



**SLOVENSKI STANDARD**  
**SIST EN 14992:2007/kFprA1:2011**  
**01-december-2011**

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**Montažni betonski izdelki - Stenski elementi**

Precast concrete products - Wall elements

Betonfertigeteile - Wandelemente

Produits préfabriqués en béton - Eléments de mur

**Ta slovenski standard je istoveten z: EN 14992:2007/FprA1**

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**ICS:**

|           |                                  |                                   |
|-----------|----------------------------------|-----------------------------------|
| 91.060.10 | Stene. Predelne stene.<br>Fasade | Walls. Partitions. Facades        |
| 91.100.30 | Beton in betonski izdelki        | Concrete and concrete<br>products |

**SIST EN 14992:2007/kFprA1:2011**      **en,fr,de**



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NORME EUROPÉENNE  
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ICS 91.060.10; 91.140.30

English Version

## Precast concrete products - Wall elements

Produits préfabriqués en béton - Eléments de mur

Betonfertigteile - Wandelemente

This draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 229.

This draft amendment A1, if approved, will modify the European Standard EN 14992:2007. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment 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.

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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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## Foreword

This document (EN 14992:2007/FprA1:2011) has been prepared by Technical Committee CEN/TC 229 "Products for which the stability requirements is predominant", the secretariat of which is held by AFNOR.

This document is currently submitted to the Unique Acceptance Procedure.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

**EN 14992:2007/FprA1:2011 (E)****1 Modification to the Foreword**

*In the 8<sup>th</sup> paragraph, replace the second sentence with the following:*

"The installation of some structural precast concrete products is dealt with by EN 13670, *Execution of concrete structures*".

*Delete the third sentence of this paragraph.*

*In the list of standards, replace "prEN 15037" and "prEN 15258" with "EN 15037" and "EN 15258".*

**2 Modification to Clause 1, Scope**

*Add to the first paragraph as 2<sup>nd</sup> sentence, "Also fibre reinforced concrete (steel, polymer or other fibres covered by European standards) may be used." and replace in the new 3<sup>rd</sup> sentence "They" with "These wall elements" to read:*

"This European Standard applies to prefabricated walls, made of normal weight or lightweight concrete with dense structure. Also fibre reinforced concrete (steel, polymer or other fibres covered by European standards) may be used. These wall elements may have external wall functions (see 3.11) or not, have facing functions (see 3.12) or not or have a combination of these functions."

**3 Modification to Clause 3, Terms and definitions**

*Add to definition 3.6.2, ". It be solid or lightened" to read:*

**"3.6.2****base panel**

structural layer of a sandwich element. It can be solid or lightened".

**4 Modification to 4.1, Material requirements**

*After the second paragraph, add the following new paragraph:*

"Also fibre reinforced concrete (steel – see EN 14889-1, polymer – see EN 14889-2 or other fibres (see EN 15422) covered by European standards) may be used, provided the fibres are not taken into account in structural calculation."

**5 Modification to 4.3.8.3, Water vapour permeability**

*Replace "permanence" with "permeance".*

**6 Modification to 5.2, Water vapour permeability**

*Replace "permanence" with "permeance".*

**7 Modification to A.2.2, Reinforcement for sandwich walls**

*In item b), 2<sup>nd</sup> line replace "connectors" with "connector system".*

*In the title of item c) replace “connectors” with “connector system”.*

## **8 Modification to A.2.3, Reinforcement for lightened walls**

*In the title of item a), delete “and concrete connections”.*

## **9 Modification to Annex B**

*In the first line of the paragraph after Figure B.2, replace “Table 7” with “Table 6”.*

## **10 Deletion of Annex Y**

*Delete Annex Y.*

## **11 Addition of a new Annex ZA**

*Replace the existing Annex ZA with the following new Annex ZA:*

“

## Annex ZA (informative)

### Clauses of this European Standard addressing the provisions of the EU Construction Products Directive

#### ZA.1 Scope and relevant characteristics

This European standard has been prepared under the mandate M/100 "Precast Concrete Products" <sup>1)</sup> given to CEN by the European Commission and the European Free Trade Association.

The clauses of this European standard shown in this annex meet the requirements of the mandate given under the EU Construction Products Directive (89/106/EEC).

Compliance with these clauses confers a presumption of fitness of the precast concrete wall elements with or without façade functions covered by this Annex for the intended uses indicated herein; reference shall be made to the information accompanying the CE marking.

**WARNING — Other requirements and other EU Directives, not affecting the fitness for intended uses, may be applicable to the wall elements falling within the scope of this standard.**

NOTE 1 In addition to any specific clauses relating to dangerous substances contained in this standard, there may be requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the EU Construction Products Directive, these requirements need also to be complied with, when and where they apply.

NOTE 2 An informative database of European and national provisions on dangerous substances is available at the Construction web site on EUROPA (accessed through <http://ec.europa.eu/enterprise/construction/cpd-ds/>).

This annex has the same scope as Clause 1 of this standard. It establishes the conditions for the CE marking of the loadbearing and non loadbearing wall elements with and without façade functions and shows the relevant clauses applicable (see Tables ZA.1a and ZA.1b).

