CPR acquis – Input code

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**Version 1.0**

CPR acquis — Product group code[[1]](#footnote-2)

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# Foreword

|  |
| --- |
| Template and examples on how the input for the CPR acquis “fast track” should be delivered. Content to be completed and explanations are included in red.Examples are provided in blue and should be removed from the document submitted. They are expected to serve as guidance and may not fit the specific situation of the product group addressed by the document. This template includes examples related to precast concrete products and windows and doors. |

CEN/TC XXX “Title” drafted this document.

This document addresses product group and code covered according to Table A.1 – describe any extension or limitation to the product group described.

In case the document includes any extension or limitation to the product group described, the document including clauses 1 and 2 should be delivered for validation.

This document addresses precast normal/lightweight/autoclaved aerated concrete products - PCP

This document is currently under CEN consultation/first submission for comments to the CPR acquis steering group/second submission for comments to the CPR acquis steering group/…

Introduction

Introductory text

The CPR acquis process offers the possibility to CEN and CENELEC/TC to deliver preliminary inputs under the “fast track procedure” to speed up the development of the technical content necessary to develop standardisation request in the context of Regulation (EU) No 305/2011.

The drafting of the standardisation request by the European Commission will take into consideration this document and the inputs provided by the CPR acquis experts. Additional consultations and discussions may take place to ensure legal and technical consistency.

Version 1.0 was updated according to the text of the new Construction Products Regulation, minor editorial changes in the legal text may require an update of this document.

# Scope

This document provides inputs to the CPR acquis group about the content of the high-level structure of harmonized technical specifications related to product group covered according to Table A.1 – describe any extension or limitation to the product group described (see foreword).

This document provides inputs to the CPR acquis group about the content of the high-level structure of harmonized technical specifications related to the product area of “precast normal/lightweight/autoclaved aerated concrete products” - PCP

This document provides inputs related to the definition of the scope of the product area. This outcome is identified as milestone I according to the CPR acquis general structure.

The scope defined in milestone I renews entirely the scope of Mandate XX./The scope defined in milestone I renews only part of the scope of Mandate XX.

The scope defined in Milestone I does not extend the scope of Mandate XX./The scope defined in Milestone I extends the scope of Mandate XX (e.g., by introducing new products or/and intended uses).

This document also provides inputs related to the essential characteristics, assessment methods, classes of performance, threshold levels, requirements, and information needs. This outcome is identified as milestone III according to the CPR acquis general structure.

# Milestone I

## List of products covered

Description of the product families including specific conditions under a general perspective.

This product group covers precast concrete products in three different families depending on the type of concrete used:

* Family I normal (non-lightweight or autoclaved aerated)
* Family II lightweight
* Family III autoclaved aerated

Description of the products covered, the related mandates, and the relevant applications and limitations. If the products are covered by EADs this shall also be reported.

Products in Table 1 are included in this product group.

Table 1 List of products covered by this product group

| Products  | Families | Mandate | Applications | Limitations |
| --- | --- | --- | --- | --- |
| Balcony elements | I | New |  | Excluding other products used for this purpose (e.g. slabs) |
| Beams and blocks – beams | I | M100 |  |  |
| Beams and blocks – blocks  | I & II | M100 |  | Only concrete, lightweight concrete, clay and EPS blocks |
| Box culverts | I, II & III | M100 |  | Families II & III only for small box culverts used to form channels for the enclosure of services |
| … |  |  |  |  |

Description of the products not covered but related to this product group and justification for its exclusion.

Products in Table 2 are not included in this product group for the reasons indicated.

Table 2 List of products not covered by this product group

| Products  | Code | Reasons |
| --- | --- | --- |
| Crash barriers, parapets | CIF | Covered by other mandate. Excluded to keep consistency with road restraint systems covered by the circulation fixtures mandate |
| Kerb units | FLO | Covered by other mandate. Excluded to keep consistency with floorings covered by the floorings mandate |
| … |  |  |

Products in Table 2 will be part of the scope of this product family only in relation to the material and manufacturing process. Information and deliverables related to these products will be provided to the relevant groups dealing with these products for their consideration.

## List of materials for manufacturing the identified products

Describe the materials used for the manufacturing of the products. In case the product group is not clearly delimited, additional information about the inclusions or exclusions shall be provided.

Precast concrete is a composite material. Concrete is always one of the products included but other constituents may be present.

### Materials commonly used

Describe the materials commonly used for the manufacturing of the product in text or a table.

Table 3 includes the materials commonly used for the manufacturing of precast concrete.

Table 3 List of materials commonly used

| Material | Type | Classification | Additional information |
| --- | --- | --- | --- |
| Mixing water  | - | - | EN 1008 Mixing water for concrete |
| Aggregates (AGG)  | Coarse | Natural/reclaimed/recycled/artificialLight/normal density | EN 1097-6 Tests for mechanical and physical properties of aggregates · Part 6: Determination of particle density and water absorption |
| Fine |
| Sand |
| Binder (CEM) | Cement | CEM I/CEM II/CEM III/CEM IV/CEM V/CEM VI | EN 197-1 Cement - Part 1: Composition, specifications and conformity criteria for common cements |
| … |  |  |  |

### Materials which might be incorporated in the products

Describe the materials which might be incorporated in the manufacturing of the product in text or a table.

Table 4 includes the materials which might be incorporated in the manufacturing of precast concrete.

