



# SLOVENSKI STANDARD

## oSIST prEN 206-2:2024

01-oktober-2024

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### Beton - Specifikacija, lastnosti, proizvodnja in skladnost - 2. del: Ugotavljanje skladnosti in certificiranje

Concrete - Specification, performance, production and conformity - Part 2: Conformity assessment and certification

Beton - Festlegung, Eigenschaften, Herstellung und Konformität - Teil 2: Konformitätsbewertung und Zertifizierung

Béton - Spécification, performances, production et conformité - Partie 2 : Évaluation de la conformité et certification

**Ta slovenski standard je istoveten z: prEN 206-2**

[oSIST prEN 206-2:2024](#)

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**oSIST prEN 206-2:2024**

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**DRAFT**  
**prEN 206-2**

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English Version

## Concrete - Specification, performance, production and conformity - Part 2: Conformity assessment and certification

Béton - Spécification, performances, production et conformité

Beton - Festlegung, Eigenschaften, Herstellung und Konformität

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 104.

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

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

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

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<b>Contents</b>	<b>Page</b>
European foreword.....	3
<b>0 Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Symbols and abbreviations</b> .....	<b>7</b>
<b>5 Conformity assessment and assessment criteria</b> .....	<b>7</b>
5.1 <b>General</b> .....	<b>7</b>
5.2 <b>Conformity assessment for designed concrete</b> .....	<b>8</b>
5.3 <b>Conformity assessment of prescribed concrete</b> .....	<b>11</b>
5.4 <b>Actions in the case of non-conformity of the product or in case of negative assessments</b>	<b>12</b>
<b>6 Certification of concrete production</b> .....	<b>12</b>
<b>Annex A (informative) Rules of application of control charts</b> .....	<b>13</b>
A.1 <b>Introduction</b> .....	<b>13</b>
A.2 <b>Control based on the cusum system</b> .....	<b>13</b>
A.3 <b>Control based on Shewhart charts with modified limits by variables</b> .....	<b>14</b>
<b>Annex B (informative) Example of a certification scheme for factory production control of concrete produced according to prEN 206</b> .....	<b>15</b>
B.1 <b>Initial assessment of the factory production control</b> .....	<b>15</b>
B.2 <b>Continuous surveillance of the factory production control</b> .....	<b>16</b>
B.3 <b>Certification of the factory production control</b> .....	<b>17</b>
B.4 <b>Measures in case of non-conformity</b> .....	<b>17</b>
<b>Bibliography</b> .....	<b>18</b>

## **prEN 206-1:2024 (E)**

### **European foreword**

This document (prEN 206-2:2024) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products”, the secretariat of which is held by SN.

This document is currently submitted to the CEN Enquiry.

This document will partially supersede EN 206:2013+A2:2021.

# **iTeh Standards (<https://standards.itih.ai>) Document Preview**

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<https://standards.itih.ai/catalog/standards/sist/b7b8eacf-f0f7-40ad-bcdc-6072b180d465/osist-pren-206-2-2024>

# 0 Introduction

## 0.1 General

This document defines provisions for conformity assessment of concrete.

prEN 206-1 gives the necessary information allowing the evaluation of conformity of concrete. This document, prEN 206-2, contains conformity assessment requirements for concrete.

Figure 1 illustrates the procedure for assessment of concrete in prEN 206.

## Assessments in EN 206

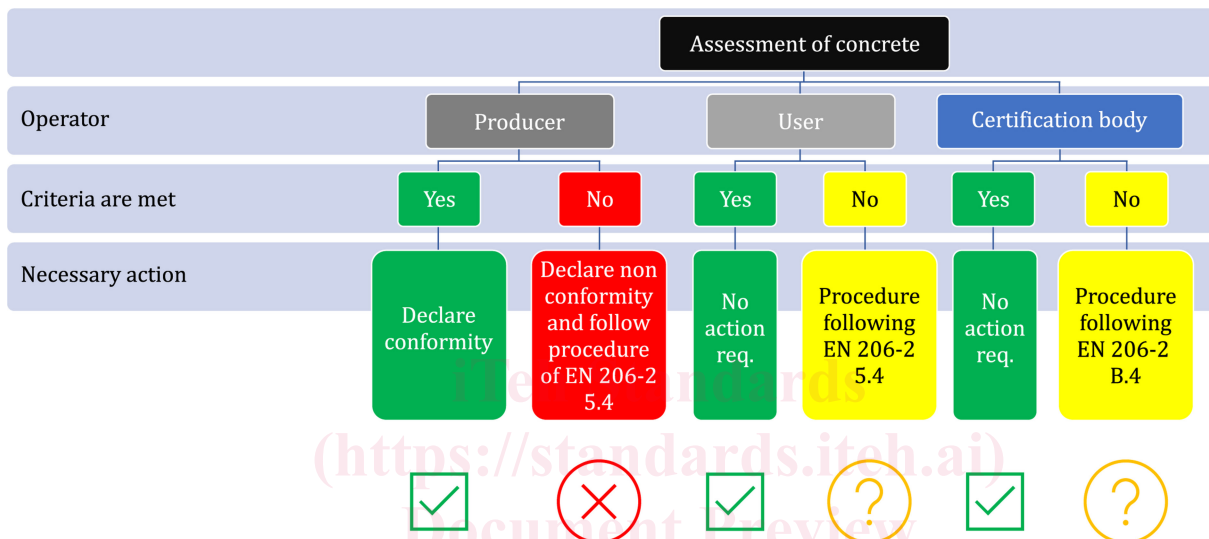


Figure 1 — Assessment of concrete in prEN 206

This document forms part of three European Standards, written by CEN/TC 104 and covering specification, performance, production and conformity of concrete.

