, Use stage, information modules related to the building fabric.....	13
6.2.5 B6-B7, use stage, information modules related to the operation of the building.....	13
6.2.6 C1-C4 End-of-life stage, information modules	14
6.2.7 D, Benefits and loads beyond the system boundary, information module	14
6.3 Calculation rules for the LCA	14
6.3.1 Functional or declared unit.....	14
6.3.2 Functional unit.....	14
6.3.3 Declared unit.....	14
6.3.4 Reference service life (RSL)	14
6.3.5 System boundaries	15
6.3.6 Criteria for the exclusion of inputs and outputs.....	22
6.3.7 Selection of data	22
6.3.8 Data quality.....	23
6.3.9 Developing product level scenarios.....	23
6.3.10 Units.....	29
6.4 Inventory analysis	29
6.4.1 Collecting data.....	29
6.4.2 Calculation procedures.....	29
6.4.3 Allocation of input flows and output emissions	29
6.4.4 Information on biogenic carbon content	29
6.5 Impact assessment	30
6.5.1 General.....	30
6.5.2 Core environmental impact indicators.....	30
7 Content of the EPD	30
7.1 Declaration of general information.....	30

7.2	Declaration of environmental indicators derived from LCA	30
7.2.1	General	30
7.2.2	Rules for declaring LCA information per module	30
7.2.3	Indicators describing environmental impacts based on life cycle impact assessment (LCIA)	30
7.2.4	Indicators describing resource use and environmental information based on life cycle inventory (LCI)	31
7.2.5	Information on biogenic carbon content	31
7.3	Scenarios and additional technical information	31
7.3.1	General	31
7.3.2	Construction process stage	31
7.3.3	B1-B7 use stage	31
7.3.4	End-of-life	32
7.4	Additional information on release of dangerous substances to indoor air, soil and water during the use stage	32
7.4.1	Indoor air	32
7.4.2	Soil and water	32
7.5	Aggregation of information modules	32
8	Project report	32
8.1	General	32
8.2	LCA-related elements of the project report	32
8.3	Documentation on additional information	32
8.4	Data availability for verification	32
9	Verification and validity of an EPD	33
	Annex A (informative) Product stage guidance for the definition of system boundaries	34
	Annex B (normative) Re-carbonation of elements	35
	Annex C (informative) Scenarios	38
	Bibliography	41

EN 18185:2026 (E)**European foreword**

This document (EN 18185:2026) has been prepared by Technical Committee CEN/TC177 “Prefabricated reinforced components of autoclaved aerated concrete or lightweight aggregate concrete with open structure”, 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 January 2027, and conflicting national standards shall be withdrawn at the latest by January 2027.

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 has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

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Introduction

This document provides rules for environmental product declarations (EPD) for prefabricated reinforced components. It complements the core product category rules for all construction products and services given in EN 15804:2012+A2:2019, *Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products*.

This document provides additional rules for environmental product declarations (EPD) of prefabricated reinforced components. It complements the core rules for all construction products and services as established in EN 15804:2012+A2:2019.

EPD information is expressed in information modules as defined in EN 15804:2012+A2:2019, which allow easy organization and expression of data packages throughout the life cycle of concrete and concrete elements. The approach requires that the underlying data should be consistent, reproducible and comparable.

In line with EN 15804:2012+A2:2019 the EPD is expressed in a form that allows aggregation to provide complete information for buildings. This document does not deal with aggregation at the building level nor does this document describe the rules for applying EPD in a building assessment.

This document refers to and mirrors relevant parts of EN 16757:2022, *Sustainability of construction works — Environmental product declarations — Product Category Rules for concrete and concrete elements*, drafted to cover concrete products to CEN/TC 177. In respect of the mechanism for the re-carbonation of cementitious components this document references and follows the calculation methodology according to EN 16757:2022, informative Annex G 'CO₂ uptake by carbonation — Guidance on calculation', Clause G.2.