Table 4 List of materials commonly used

| Material | Type | Classification | Additional information |
| --- | --- | --- | --- |
| Additions (AGG, CMG) | Type 1 | Pigments/filler aggregate | EN 12878 Pigments for the colouring of building materials based on cement and/or limeEN 12620 Aggregates for concreteEN 13055 Lightweight aggregates |
| Type 2 | Fly ash/silica fume/GGBS | EN 450-1 Fly ash for concreteEN 13263-1 Silica fume for concreteEN 15167-1 Ground granulated blast furnace slag for use in concrete, mortar and |
| Reinforcement (RPS) | Non-prestressed | Bar/wire/mesh/cage/lattice girder/continuity strips | EN 10080 Steel for the reinforcement of concrete - Weldable reinforcing steel - GeneralEN 15630 series – Steel for the reinforcement and prestressing of concrete |
| … |  |  |  |

### Materials rarely incorporated in the products but relevant

Describe the materials which are not usually incorporated in the manufacturing of the product but may be relevant for the performance of the product in text or a table.

Table 5 includes the materials which are not usually incorporated in the manufacturing of the precast concrete product but may be relevant for its performance.

Table 5 List of materials rarely incorporated

| Material | Type | Classification | Additional information |
| --- | --- | --- | --- |
| Woodchips | - | - | EN 14474 Precast concrete products - Concrete with wood-chips as aggregate |
| Lifting devices (FIX) | - | Produced by the manufacturer/purchased | TR 15728 Design and use of inserts for lifting and handling of precast concrete elementsEN 13155 Crane - Safety - Non-fixed load lifting attachments |
| … |  |  |  |

## Intended uses

Description of the intended uses and their relationship with the products identified in clause 2.1 in a text or table.

Many intended uses are possible for precast concrete products. Some of them are general and others more specific. Referring only to one intended use may be too restrictive because products are often subject to several intended uses.

Table 6 contains a classification of the intended use as structural and/or non-structural and also offer additional information on the applications and limitations.

Additional considerations as regards the intended use may be required in relation to the applicable list of essential characteristics, in particular when dealing with release of dangerous substances to soil and ground water.

Table 6 List of products and intended uses

| Products  | Families | Intended uses |
| --- | --- | --- |
| Balcony elements | I | Structural  |
| Beams and blocks – beams | I | Structural |
| Beams and blocks – blocks  | I & II | Structural |
| Box culverts | I, II & III | Structural and non-structural |
| … |  |  |

## List of the form of the identified products

Description of the forms and their relationship with the products identified in clause 2.1 in text or a table.

There are many forms used for the precast concrete products. A classification based on forms is not applicable to these products.

## Components or key parts

Description of the main components of the product or of the key parts. This paragraph shall be particularly accurate when the product includes components or key parts covered by their own harmonised technical specification.

The glass is a key part of the window. Glass is covered by product harmonised standards developed under Mandate 135 (product group GLA). Only when the performance of the glass represents the performance of the window, the performance of glass declared in the DoP represent the performance of the window without additional assessment.

## Interactions with other product groups

Description of the interactions with other groups, voluntary standards and other regulatory frameworks and the need for coordination, in relation to the materials describe in clause 2.2.

Coordination with the product groups listed in Table 7 may be required.

Table 7 List of interactions with other product groups

| Products  | Code | Interaction |
| --- | --- | --- |
| Reinforcing and prestressing steel for concrete (and ancillaries) Post tensioning kits | RPS | Reinforcement performance to be declared as part of the declaration of performance of the precast concrete product. Classes may apply. |
| Concrete | CMG | Standards include references to EN 206 which is not harmonised and establish additional obligations linked to national provisions. Additional assessment about potential barriers to trade is required. |
| … |  |  |

Directive (EU) 2016/797 on the interoperability of the rail system within the European Union covers some products included in the scope of this product group. Additional analysis in collaboration with the European Commission are required in relation to these products.

## Regulatory provisions by Member States which are problematic

Description of the regulatory provisions related to the products identified in clause 2.1. The list should be as exhaustive as possible and include the legal reference according to the following instructions:

**State code and type of provision**

Country code followed by the relevant code from this list:

* A.1 National legal acts in force
* B.1 Regional or local legal acts in force
* C. Standards applied at national level
* D. National approvals schemes (Certificates, Declarations of conformity, compliance statements…), if applicable
* E. Technical specifications – Working sheets, if applicable
* F. Provisions of public or private bodies, if applicable

**Identification and nature of the provision**

Legally established acts (e.g., laws, decrees, orders, etc.) notified under the CPD and the CPR starting from the date of the entering into force of Directive 98/34 of the European Parliament and of the Council, or that were part of the Acquis when the accession to the European Union took place (Codes A and B);

Working practices, not having the same legal status, issued by public bodies or private bodies acting as a public undertaking, or acting as a public body based on a monopoly position or under a public mandate (Codes C to F).

For each row of this first column of all sheets the following information should be provided:

* the notification number (where relevant),
* the title,
* the number,
* the name, and
* the issuing body allowing the univocal identification of the provision
* the reason why this provision is problematic

The provisions listed shall only be those having a technical significance on construction product characteristics and/or product requirements.

**Construction product**

For each provision included in the first column the following information related to the application of the provision should be provided:

* name, and, if relevant
* material
* form, and
* composition

**Intended use(s)**

For each of the products listed in the second column, the intended use(s), as envisaged by the relevant listed provision, should be provided.

**Technical data requested** (Threshold levels, classes, or any other required data on the product)

For each of the products listed in the second column the relevant technical data as envisaged in the relevant listed provision should be provided:

* product groups,
* characteristics,
* performance levels,
* threshold levels,
* classes,
* other technical requirements,

**Additional information / remarks**

Additional information to the provision such as.:

* relevant supporting documents, referred to in the provision
* possible interactions with other provisions
* other remarks

Products in Table 8 are included in this product group.

Table 8 List of regulatory provisions and products

| State code and type of provision | Identification and nature of the provision | Construction product | Intended use(s) | Technical data requested(Threshold levels, classes or any other required data on the product) | Additional information / remarks |
| --- | --- | --- | --- | --- | --- |
| FR – A.1 | Order 21 November 2002 modified related to reaction to feu of CP. | All construction products except gates, industrial and garage doors |  | Classes | Reaction to fire |
| … |  |  |  |  |  |

# Milestone III

## Essential characteristics and assessment methods

### List of essential characteristics and assessment methods

Annex B, includes the list of essential characteristics identified for the products listed in Milestone I.

Essential characteristics must be performance based and assessment methods must be standardised at European level. The development of new or the update of assessment methods can also be included in comments when necessary.

The list shall always include the relevant list of essential characteristics related to the release of dangerous substances. For the development of this list, in addition to the regulatory requirements identified in Milestone I, the existing mandates and draft mandates are a good reference. In case no mandate or draft mandate applicable to the product offers information the candidate list of CEN/TC 351 can also be used as reference. As regards the assessment methods applicable to them, horizontal standards developed by CEN/TC 351 must be used by default. Any deviation needs to be properly justified.

The list shall always include the environmental sustainability essential characteristics already available in this draft. Other environmental sustainability essential characteristics may be added if they respond to a regulatory need, they can be assessed according to a standardised method at European level and they do not enter into conflict with other essential characteristics or provisions of the CPR.

The list contains the essential characteristics and information related to them:

**Essential characteristic**

name of the essential characteristic including additional relevant information separated by hyphens. In particular

* the word “testing”, “calculation” or “tabulated values” when different options are possible.
* the name or subcategory of the product when the essential characteristic is product specific e.g., shuttering blocks.
* additional information about the property assessed when more than one apply e.g. tensile strength and longitudinal load.

**Assessment method**

assessment method as a reference to the document in which the main assessment method is available (the standard may offer additional information referring to other standards as regards sampling or test rig conditions). Only one assessment method is possible for each essential characteristics, if more than one assessment method is required a separate essential characteristic must be included e.g., if the essential characteristic is assessed using testing or calculation, it should be included twice and the text “ - testing” and “ - calculation” in their names.

**Dimensions**

dimensions of the performance: required to check consistency.

**Statistical value**

statistical value usually expressed as the fractile declared (e.g. fractile 50% is the median) and the confidence interval (proportion of confidence intervals that contain the value declared). This approach can be defined as such in the standard or using a simplified approach (e.g. characteristic value).

**Units**

units in which the performance is expressed: required to facilitate performance comparison, it needs to be consistent with the assessment method and with the dimensions of the performance.

**Rounding**

the rounding used for the declaration.

### Environmental sustainability

The assessment and declaration of environmental sustainability is included according to the outcome of the discussions in the Sub-Group dealing with this topic.

#### List of essential characteristics

The list of essential characteristics related to environmental sustainability is available in Annex B and includes an additional essential characteristic for the declaration of the Reference service life (RSL) to ensure the correct delivery of information to be used in the building assessment.

Define specific rules for the determination of the RSL

RSL needs to be defined according to the required service life determined in the project (made to measure products) or indicated by the manufacturer (off the shelf products).

#### Functional/declared unit

The specific rules about the determination of the functional/declared unit to be used will be included in the complementary product category rules (c-PCR) and in the relevant standard. The declared unit shall be consistent with the other essential characteristics declared and refer to the RSL and to the applicable product type. The functional/declared unit shall relate to the product including all its constituents and should be as close as possible to the final product delivered by the manufacturer. If at least one environmental characteristic is declared, RSL shall also be declared because it is relevant to the calculation.

Define the general approach for the determination of the functional/declared unit, in particular if the product type as defined in the DoP cannot be applied as declared unit.

#### Scenarios

The declaration of performance of each essential characteristic except RSL will contain a separate value per module and scenario as described in Table 9.

Complete the table with all relevant scenarios. The list should be as exhaustive as possible and may refer to scenarios available in preparatory documents of other subgroups e.g., the scenarios developed for the subgroups PCP or SMP.

Table 9 Environmental sustainability scenarios

| Module | Harmonised scenario | Description | Comments |
| --- | --- | --- | --- |
| A1-A3 | N/A | calculation according to the constituents and manufacturing process |  |
| A4 | transport by lorry | transport of the declared unit by lorry, value declared per km | different scenarios to be defined in the standard depending on the size and weight |
| A5 | lifting, erecting, and fixing - electric machinery | required tasks to finalise the assembly of the product | value to be used for the final calculation together with the applicable energy mix impactse.g., crane energy consumption |
| … |  |  |  |

The c-PCR document will provide general information about the scenarios and every standard will define product specific rules, when necessary.

### Additional information about essential characteristics

Describe additional issues related to the essential characteristics such as interaction between them, ways to ensure a performance based approach and additional information to understand the tables provided.