- Concrete — Specification, performance, production and conformity — Part 1: Performance, requirements, factory production control and assessment criteria for individual values
- Concrete — Specification, performance, production and conformity — Part 2: Conformity assessment and certification
- Concrete — Specification, performance, production and conformity — Part 3: Additional requirements for specification and conformity of concrete for special geotechnical works

## 0.2 Provisions valid in the place of use for prEN 206-2

(1) This document will be applied under different legal frameworks and different regional safety requirements. Where general solutions were not possible, the relevant clauses contain permission for the application of provisions valid in the place of use of the concrete.

(2) National choice is allowed in this document where explicitly stated that provisions valid in the place of use may be given.

(3) The national standard implementing prEN 206-2 can have a National Annex or complementary standard containing all national choices to be used in the relevant country.

(4) National choice is allowed in prEN 206-2 in the following:

5.2.1.3 (5)

6 (1)

**prEN 206-1:2024 (E)**

NOTE The National Annex can contain, directly or by reference, non-contradictory complementary information for ease of implementation, provided it does not alter any provisions of this document.

**1 Scope**

(1) This document specifies the scheme for the conformity assessment and assessment criteria for concrete.

(2) The document provides technical rules for testing of samples and assessment of the performance of the concrete. It also provides rules for actions to be followed in the event of non-conformity of the product or negative assessment.

(3) In this document, the word “concrete” is used to refer concrete as defined in prEN 206-1. Such a concrete is produced at a given plant and belongs to a particular type and a particular strength class, as defined and specified in prEN 206-1.

**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.

prEN 206-1, *Concrete - Specification, performance, production and conformity - Part 1: Performance, requirements, factory production control and assessment criteria for individual values*

EN 12350-1, *Testing fresh concrete - Part 1: Sampling and common apparatus*

EN 12390-7, *Testing hardened concrete - Part 7: Density of hardened concrete*

EN ISO/IEC 17065, *Conformity assessment – Requirements for bodies certifying products, processes and services*

**3 Terms and definitions**

For the purposes of this document, the terms and definitions of prEN 206-1 and the following apply.

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

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

**3.1****average outgoing quality AOQ**

**fr: qualité moyenne après contrôle AOQ**

**de: Durchschlupf AOQ**

percentage of the unknown distribution below the required characteristic value multiplied by the corresponding acceptance probability of that distribution when using the applied conformity assessment

Note 1 to entry: In the case of strength, the word ‘required’ refers to the characteristic strength for the specified compressive strength class or the characteristic strength of the reference concrete of the family.

**3.2****average outgoing quality limit AOQL**

**fr: limite de la qualité moyenne après contrôle AOQL**

**de: maximaler Durchschlupf AOQL**

maximum average fraction below the required characteristic value in the accepted (or outgoing) concrete production

### 3.3

#### **acceptable quality level AQL**

**fr: niveau de qualité acceptable NQA**

**de: annehmbare Qualitätsgrenze AQL**

percentage of the unknown distribution worse than the specified characteristic of the property under consideration that is considered satisfactory for the production of concrete

### 3.4

#### **accreditation**

third-party attestation related to a conformity assessment body conveying formal demonstration of its competence, impartiality and consistent operation in performing specific conformity assessment activities

[SOURCE: ISO/IEC 17000: 2020]

### 3.5

#### **certification**

third-party attestation related to an object of conformity assessment, with the exception of conformity accreditation

[SOURCE: ISO/IEC 17000: 2020]

### 3.6

#### **certification scheme**

certification system related to specified products, to which the same specified requirements, specific rules and procedures apply

Note 1 to entry: The rules, procedures and management for implementing product, process and service certification are stipulated by the certification scheme.

