Betoonvalmistooted. Tala-plokk-vahelaesüsteemid. Osa 5: Kergplokid lihtsate raketiste jaoks

Precast concrete products - Beam-and-block floor systems - Part 5: Lightweight blocks for simple formwork

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 15037-5:2013 sisaldab Euroopa standardi EN 15037-5:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 15037-5:2013 consists of the English text of the European standard EN 15037-5:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.05.2013.	Date of Availability of the European standard is 01.05.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.100.30

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 15037-5

May 2013

ICS 91.100.30

English Version

Precast concrete products - Beam-and-block floor systems - Part 5: Lightweight blocks for simple formwork

Produits préfabriqués en béton - Systèmes de planchers à poutrelles et entrevous - Partie 5: Entrevous légers de coffrage simple

Betonfertigteile - Balkendecken mit Zwischenbauteilen - Teil 5: Leichte Zwischenbauteile für einfache Schalungen

This European Standard was approved by CEN on 21 January 2013.

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, *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.

Foreword

This document (EN 15037-5:2013) 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 November 2013, and conflicting national standards shall be withdrawn at the latest by November 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 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.

Eurocodes are taken as a common reference for design aspects. This document was examined and agreed upon by a liaison ad-hoc group with CEN/TC 250, particularly for its compatibility with structural Eurocodes. The installation of some structural precast concrete products is dealt with in EN 13670, *Execution of concrete structures.*

EN 15037, *Precast concrete products — Beam-and-block floor systems* is composed of the following parts:

— *Part 1: Beams*

— *Part 2: Concrete blocks*

— *Part 3: Clay blocks*

— *Part 4: Expanded polystyrene blocks*

— *Part 5: Lightweight blocks for simple formwork* (the present document)

For common aspects of concrete products, reference is made to EN 13369, *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 by CEN/TC 229 product standards are intended to make them homogeneous and to avoid repetitions of similar requirements.

The program 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*

— 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 13978-1, *Precast concrete products — Precast concrete garages — Part 1: Requirements for reinforced garages monolithic or consisting of single sections with room dimensions*

— 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 15050, *Precast concrete products — Bridge elements*

— EN 15258, *Precast concrete products — Retaining wall elements*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, 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.

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. Additional complementary rules are provided where necessary.

1 Scope

This European Standard deals with the requirements and the basic performance criteria for lightweight blocks used as formwork during the construction of the floor system. The blocks are used in conjunction with precast concrete beams in compliance with EN 15037-1, with or without cast-in-situ concrete for the construction of beam-and-block floor systems.

This European Standard does not deal with blocks made in polystyrene, with or without tong, or combined with different materials where polystyrene contributes to more than 50 % of the mechanical resistance of the block. These blocks are covered by EN 15037-4, *Precast concrete products — Beam-and-block floor systems — Part 4: Expanded polystyrene blocks*.

Examples of typology of floor systems are given in Annex B of EN 15037-1:2008.

2 Normative references

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

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

EN 12667, *Thermal performance of building materials and products — Determination of thermal resistance by means of guarded hot plate and heat flow meter methods — Products of high and medium thermal resistance*

EN 13369:2013, *Common rules for precast concrete products*

EN 13501-1, *Fire classification of construction products and buildings elements — Part 1: Classification using data from reaction to fire tests*

EN 13823:2010, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

EN 15037-1:2008, *Precast concrete products — Beam-and-block floor systems — Part 1: Beams*

EN ISO 10211, *Thermal bridges in building construction — Heat flows and surface temperatures — Detailed calculations (ISO 10211)*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
lightweight block for simple formwork
block with no mechanical function in the final floor system

Note 1 to entry: Its only mechanical function is that of formwork during the construction of the floor system.

Note 2 to entry: This block is mentioned in the present standard as lightweight block. See Figure 1.