#### Calculation aided by testing

Characteristics identified as “calculation aided by testing” are validations of the calculation, but they cannot be considered pass/fail characteristics or thresholds because they are based on the results of calculation. They are included in the table including a cross reference to the relevant calculation. The statistical value reflects the validation conditions. These essential characteristics contain the name of the product for which the testing is relevant in the name of the characteristic.

The expression of results as Boolean means that the declaration will be 1 if the ratio failure load tested vs failure load calculated is equal or greater that the validation criteria (usually 95%) and 0 if it is lower than the validation criteria.

## Documents to be provided together with the declaration of performance

Clause to be removed if not applicable.

These documents relate to important aspects of the products (sometimes identified as essential requirements according to the CPD) relevant to express unequivocally the structural behaviour in the context of the assessment of the product performances. These aspects cover, but are not limited, to dimensions, tolerances on dimension and shape, drawings, and structural design calculation. The standardisation request will indicate a non-exhaustive list of necessary documents that the manufacturer shall provide together with the declaration of performance (according to Commission Delegated Regulation (EU) No 574/2014). In the harmonised technical specifications, a standard of reference can be indicated where available and provided that it complies with the technical and legal requirements of the CPR. In case the Declaration of Performance is made available online, Commission Delegated Regulation (EU) No 157/2014 applies.

## Aspects implemented as factory production control required checks

Clause to be removed if not applicable.

Some aspects identified as essential cannot be included as essential characteristics in the meaning of the CPR because they are not based on performance, they reflect processes or verifications indirectly related to the final product or they are not based on a European harmonised approach. Nevertheless, these characteristics are relevant to ensure constancy of performance and therefore cannot be neglected.

These characteristics are included as a verification check in the factory production control. These characteristics will be listed in the standardisation requests as factory production control checks. Some of these checks may be applicable under certain circumstances.

Manufacturers may define their own factory production control approach, but it shall include the relevant checks according to the relevant standard including, when necessary, tests or documentary check of test reports.

Declaration of performance will refer to the notified body certifying the factory production control when applicable (AVCP systems 1+, 1 and 2+).

Table 10 includes the FPC checks and explanations about their application.

Table 10 List of complementary FPC checks

| Type of FPC | FPC check | Applicable |
| --- | --- | --- |
| detailing | dimensional tolerances | for all products |
| concrete | cement type | when relevant for the durability calculations provided |
| cement content  |
| cement content of alkali |
| cement strength class |
| … |  |  |

## Classes and thresholds

Classes and thresholds depend on the essential characteristics and their products. Any threshold level or class included in future standards related to this product group must be included in the standardisation request or in a future delegated act, but this second route should be avoided.

Annex C includes the list of classes and their values for each essential characteristic identified to be declared according to classes.

Annex D includes a list of products and the relevant essential characteristics, and thresholds and classes related to them.

Additional information about classes and thresholds

## Product requirements

This document reports product inherent requirements as foreseen in Annex III to the revised Construction Products Regulation.

This information is relevant to characteristics that cannot be expressed using essential characteristics (non-performance based) but nevertheless relevant for the product. Cells may be left empty if they are not relevant/applicable.

### Requirements ensuring the appropriate functioning and performance of products

Products shall be designed, manufactured and packaged in such a way that:

1. the intended purpose is effectively and reliably fulfilled;
2. the fulfilment of the declared performance is not impaired;
3. the fulfilment of the safety and environmental requirements set out in accordance with points 2.1 and 3.1 is not impaired;
4. the functionality of the products is maintained.

The product requirements referred to in 3.5.1 shall be specified according to the elements included in Table 11.

Table 11 Requirements ensuring the appropriate functioning and performance of products

|  |  |  |  |
| --- | --- | --- | --- |
| Requirements[please do not modify] | Applicability | Description of the requirement | Justification and/or comment |
| (a) The use of specific materials which can be specified also in terms of their chemical composition |  |  |  |
| (b) The specific dimensions and shapes of products or their components | Geometric compatibility of beam and block systems |  Beam and block detailing shall match and properly transfer the loads | Incompatibility of beam and block systems may result in structural failure |
| (c) the use of certain components which can be specified also in terms of materials, dimensions and shapes |   |   |   |
| (d) the use of certain accessories and requirements for them  |   |   |   |
| (e) the ease of installation and deinstallation |   |   |   |
| (f) the ease of maintenance or the lack of maintenance required for the expected life span |   |   |   |
| (g) the characteristics of the product, including its cleanability, scratch resistance and break resistance, under usual operation conditions |   |   |  |

### Inherent product safety requirements

Safety relates to professionals (workers) and laypersons (consumers, occupants), while they transport, install, maintain, use or dismantle the product, as well as while they treat the product for its end of life phase or its reuse or recycling.