According to [5] in the bibliography, the carbonation runs linear in terms of time, and a carbonation degree of 80 % after 50 years may be assumed. Time periods lower than 50 years can be calculated according to these conditions with a linear relation. This condition can be used in all clauses where relevant.

The document deals with a limited number of quantifiable parameters as predefined in EN 15804:2012+A2:2019. Future revisions of EN 15804:2012+A2:2019 can lead to the incorporation in this document of additional predetermined parameters. This document provides the means for developing a Type III environmental declaration for prefabricated reinforced components in the context of the suite of standards that are intended to assess the sustainability of construction works.

This suite of standards includes:

- EN 206-1:2026, *Concrete - Specification, performance, production and conformity - Part 1: Performance, requirements, factory production control and assessment criteria for individual values*
- EN 459-1:2015, *Building lime - Part 1: Definitions, specifications and conformity criteria*
- EN 15643:2021, *Sustainability of construction works — Framework for assessment of buildings and civil engineering works*
- EN 15978:2026, *Sustainability of construction works — Assessment of environmental performance of buildings — Calculation methods*
- EN 15804:2012+A2:2019, *Sustainability of construction works — Environmental product declaration — Core rules for the product category of construction products*
- EN 15941:2024, *Sustainability of construction works — Environmental product declarations — Data quality for the environmental assessment of products and construction works — Selection and use of data*
- EN 15942:2021, *Sustainability of construction works — Environmental product declarations — Communication format — Business to business*

EN 18185:2026 (E)

- CEN/TR 16970:2016, *Sustainability of construction works — Guidance for the implementation of EN 15804*
- EN 17472:2022, *Sustainability of construction works — Sustainability assessment of civil engineering works — Calculation methods*
- EN 17672:2022, *Sustainability of construction works — Environmental product declarations — Horizontal rules for business to consumer communication*
- EN 17680:2023, *Sustainability of construction works — Evaluation of the potential for sustainable refurbishment of buildings*

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1 Scope

This document provides product category rules (PCR) guidance for the development of Type III environmental declarations for prefabricated reinforced components of autoclaved aerated concrete or lightweight aggregate concrete with open structure according to EN 15804:2012+A2:2019.

This document defines the parameters to be reported, the EPD types (and life cycle stages) to be covered, the rules to be followed for generating life cycle inventories (LCI) and conducting life cycle impact assessments (LCIA), and the data quality to be used in the development of EPDs.

In addition to the common parts of EN 15804:2012+A2:2019, this document provides guidance for elements made as prefabricated reinforced components of autoclaved aerated concrete or lightweight aggregate concrete with open structure:

- defines the system boundaries;
- defines the modelling and assessment of material-specific characteristics;
- defines allocation procedures for multi-output processes along the production chain;
- defines allocation procedures for reuse and recycling;
- includes the rules for calculating the LCI and the LCIA underlying the EPD;
- provides guidance/specific rules for the determination of the reference service life (RSL);
- gives guidance on the establishment of default scenarios;
- gives guidance on default functional units for elements.

This document is intended to be used for cradle to gate, cradle to gate with options or cradle to grave assessments, when the intention is clearly 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 15804:2012+A2:2019,¹ *Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15804:2012+A2:2019, Clause 3 and the following 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/>

3.1

aggregate

granular material used in construction

Note 1 to entry: Aggregate may be natural, manufactured, or recycled.

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

EN 18185:2026 (E)

[SOURCE: EN 12620:2002+A1:2008, 3.1 and EN 13055-1:2002]

3.2**lightweight aggregate**

aggregate of mineral origin having a particle density not exceeding 2 000 kg/m³ (2,00 Mg/m³) or a loose bulk density not exceeding 1 200 kg/m³ (1,20 Mg/m³)

[SOURCE: EN 13055-1:2002, 3.2]

3.3**carbonation**

carbon dioxide reaction with calcium and magnesium containing minerals to form carbonates *resulting in the sequestration of CO₂*

3.4**LAC****lightweight aggregate concrete with open structure**

concrete with an open and porous structure

Note 1 to entry: LAC has a dry bulk density between 400 kg/m³ and 2,000 kg/m³ and is produced with lightweight aggregates (LWA), cement, concrete additives, and admixtures.

