

Betoonvalmistooted. Piirdeaedade elemendid

Precast concrete products - Elements for fences

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NATIONAL FOREWORD

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ICS 91.100.30

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English Version

Precast concrete products - Elements for fences

Produits préfabriqués en béton - Eléments pour clôtures

Betonfertigteile - Betonelemente für Zäune

This European Standard was approved by CEN on 13 November 2011.

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Foreword

This document (EN 12839:2012) has been prepared by Technical Committee CEN/TC 229 "Precast concrete products", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by July 2012, and conflicting national standards shall be withdrawn at the latest by October 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12839:2001.

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.

This standard is one of a series of product standards for precast concrete products.

For common aspects reference is made to EN 13369:2004, *Common rules for precast concrete products*, from which also the relevant requirements of EN 206-1, *Concrete — Part 1: Specification, performance, production and conformity*, are taken.

The references to EN 13369:2004 by CEN/TC 229 product standards are intended to make them homogeneous and to avoid repetitions of similar requirements.

Eurocodes are taken as a common reference for design aspects. The installation of some structural precast concrete products is dealt with by EN 13670-1, *Execution of concrete structures*, which has at the moment the status of an European prestandard. In all countries, it can be accompanied by alternatives for national application and it shall not be treated as an European standard.

The programme of standards for structural precast concrete products comprises the following standards, in some cases consisting on several parts:

- EN 1168, *Precast concrete products — Hollow core slabs*;
- EN 12794, *Precast concrete products — Foundation piles*;
- EN 12843, *Precast concrete products — Masts and poles*;
- EN 13224, *Precast concrete products — Ribbed floor elements*;
- EN 13225, *Precast concrete products — Linear structural elements*;
- EN 13693, *Precast concrete products — Special roof elements*;
- EN 13747, *Precast concrete products — Floor plates for floor systems*;
- EN 13978 (all parts), *Precast concrete products — Precast concrete garages*;
- EN 14843, *Precast concrete products — Stairs*;

- EN 14844, *Precast concrete products — Box culverts*;
- EN 14991, *Precast concrete products — Foundation elements*;
- EN 14992, *Precast concrete products — Wall elements*;
- EN 15037-1, *Precast concrete products — Beam-and-block floor systems — Part 1: Beams*;
- EN 15037-2, *Precast concrete products — Beam-and-block floor systems — Part 2: Concrete blocks*;
- EN 15037-3, *Precast concrete products — Beam-and-block floor systems — Part 3: Clay blocks*;
- EN 15050, *Precast concrete products — Bridge elements*;
- EN 15258, *Precast concrete products — Retaining wall elements*.

This standard defines in Annex ZA the application methods of CE marking to products designed using the relevant EN Eurocodes (EN 1992-1-1 and EN 1992-1-2). Where, in default of applicability conditions of EN Eurocodes to the works of destination, design Provisions other than EN Eurocodes are used for mechanical strength, the conditions to affix CE marking to the product are described in ZA.3.4.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European standard specifies precast products in reinforced or pre-stressed concrete with or without fibres, to be used together or in combination with other elements to erect fences e.g. boundary fences.

This European standard covers both mechanical resistance determined by calculation and load bearing capacity determined by testing.

Normal weight concrete or light weight concrete elements include posts, solid or open panels, slabs, rails, spurs, struts and base panels.

The intended uses may be nonstructural or lightly structural.

It provides for the evaluation of conformity of elements to this European Standard. Marking conditions are included.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 206-1:2000, *Concrete — Part 1: Specification, performance, production and conformity*

EN 1991-1-4:2005, *Eurocode 1: Actions on structures — Part 1-4: General actions — Wind actions*

EN 12390-4:2000, *Testing hardened concrete — Part 4: Compressive strength — Specification for testing machines*

EN 13369:2004, *Common rules for precast concrete products*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13369:2004 and the following apply.

3.1 types of fences

NOTE Annex A intends to provide information on the possible types of fences in which these elements may be part of.

3.1.1 solid fence

fence made of posts and solid panels or cladding

3.1.2 open-work fence

fence made of posts and open-work panels possibly including solid panels

3.1.3 mesh or wire fence

fence made of posts and woven or welded wire mesh, and/or wires