Products shall be designed, manufactured, and packaged in such a way that inherent product safety risks identified in Table 12 are addressed in accordance with the state of the art:

Table 12 Inherent product safety requirements

|  |  |  |  |
| --- | --- | --- | --- |
| Requirements[please do not modify] | Applicability | Description of the requirement | Justification and/or comment |
| (a) chemical risks due to leaking or leaching  |  |  |  |
| (b) the risk of unbalanced composition in terms of substances resulting in flawed, safety- relevant functioning of products;  |  |  |  |
| (c) mechanical risks;  |  |  |  |
| (d) mechanical failure;  |  |  |  |
| (e) physical failure;  |  |  |  |
| (f) risks of electric failure  |  |  |  |
| (g) risks linked to electricity supply breakdown;  |  |  |  |
| (h) risks linked to unintended charge or discharge of electricity;  |  |  |  |
| (i) risks linked to software failure  |  |  |  |
| (j) risks of software manipulation;  |  |  |  |
| (k) risks of incompatibility of substances or materials;  |  |  |  |
| (l) risks linked to the incompatibility of different items, at least one of them being a product;  |  |  |  |
| (m) the risk of not performing as intended, where the performance is safety relevant;  |  |  |  |
| (n) the risk of misunderstanding instructions for use in a field affecting health and safety;  |  |  |  |
| (o) the risk of unintended inappropriate installation or use;  |  |  |  |
| (p) the risk of intended inappropriate use.  |  |  |  |

### Inherent product environmental requirements

Environment relates to the extraction and manufacturing of the materials, the manufacturing of the product, its maintenance, its potential to remain as long as possible within a circular economy and its end of life phase.

Products shall be designed, manufactured, and packaged in such a way that the inherent product environmental aspects identified in Table 13 are, over the product’s life cycle, addressed wherever possible without safety loss or by outweighing negative environmental impact:

Table 13 Inherent product environmental requirements

|  |  |  |  |
| --- | --- | --- | --- |
| Requirements[please do not modify] | Applicability | Description of the requirement | Justification and/or comment |
| (a) maximising durability and reliability of the product or its components as expressed through a product's technical lifetime indication of real use information on the product, resistance to stress or ageing mechanisms and in terms of the expected average life span, the minimum life span under worst but still realistic conditions, and in terms of the minimum life span requirements and prevention of premature obsolescence; |   |   |   |
| (b) minimising life-cycle greenhouse gas emissions; |   |   |   |
| (c) maximising reused, recycled and by-product content; |  |  |  |
| (d) the selection of safe, sustainable-by-design, and environmentally benign substances; |  |  |  |
| (e) energy use and energy efficiency; |  |  |  |
| (f) resource efficiency; |  |  |  |
| (g) modularity; |   |   |   |
| (h) identifying which product or parts thereof and in what quantity can be reused after de-installation (reusability), and in what quantities; |   |   |   |
| (i) upgradability; |   |   |   |
| (j) the ease of reparability during the expected life span, including compatibility with commonly available spare parts; |   |   |   |
| (k) the ease of maintenance and refurbishment during the expected life span; |   |   |   |
| (l) recyclability and the capability to be remanufactured; |   |   |   |
| (m) the capability of different materials or substances to be separated and recovered during dismantling or recycling procedures;. |   |   |   |
| (n) sustainable sourcing; |   |   |   |
| (o) minimising the product-to-packaging ratio; |   |   |   |
| (p) amounts of waste generated, notably hazardous waste. |   |   |  |

## General product information, instructions for use and safety information

Products shall be accompanied by the information included in this clause.

In addition to the product identification through the unequivocal type number on the basis of the determination of product type the information included in Table 14 and Table 15 shall be provided.

Table 14 General product information

|  |  |  |  |
| --- | --- | --- | --- |
| Product description[please do not modify] | Applicability | Description of the requirement | Justification and/or comment |
| (a) declared uses |  |  |  |
| (b) intended users; |   |   |   |
| (c) conditions of uses; |   |   |   |
| (d) estimated average and minimum service life span for declared use (durability); |   |   |   |
| (e) main materials used; |   |   |   |

Table 15 Instructions for use and safety information

|  |  |  |  |
| --- | --- | --- | --- |
| Instructions/information[please do not modify] | Applicability | Description of the requirement | Justification and/or comment |
| 1. Safety during transport, installation, deinstallation, maintenance, deconstruction and demolition: |   |   |   |
| 1. potential risks of the product and any reasonably foreseeable misuse thereof;
 |   |   |   |
| 1. instructions for the assembly, installation and connection, including drawings, diagrams and, where relevant, the means of attachment to other products and parts of construction works;
 |   |   |   |
| 1. instructions for operation and maintenance to be carried out safely, including the protective measures that should be taken during these operations;
 |   |   |   |
| 1. if necessary, instructions for the training of the installers or operators;
 |   |   |   |
| 1. information on what to do in the event of failure or accidents;
 |   |   |   |
| 2. Compatibility and integration into systems or kits: |   |   |   |
| 1. compatibility with other materials or products, regardless of whether they are covered by this Regulation or not;
 |   |   |   |
| 1. electric and electro-magnetic compatibility;
 |   |   |   |
| 1. software compatibility;
 |   |   |   |
| 1. integration into systems or kits;
 |   |   |   |
| 3. Maintenance needs with a view to maintaining the performance of the product during its service life span: |   |   |   |
| 1. description of the adjustment and maintenance operations that should be carried out by the users and the preventive maintenance measures that should be observed;
 |   |   |   |
| 1. the type and frequency of the inspections and the maintenance required for reasons of safety and, where appropriate, the parts subject to wear and the criteria for replacement;
 |   |   |   |
| 1. information on what to do in the event of failure or accident;
 |   |   |   |
| 4. Safety during use: |   |   |   |
| 1. instructions on the protective measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided;
 |   |   |   |
| 1. instructions designed for the safe use of the product, including the protective measures that should be taken during its use;
 |   |   |   |
| 1. information on what to do in the event of failure or accident during use;
 |   |   |   |
| 5. Training and other requirements necessarily to be fulfilled for safe use; |   |   |   |
| 6. Risk mitigation possibilities going beyond points 1 to 5. |   |   |   |
| 7. Recommendations for a product’s: |  |  |  |
| 1. repair;
 |  |  |  |
| 1. de-installation;
 |  |  |  |
| 1. reuse:
 |  |  |  |
| 1. remanufacturing;
 |  |  |  |
| 1. recycling;
 |  |  |  |
| 1. safe deposit;
 |  |  |  |

1. Product groups and codes
	1. List of product groups and codes

The product groups and their respective codes are provided in the following table.