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1) As amended



**Table ZA.1a — Relevant clauses for loadbearing and non loadbearing wall elements without façade functions**

| Essential Characteristics                              |             | Requirement clauses in this standard  | Levels and/or classes  | Notes and units        |
|--|-------------|---|------------------------|------------------------|
| Compressive strength (of concrete)                     | All methods | 4.2 Production requirements   | None                   | N/mm <sup>2</sup>      |
| Ultimate tensile and tensile yield strength (of steel) | All methods | Reinforcing steel and Prestressing steel of EN 13369:2004   | None                   | N/mm <sup>2</sup>      |
| Mechanical resistance                                  | Method 1    | Information listed in ZA.3.2  | None                   | Geometry and materials |
|  | Method 2    | 4.3.3 Mechanical resistance<br>4.2.3.2.1 Initial tensioning stresses of EN 13369<br>4.2.3.2.4 Slippage of tendons of EN 13369 | None                   | kNm, kN, kN/m          |
|  | Method 3    | Mechanical resistance<br>4.2.3.2.1 Initial tensioning stresses of EN 13369<br>4.2.3.2.4 Slippage of tendons of EN 13369       | None                   | design specification   |
| Resistance to fire (where relevant)                    | Method 1    | Information listed in ZA.3.2  | R <sup>a</sup> / E / I | Geometry and materials |
|  | Method 2    | 4.3.4.1 Resistance to fire  | R <sup>a</sup> / E / I | Min                    |
|  | Method 3    | 4.3.4.1 Resistance to fire  | R <sup>a</sup> / E / I | design specification   |
| Reaction to fire (where relevant)                      | Method 1    | Information listed in ZA.3.2  | Euroclasses            | Geometry and materials |
|  | Method 2    | 4.3.4.2 Reaction to fire  | Euroclasses            |                        |
|  | Method 3    | 4.3.4.2 Reaction to fire  | Euroclasses            | design specification   |
| Acoustical insulation (where relevant)                 | All methods | 4.3.5 Acoustic properties   | None                   | dB                     |
| Thermal resistance                                     | All methods | 4.3.6 Thermal properties  | None                   |                        |
| Detailing  | All methods | 4.3.1 Geometrical properties  | None                   | Declared classes       |
|  |             | 4.3.3.1 Loadbearing design  | None                   |                        |
|  |             | 4.3.3.2 Reinforcement detailing   | None                   |                        |
|  |             | 8 Technical documentation   | None                   |                        |
| Durability   | All methods | 4.3.7 Durability  | None                   | Ambient conditions     |
| Strength of fixture <sup>b</sup>                       | All methods | 4.3.8.5 Fixture of cladding elements  | None                   |                        |
| <sup>a</sup> Applies only to loadbearing elements      |             |   |                        |                        |
| <sup>b</sup> Applies only to claddings                 |             |   |                        |                        |

## EN 14992:2007/FprA1:2011 (E)

Table ZA.1b — Relevant clauses for loadbearing and non loadbearing wall elements with façade functions

| Essential Characteristics                              |             | Requirement clauses in this Standard  | Levels and/or classes  | Notes and units           |
|--|-------------|---|------------------------|---------------------------|
| Compressive strength (of concrete)                     | All methods | 4.2 Production requirements   | None                   | N/mm <sup>2</sup>         |
| Ultimate tensile and tensile yield strength (of steel) | All methods | Reinforcing steel and Prestressing steel of EN 13369:2004   | None                   | N/mm <sup>2</sup>         |
| Mechanical resistance                                  | Method 1    | Information listed in ZA.3.2  | None                   | Geometry and materials    |
|  | Method 2    | Mechanical resistance<br>4.2.3.2.1 Initial tensioning stresses of EN 13369<br>4.2.3.2.4 Slippage of tendons of EN 13369 | None                   | kNm, kN, kN/m             |
|  | Method 3    | Mechanical resistance<br>4.2.3.2.1 Initial tensioning stresses of EN 13369<br>4.2.3.2.4 Slippage of tendons of EN 13369 | None                   | design specification      |
| Resistance to fire (where relevant)                    | Method 1    | Information listed in ZA.3.2  | R <sup>a</sup> / E / I | Geometry and materials    |
|  | Method 2    | 4.3.4 Resistance and reaction to fire   | R <sup>a</sup> / E / I | min                       |
|  | Method 3    | 4.3.4 Resistance and reaction to fire   | R <sup>a</sup> / E / I | design specification      |
| Reaction to fire (where relevant)                      | Method 1    | Information listed in ZA.3.2  | Euroclasses            | Geometry and materials    |
|  | Method 2    | 4.3.4 Resistance and reaction to fire   | Euroclasses            |                           |
|  | Method 3    | 4.3.4 Resistance and reaction to fire   | Euroclasses            | design specification      |
| Acoustical insulation (where relevant)                 | All methods | 4.3.5 Acoustic properties   | None                   | dB                        |
| Thermal resistance                                     | All methods | 4.3.6 Thermal properties  | None                   |                           |
| Detailing  | All methods | 4.3.1 Geometrical properties  | None                   | Declared classes          |
|  |             | 4.3.3.1 Loadbearing design  | None                   |                           |
|  |             | 4.3.3.2 Reinforcement detailing   | None                   |                           |
|  |             | 8 Technical documentation   | None                   |                           |
| Durability   | All methods | 4.3.7 Durability  | None                   | Ambient conditions        |
| Water vapour permeability (where relevant)             | All methods | 4.3.8.3 Water vapour permeability   | None                   | Kg/(m <sup>2</sup> ·s·Pa) |
| Water permeability (where relevant)                    | All methods | 4.3.8.4 Water permeability  | None                   | %                         |
| Strength of fixture <sup>b</sup>                       | All methods | 4.3.8.5 Fixture of cladding elements  | None                   |                           |
| <sup>a</sup> Applies only to loadbearing elements      |             |   |                        |                           |
| <sup>b</sup> Applies only to claddings                 |             |   |                        |                           |