[SOURCE: EN 1520:2026, 3.1.2, modified – open and porous structure have been added]

3.5**autoclaved aerated concrete****AAC**

concrete that is manufactured from binders such as cement and/or lime combined with fine siliceous-based material, cell-generating material, and water

Note 1 to entry: The raw materials are mixed and cast into moulds where the mix is allowed to rise and set into cakes, and after this part of the process, the cake is cut into the required sizes of components and cured with high-pressure steam in autoclaves.

[SOURCE: EN 12602:—², 3.1]

3.6**element**

precast component with or without reinforcement of autoclaved aerated concrete or lightweight aggregate concrete with open structure

3.7**cement**

finely ground inorganic material which, when mixed with water, forms a paste that sets and hardens by means of hydration reactions and processes and which, after hardening, retains its strength and stability even under water

[SOURCE: EN 206-1:2026, 3.2.6]

² Under preparation. Stage at the time of publication: FprEN 12602:2026.

3.8**addition**

finely-divided-inorganic constituent used in concrete in order to improve certain properties or to achieve special properties

[SOURCE: EN 206-1:2026, 3.2.1]

3.9**admixture**

constituent added during the mixing process in small quantities to modify the properties of fresh or hardened concrete

[SOURCE: EN 206-1:2026, 3.2.2]

3.10**lime**

calcium oxide and/or hydroxide, and calcium-magnesium oxide and/or hydroxide produced by the thermal decomposition (calcination) of naturally occurring calcium carbonate (e.g. limestone, chalk, shells) or naturally occurring calcium magnesium carbonate (e.g. dolomitic limestone, dolomite)

[SOURCE : EN 459-1:2015, 3.1]

4 Abbreviations

Abbreviations given in EN 15804:2012+A2:2019, Clause 4 and the following apply.

FU	functional unit
AAC	autoclaved aerated concrete
LAC	lightweight aggregate concrete with open structure
c-PCR	complementary product category rules

5 General aspects**5.1 Objective of the c-PCR**

This c-PCR aims to provide rules specific to element units for the application of EN 15804:2012+A2:2019 and EN 15941:2024. In addition to the objectives of EN 15804:2012+A2:2019, 5.1, this document aims to:

- define the parameters being declared collated, and reported;
- describe 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;
- to define rules for the development of scenarios;
- to communicate EPDs and environmental information about elements;
- to ensure that comparisons between construction products are only carried out in the context of their application in construction works.

This c-PCR enables transparency for the EPD development for elements.

EN 18185:2026 (E)

5.2 Types of EPD with respect to life cycle stages covered

EN 15804:2012+A2:2019, 5.2 applies (see Figure 1).

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 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
Cradle to gate with modules C1-C4 and module D	Mand.	Mand.	Mand.									Mand.	Mand.	Mand.	Mand.	Mandatory
Cradle to gate with options, modules C1-C4 and module D	Mand.	Mand.	Mand.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Mand.	Mand.	Mand.	Mand.	Mandatory
Cradle to grave and module D	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mandatory
Cradle to gate ²	Mand.	Mand.	Mand.													
Cradle to gate with options ³	Mand.	Mand.	Mand.	Opt.	Opt.											

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

SOURCE: EN 15804:2012+A2:2019, 5.2

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

5.3 Comparability of EPD for construction products

EN 15804:2012+A2:2019, 5.3 applies.

5.4 Additional environmental information

EN 15804:2012+A2:2019, 5.4 applies.

5.5 Ownership, responsibility, and liability for the EPD

EN 15804:2012+A2:2019, 5.5 applies.