In case the document refers to more than one product group both titles and codes shall be provided together.

In case the document refers to a limited part of the product group and additional short description shall be provided after the title and the code.

Limitations and expansions of the scope shall be previously consulted and approved by the CPR acquis group.

Table A.1 Product groups and codes

| ****Product groups**** | ****Code**** |
| --- | --- |
| Precast concrete products | PCP |
| Structural metallic product | SMP |
| Reinforcing prestressing steel | RPS |
| Doors, windows and shutters | DWS |
| Cement, lime and other hydraulic binders | CEM |
| Thermal insulating products | TIP |
| Structural timber products | STP |
| Concrete, mortar and grout | CMG |
| Masonry | MAS |
| Aggregates | AGG |
| Fixed firefighting equipment  | FFF  |
| Road construction product | RCP |
| Floorings | FLO |
| ETICs  | ETI  |
| Curtain walling  | CWP  |
| Wood based panels  | WBP  |
| Structural bearings  | SBE  |
| Kits and assemblies  | KAS  |
| Wall and ceiling finishes  | WCF  |
| Space heating appliances  | SHA  |
| Roof coverings  | ROC  |
| Circulation fixtures  | CIF  |
| Waste water disposal  | WWD  |
| Adhesives  | ADH  |
| Gypsum | GYP  |
| Anchors and fasteners  | FIX  |
| Membranes  | MEM  |
| Glass  | GLA  |
| Geotextiles  | GEO  |
| Sanitary appliances  | SAP  |
| Pipes and tanks  | PTA  |
| Power, control and communication cables  | CAB  |
| Chimneys  | CHI  |
| Sealants  | SEA  |

1. List of essential characteristics
	1. Essential characteristics related to group of essential characteristics

Table B.1 List of essential characteristics related to mechanical strength

| **Essential characteristic** | **Declaration** | **Assessment method** | **Clause** | **Dimensions** | **Statistical value** | **Unit** | **Rounding** | **Comments** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| mechanical strength - testing - beams and blocks - blocks - punching-bending strength | characteristic punching-bending strength | EN 15037-2 | 5.2.1 | MLT-2 | 5% fractile 95% ci | kN | N/A | Declared as a class |
| mechanical strength - testing - beams and blocks - blocks - bending strength | bending strength | EN 15037-2 | 5.2.1 | MLT-2 | 5% fractile 95% ci | kN | nearest 50 |  |

* 1. Essential characteristics related to group of essential characteristics

Table B.1 List of essential characteristics related to thermal performance

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Essential characteristic** | **Declaration** | **Assessment method** | **Clause** | **Dimensions** | **Statistical value** | **Unit** | **Rounding** | **Comments** |
| thermal conductivity - testing | thermal conductivity | EN 12664 |  | MLT-3K-1 | 90% fractile 90% ci | W/(mK) | nearest 0.01 |  |
| thermal conductivity - tabulated values | thermal conductivity | EN ISO 10456 |  | MLT-3K-1 | 90% fractile 90% ci | W/(mK) | Specific rules | Specific rounding rules |
| … |  |  |  |  |  |  |  |  |

* 1. Essential characteristics related to release of dangerous substances [always to be included – empty if not relevant]

Table B.3 List of essential characteristics related to release of dangerous substances

| **Essential characteristic** | **Declaration** | **Assessment method** | **Clause** | **Dimensions** | **Statistical value** | **Unit** | **Rounding** | **Comments** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| dangerous substances - emission to indoor air - acetaldehyde | release in emission test | EN 16516 |  | ML-3 | 5% fractile 95% ci | µg/m3 | nearest integer | release of dangerous substances - air |
| dangerous substances - emission to indoor air - benzene | release in emission test | EN 16516 |  | ML-3 | 5% fractile 95% ci | µg/m3 | nearest 10 | release of dangerous substances – air |
| … |  |  |  |  |  |  |  |  |

* 1. Essential characteristics related to environmental sustainability [always to be included]

Table B.4 List of essential characteristics related to environmental sustainability