[SOURCE: ISO/IEC 17065: 2012]

### 3.7

#### **conformity assessment**

demonstration that specified requirements are fulfilled

[SOURCE: ISO/IEC 17000: 2020]

### 3.8

#### **conformity assessment body**

body that performs conformity assessment activities, excluding accreditation

[SOURCE: ISO/IEC 17000: 2020]

### 3.9

#### **declaration**

first-party attestation

[SOURCE: ISO/IEC 17000: 2020]

### 3.10

#### **verification**

**fr: vérification**

**de: Nachweise**

confirmation by examination of objective evidence that specified requirements have been fulfilled



## 4 Symbols and abbreviations

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

$f_{ck}$	Characteristic compressive strength of concrete NOTE 1 Where used in this standard this applies to both $f_{ck,cyl}$ and $f_{ck,cube}$ .
$f_{ck,cyl}$	Characteristic compressive strength of concrete determined by testing cylinders
$f_{c,cyl}$	Compressive strength of concrete determined by testing cylinders
$f_{ck,cube}$	Characteristic compressive strength of concrete determined by testing cubes
$f_{c,cube}$	Compressive strength of concrete determined by testing cubes
$f_{cm}$	Mean compressive strength of concrete NOTE 2 Where used in this standard this applies to both $f_{cm,cyl}$ and $f_{cm,cube}$ .
$f_{cm,j}$	Mean compressive strength of concrete at the age of (j) days
$f_{ci}$	Individual test result for compressive strength of concrete
$f_{ctk,sp}$	Characteristic tensile splitting strength of concrete
$f_{ctm,sp}$	Mean tensile splitting strength of concrete
$f_{cti,sp}$	Individual test result for tensile splitting test of concrete
$\sigma$	Estimate for the standard deviation of a population
AOQ	Average outgoing quality
AOQL	Average outgoing quality limit
AQL	Average quality level
$n$	Number

## 5 Conformity assessment and assessment criteria

### 5.1 General

(1) Conformity assessment comprises the combination of actions and decisions to be taken in accordance with conformity rules adopted in advance to assess the conformity of the concrete with its specification.

NOTE 1 The properties of concrete used for conformity assessment are those measured by the appropriate tests using standardized procedures. The actual values of the properties of the concrete in the structure may differ from those determined by the tests depending on, e.g. dimensions of the structures, placing, compaction, curing and environment.

(2) Where tests for factory production control according to prEN 206-1 are the same as those required for conformity assessment, they are permitted to be taken into account for the assessment of conformity. Also other test data on the delivered concrete may be used in the conformity assessment.

(3) The conformity or non-conformity is judged against the assessment criteria. Conformity assessment by a party different from the producer applies for the concrete delivered and not for the whole production. Non-conformity shall lead to further action at the place of production and on the construction site (see 5.4).

(4) The outcome of conformity assessment depends on the party assessing conformity or results. The result of a conformity assessment by the producer is a declaration of conformity (DoC). The assessment by a 2<sup>nd</sup> party results in a report on the assessment. The outcome of a 3<sup>rd</sup> party assessment is a report on the assessment and an optional certification by the 3<sup>rd</sup> party.

NOTE 2 2<sup>nd</sup> and 3<sup>rd</sup> party positive assessments increase confidence in DoC. Negative assessments create doubt in DoC and initiate a series of actions.

## 5.2 Conformity assessment for designed concrete

### 5.2.1 Conformity assessment for compressive strength

#### 5.2.1.1 General

- (1) In the sampling and testing plan and the assessment criteria distinction is made between initial production and continuous production.
- (2) Initial production covers the production until at least 35 test results are available.
- (3) Continuous production is achieved when at least 35 test results are obtained over a period not exceeding 12 months.
- (4) If the production has been suspended more than 12 months, the criteria, sampling and testing plan given for initial production shall be adopted.
- (5) During continuous production, the sampling and testing plan and the criteria for initial production may be adopted.
- (6) If the strength is specified for a different age, the conformity is assessed on specimens tested at the specified age.

#### 5.2.1.2 Sampling and testing

- (1) The test result shall be that obtained from an individual specimen or the average of the results when two or more specimens made from one sample are tested at the same age.
- (2) Where two or more specimens are made from one sample and the range of the test values is more than 15 % of the mean then the results shall be disregarded unless an investigation reveals an acceptable reason to justify disregarding an individual test value.

#### 5.2.1.3 Assessment criteria for compressive strength

- (1) The achievement of the specified characteristic strength shall be assessed by one of the following methods.

##### Method A: Initial production

- (2) The mean strength of non-overlapping or overlapping groups of three consecutive results shall satisfy:

$$f_{cm} \geq (f_{cm} + 4)N / \text{mm}^2 \quad (2)$$

NOTE 1 The assessment criteria are developed on the basis of non-overlapping test results. Application of the criteria to overlapping test results increases the risk of rejection.

##### Method B: Continuous production

- (3) Conformity assessment shall be made on test results taken during an assessment period that shall not exceed the period given by one of the following options depending on the rate of testing:

- for assessment with lower testing rates (number of test results for designed concrete less than 35 per three months), the assessment period shall comprise at least 15 results and not more than 35 consecutive results taken over a period not exceeding 6 months;
- for assessment with higher testing rates (number of test results for designed concrete 35 or more per three months) the assessment period shall comprise at least 15 consecutive results and not exceed three months.

- (4) The mean strength of non-overlapping or overlapping groups of consecutive test results obtained from a single concrete or a concrete family according to prEN 206-1 in an assessment period shall satisfy: