

# SLOVENSKI STANDARD kSIST FprEN 15037-4:2009

01-junij-2009

# Montažni betonski izdelki - Stropni sistemi iz nosilcev in polnil - 4. del: Polnila iz ekspandiranega polistirena

Precast concrete products - Beam-and-block floor systems - Part 4: Expanded polystyrene blocks

Betonfertigteile - Balkendecken mit Zwischenbauteilen - Teil 4: Zwischenbauteile aus gedehntem Polystyrol

Produits préfabriqués en béton - Systèmes de planchers à poutrelles et entrevous - Partie 4: Entrevous en polystyrène expansé

Ta slovenski standard je istoveten z: FprEN 15037-4

ICS:

91.100.30 Beton in betonski izdelki Concrete and concrete

products

kSIST FprEN 15037-4:2009 en,fr

**kSIST FprEN 15037-4:2009** 

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

# FINAL DRAFT FprEN 15037-4

April 2009

ICS 91.100.30

#### **English Version**

# Precast concrete products - Beam-and-block floor systems - Part 4: Expanded polystyrene blocks

Produits préfabriqués en béton - Systèmes de planchers à poutrelles et entrevous - Partie 4: Entrevous en polystyrène expansé

Betonfertigteile - Balkendecken mit Zwischenbauteilen -Teil 4: Zwischenbauteile aus gedehntem Polystyrol

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

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.

This draft European Standard 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 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.

**Warning**: This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

**Contents** Page

The numbering of clauses is strictly related to EN 13369:2004 Common rules for precast concrete products, at least for the first three digits. When a clause of EN 13369:2004 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.

Forewo	ord	4
Introdu	ction	6
1	Scope	7
2	Normative references	7
3	Terms and definitions	8
4 4.1 4.2 4.3	Requirements	9 9
5 5.1 5.2 5.3 5.4 5.5	Test methods	14 19 27 27
6 6.1 6.2 6.3	Evaluation of conformity	27 27
7	Marking	28
8	Technical documentation	28
Annex A.1 A.2	A (normative) Sampling for initial type testing and for independent testing of consignments	29
Annex	B (normative) Factory production control	31
Annex C.1 C.2 C.3	C (normative) Gravity loading tests	33 38
Annex D.1 D.2 D.3	D (normative) Calibration of punching-bending testing machine  Sample	40 40
Annex	E (normative) Compliance criteria for punching-bending strength	42
Δηηρν	F (informative) Calculation assumptions for calculating the thermal resistance of floors	13

## **kSIST FprEN 15037-4:2009**

# FprEN 15037-4:2009 (E)

<b>Annex</b>	ZA (informative) Clauses of this European Standard addressing the provisions of the EU	
	Construction Products Directive	46
ZA.1	Scope and relevant characteristics	46
ZA.2	Procedure for attestation of conformity of EPS blocks for beam-and-block floor systems	47
ZA.3	CE marking and labelling	49
Bibliod	graphy	52

### **Foreword**

This document (FprEN 15037-4:2009) has been prepared by Technical Committee CEN/TC 229 "Precast concrete products", the secretariat of which is held by AFNOR, and was examined by and agreed with a joint working party appointed by the Liaison Group CEN/TC 229-TC 250, particularly for its compatibility with structural Eurocodes.

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.

The European Standard for beam-and-block floor systems is made of 5 parts:

- EN 15037-1, Beam-and-block floor systems Part 1: Beams
- EN 15037-2, Beam-and-block floor systems Part 2: Concrete blocks
- EN 15037-3, Beam-and-block floor systems Part 3: Clay blocks
- EN 15037-4, Beam-and-block floor systems Part 4: Polystyrene blocks
- EN 15037-5, Beam-and-block floor systems Part 5: Lightweight blocks<sup>1)</sup>

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

For common aspects of concrete products, reference is made to EN 13369, from which also the relevant requirements of the EN 206-1 are taken.

The references to EN 13369 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 ENV 13670-1 which has at the moment the status of a European prestandard. In all countries it can be accompanied by alternatives for national application and it should not be treated as a European Standard.

The program of standards for structural precast concrete products comprises the following European 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

\_

<sup>1)</sup> To be developed.

EN 13693, Precast concrete products — Special roof elements

EN 13747, Precast concrete products — Floor plates for floor systems

EN 13978, 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, Precast concrete products — Beam-and-block floor systems

EN 15050, Precast concrete products — Bridge elements

EN 15258, Precast concrete products — Retaining wall elements

## Introduction

The evaluation of conformity 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 reference is made to EN 1992-1-1:2004. Additional complementary rules are provided where necessary.

NOTE This European Standard will be applied in Europe under different climatic and geographical conditions, different levels of protection and under different, well established, regional traditions and experience. Classes for EPS blocks have been introduced to cover these situations. Where such general solutions were not possible, the relevant clauses contain permission for the application of national standards or provisions valid in the place of use of the EPS Blocks (see 4.3.3).