| **Essential characteristic** | **Declaration** | **Assessment method** | **Clause** | **Dimensions** | **Statistical value** | **Unit** | **Rounding** | **Comments** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| reference service life | Reference service life | c-PCR |  | T | modelling | years | nearest integer |  |
| climate change - total | Global Warming Potential total (GWP‑total) | EN 15804+A2 |  | M | modelling | kg CO2 eq. | N/A | LCA environmental impact indicators |
| climate change - fossil | Global Warming Potential fossil fuels (GWP‑fossil) | EN 15804+A2 |  | M | modelling | kg CO2 eq. | N/A | LCA environmental impact indicators |
| climate change - biogenic | Global Warming Potential biogenic (GWP‑biogenic) | EN 15804+A2 |  | M | modelling | kg CO2 eq. | N/A | LCA environmental impact indicators |
| climate change - land use and land use change | Global Warming Potential land use and land use change (GWP‑luluc) | EN 15804+A2 |  | M | modelling | kg CO2 eq. | N/A | LCA environmental impact indicators |
| ozone depletion | Depletion potential of the stratospheric ozone layer (ODP) | EN 15804+A2 |  | M | modelling | kg CFC 11 eq. | N/A | LCA environmental impact indicators |
| acidification | Acidification potential, Accumulated Exceedance (AP) | EN 15804+A2 |  | N | modelling | mol H+ eq. | N/A | LCA environmental impact indicators |
| eutrophication aquatic freshwater | Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP‑freshwater) | EN 15804+A2 |  | M | modelling | kg PO4 eq. | N/A | LCA environmental impact indicators |
| eutrophication aquatic marine | Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP‑marine) | EN 15804+A2 |  | M | modelling | kg N eq. | N/A | LCA environmental impact indicators |
| eutrophication terrestrial | Eutrophication potential, Accumulated Exceedance (EP‑terrestrial) | EN 15804+A2 |  | N | modelling | mol N eq. | N/A | LCA environmental impact indicators |
| photochemical ozone formation | Formation potential of tropospheric ozone (POCP); | EN 15804+A2 |  | M | modelling | kg NMVOC eq. | N/A | LCA environmental impact indicators |
| depletion of abiotic resources - minerals and metals | Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | EN 15804+A2 |  | M | modelling | kg Sb eq. | N/A | LCA environmental impact indicators |
| depletion of abiotic resources - fossil fuels | Abiotic depletion potential for fossil resources (ADP-fossil) | EN 15804+A2 |  | ML2T-2 | modelling | MJ, net calorific value | N/A | LCA environmental impact indicators |
| water use | Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | EN 15804+A2 |  | L3 | modelling | m3 world eq. deprived | N/A | LCA environmental impact indicators |
| particulate matter emissions | Potential incidence of disease due to PM emissions (PM) | EN 15804+A2 |  |  | modelling | Disease incidence | N/A | LCA environmental impact indicators |
| ionising radiation, human health | Potential Human exposure efficiency relative to U235 (IRP) | EN 15804+A2 |  | S-1 | modelling | kBq U235 eq. | N/A | LCA environmental impact indicators |
| ecotoxicity (freshwater) | Potential Comparative Toxic Unit for ecosystems (ETP‑fw) | EN 15804+A2 |  | M-1 | modelling | CTUe | N/A | LCA environmental impact indicators |
| human toxicity, cancer effects | Potential Comparative Toxic Unit for humans (HTP‑c) | EN 15804+A2 |  | M-1 | modelling | CTUh | N/A | LCA environmental impact indicators |
| human toxicity, non- cancer effects | Potential Comparative Toxic Unit for humans (HTP‑nc) | EN 15804+A2 |  | M-1 | modelling | CTUh | N/A | LCA environmental impact indicators |
| land use related impacts / soil quality | Potential Soil quality index (SQP) | EN 15804+A2 |  |  | modelling | unitless | N/A | LCA environmental impact indicators |
| use of renewable primary energy excluding renewable primary energy resources used as raw materials | net calorific value | EN 15804+A2 |  | ML2T-2 | modelling | MJ | - | Resource use indicators |
| use of renewable primary energy resources used as raw materials | net calorific value | EN 15804+A2 |  | ML2T-2 | modelling | MJ | - | Resource use indicators |
| total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials) | net calorific value | EN 15804+A2 |  | ML2T-2 | modelling | MJ | - | Resource use indicators |
| use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials | net calorific value | EN 15804+A2 |  | ML2T-2 | modelling | MJ | - | Resource use indicators |
| use of non-renewable primary energy resources used as raw materials | net calorific value | EN 15804+A2 |  | ML2T-2 | modelling | MJ | - | Resource use indicators |
| total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) | net calorific value | EN 15804+A2 |  | ML2T-2 | modelling | MJ | - | Resource use indicators |
| use of secondary material | - | EN 15804+A2 |  | M | modelling | kg | - | Resource use indicators |
| use of renewable secondary fuels | net calorific value | EN 15804+A2 |  | ML2T-2 | modelling | MJ | - | Resource use indicators |
| use of non-renewable secondary fuels | net calorific value | EN 15804+A2 |  | ML2T-2 | modelling | MJ | - | Resource use indicators |
| net use of fresh water | - |  |  | L3 | Modelling | m3 | - | Resource use indicators |
| hazardous waste disposed | - | EN 15804+A2 |  | M | modelling | kg | - | Waste indicators |
| non-hazardous waste disposed | - | EN 15804+A2 |  | M | modelling | kg | - | Waste indicators |
| radioactive waste disposed | - | EN 15804+A2 |  | M | modelling | kg | - | Waste indicators |
| components for re-use | - | EN 15804+A2 |  | M | modelling | kg | - | Output flows indicators |
| materials for recycling | - | EN 15804+A2 |  | M | modelling | kg | - | Output flows indicators |
| materials for energy recovery | - | EN 15804+A2 |  | M | modelling | kg | - | Output flows indicators |
| exported energy | per energy carrier |  |  | ML2T-2 | modelling | MJ | - | Output flows indicators |
| biogenic carbon content in product | - | EN 15804+A2 |  | M | modelling | kg C | - | Biogenic carbon content indicators |
| biogenic carbon content in accompanying packaging | - | EN 15804+A2 |  | M | modelling | kg C | - | Biogenic carbon content indicators |
| additional environmental sustainability essential characteristics, when relevant |  |  |  |  |  |  |  |  |

