

## საქართველოს სტანდარტი

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ქარხნული ბეტონის ნაკეთობები- სახურავის სპეციალური ელემენტები

საქართველოს სტანდარტებისა და მეტროლოგიის  
ეროვნული სააგენტო  
თბილისი

სსტ ენ 13693:2004+A1:2009/2015

## საინფორმაციო მონაცემები

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2 მიღებულია გარეკანის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 13693:2004+A1:2009 „ქარხნული ბეტონის ნაკეთობები-სახურავის სპეციალური ელემენტები“

### 3 პირველად

4 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2015 წლის 30 ოქტომბერი №268-1.3-8130

აკრძალულია ამ სტანდარტის გადაცემა მესამე პირებისათვის ან/და მისი სხვა ფორმით გავრცელება

English Version

## Precast concrete products - Special roof elements

Produits préfabriqués en béton - Éléments spéciaux de  
couverture

Betonfertigteile - Besondere Fertigteile für Dächer

This European Standard was approved by CEN on 24 June 2004 and includes Amendment 1 approved by CEN on 19 June 2009.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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 and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

## Contents

The numbering of clauses is strictly related to EN 13369, *Common rules for precast concrete products*, at least for the first three digits. When a clause of EN 13369 is not relevant or included in a more general reference of this standard, its number is omitted and this may result in a gap on numbering

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საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

## Foreword

This document (EN 13693:2004+A1:2009) has been prepared by Technical Committee CEN/TC 229 “Precast concrete products”, the secretariat of which is held by AFNOR. <sup>A1</sup> This document was examined by and agreed with a joint working party appointed by the Liaison Group CEN/TC 229 – CEN/TC 250, particularly for its compatibility with structural Eurocodes. <sup>A1</sup>

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 2010, and conflicting national standards shall be withdrawn at the latest by January 2010.

This document includes Amendment 1, approved by CEN on 2009-06-19.

This document supersedes EN 13693:2004.

The start and finish of text introduced or altered by amendment is indicated in the text by tags <sup>A1</sup> <sup>A1</sup>.

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 Construction Products Directive (89/106/EEC) of European Union (EU).

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: Common rules for precast products*, from which also the relevant requirements of the *EN 206-1: Concrete - Part 1: Specification, performances, production and conformity* are taken.











The references to EN 13369 by CEN/TC229 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 *ENV 13670-1: Execution of concrete structures – Part 1: Common rules*, 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 a European Standard.

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

- EN 1168, *Precast concrete products - Hollow core slabs*
- <sup>A1</sup> EN 12794, *Precast concrete products - Foundation piles* <sup>A1</sup>
- 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*
- <sup>A1</sup> EN 13747, *Precast concrete products - Floor plates for floor systems* <sup>A1</sup>
- <sup>A1</sup> EN 13978, *Precast concrete products - Precast concrete garages* <sup>A1</sup>

## EN 13693:2004+A1:2009 (E)

-  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, *Precast concrete products - Beams for beam-and-block floor systems* 

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 and/or fire resistance, 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, 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 and United Kingdom.

საინფორმაციო ნაწილი. სრული ტექსტის სახასიათოდ შეიძინეთ სტანდარტი.

## Introduction

The evaluation of conformity given in this standard refers to the completed precast elements which are supplied to the market and covers all the production operations carried out in the factory.

For design rules and resistance to fire principal reference is made to EN 1992-1-1 and EN 1992-1-2. Additional complementary rules are provided where necessary.

In Clause 4.3.3 and 4.3.4 this document includes specific provisions resulting from the application of EN 1992-1-1 and EN 1992-1-2 rules to the concerned product. The use of these provisions is consistent with a design of works made with EN 1992-1-1 and EN 1992-1-2.