1. Classes
	1. characteristic compressive strength

Table C.1 Classes related to the essential characteristic compressive strength

| **essential characteristic** | **declaration** | **minimum cylinder value (MPa)** | **minimum cube value (MPa)** |
| --- | --- | --- | --- |
| characteristic compressive strength | C8/10 | 8 | 10 |
| C12/15 | 12 | 15 |
| C16/20 | 16 | 20 |
| C20/25 | 20 | 25 |
| C25/30 | 25 | 30 |
| C30/37 | 30 | 37 |
| C35/45 | 35 | 45 |
| C40/50 | 40 | 50 |
| C45/55 | 45 | 55 |
| C50/60 | 50 | 60 |
| C55/67 | 55 | 67 |
| C60/75 | 60 | 75 |
| C70/85 | 70 | 85 |
| C80/95 | 80 | 95 |
| C90/105 | 90 | 105 |
| C100/115 | 100 | 115 |

* 1. reaction to fire - class declaration

Classes included in the following legal act its revisions:

Commission Delegated Regulation (EU) 2016/364 of 1 July 2015 on the classification of the reaction to fire performance of construction products pursuant to Regulation (EU) No 305/2011 of the European Parliament and of the Council.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R0364>

1. Products

This annex should include a separate clause describing the information related to every product in the scope of the document.

* 1. Precast concrete hollow core slabs

EN 1168

Precast concrete hollow core slabs and solid slabs manufactured in the same way but without hollow cores to be used in conjunction with cast-in-situ concrete or without it intended to be used as structural elements.

The product definition includes hollow core slabs with a maximum depth of 500 mm for prestressed elements and 300 mm for reinforced elements.

**Group**

Cluster of essential characteristics in case they share some characteristics. It should be explicit for environmental sustainability

**Essential characteristic**

Name of the essential characteristic aligned to the names provided in Annex B.

**EU threshold**

Value or class to be fulfilled to allow the marketing of the product in the EU. National regulations can be more restrictive. The threshold

**Class**

Classification system applicable to the essential characteristic including the reference in Annex C.

**Comments**

Additional information about the essential characteristic including the suggestion for the declaration to be mandatory, limitations or additional information related to the essential characteristic and the relevant thresholds and classes.

Table C.1 Summary table applicable to precast concrete hollow core slabs

| **Group** | **Essential characteristic** | **EU threshold** | **Class** | **Comments** |
| --- | --- | --- | --- | --- |
| concrete | characteristic compressive strength |  | C.1 | mandatory declaration |
| maximum aggregate size |  |  |  |
| reinforcing steel | elongation at maximum load - reinforcing steel |  |  | products reinforced with steel |
| stress ratio - reinforcing steel |  |  |
| tensile yield strength - reinforcing steel |  |  |
| ultimate tensile strength - reinforcing steel |  |  |
| reinforcing stainless steel | elongation at maximum load - reinforcing stainless steel |  |  | products reinforced with stainless steel |
| stress ratio - reinforcing stainless steel |  |  |
| tensile yield strength - reinforcing stainless steel |  |  |
| ultimate tensile strength - reinforcing stainless steel |  |  |
| prestressing steel | elongation at maximum load - prestressing steel |  |  | products reinforced with prestressing steel |
| tensile 0,1 proof stress - prestressing steel |  |  |
| tensile 0,2 proof stress - prestressing steel |  |  |
| ultimate tensile strength - prestressing steel |  |  |
| calculation aided by testing | mechanical strength - testing - hollow core slabs - bending strength |  |  |  |
| mechanical strength - testing - hollow core slabs - tensile strength |  |  |  |
| mechanical strength - calculation aided by physical testing - hollow core slabs - shear capacity |  |  |  |
| fire performance | propensity to undergo continuous smouldering |  |  |  |
| reaction to fire - class declaration |  | ¢ |  |
| resistance to fire EI - class declaration |  | ¢ |  |
| resistance to fire R - class declaration |  | ¢ |  |
| resistance to fire REI - class declaration |  | ¢ |  |
| thermal performance | thermal conductivity - testing |  |  | beam and block system |
| thermal conductivity - tabulated values |  |  |
| acoustic performance | airborne sound insulation index - calculation |  |  | beam and block system |
| airborne sound insulation index - testing |  |  |
| impact sound insulation - calculation |  |  |
| impact sound insulation - testing |  |  |
| other performances | weight of the element |  |  |  |
| release of dangerous substances - indoor air | all (clause B.3) |  |  |  |
| release of dangerous substances - soil and ground water | all (clause …) |  |  |  |
| environmental sustainability | all (clause B.4) |  |  |  |

Documents to be provided together with the declaration of performance

|  |  |
| --- | --- |
| **Documents** | **Comments** |
| set of drawings  |  |
| calculations |  |
| reference to the methods used |  |
| exposure scenarios |  |

FPC checks applicable to this product:

|  |  |
| --- | --- |
| **Type of FPC** | **Comments** |
| detailing |  |
| concrete |  |
| prestressing steel | documentary check |
| reinforcing steel | documentary check |
| release of dangerous substances - leaching |  |

Bibliography

[1] EN XXXX, *General title*

1. According to Table A.1 [↑](#footnote-ref-2)