

ICS 91.100.30

See start of application

**Precast concrete products –
Beam-and-block floor systems –
Part 5: Lightweight blocks for simple formwork;
English version EN 15037-5:2013,
English translation of DIN EN 15037-5:2013-08**

Betonfertigteile –
Balkendecken mit Zwischenbauteilen –
Teil 5: Leichte Zwischenbauteile für einfache Schalungen;
Englische Fassung EN 15037-5:2013,
Englische Übersetzung von DIN EN 15037-5:2013-08

Produits préfabriqués en béton –
Systèmes de planchers à poutrelles et entrevous –
Partie 5: Entrevous légers de coffrage simple;
Version anglaise EN 15037-5:2013,
Traduction anglaise de DIN EN 15037-5:2013-08

Document comprises 60 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

A comma is used as the decimal marker.

Start of application

It should be noted that, in Germany, CE conformity marking of construction products will be permitted once this standard has been listed in the Official Journal of the European Union and/or the *Bundesanzeiger* (German Federal Gazette) and from the date given therein.

For further information, users of this standard should refer to the websites of the European Commission or of the relevant building authority.

National foreword

This document (EN 15037-5:2013) has been prepared by Technical Committee CEN/TC 229 “Precast concrete products” (Secretariat: AFNOR, France).

The responsible German body involved in its preparation was the *Normenausschuss Bauwesen* (Building and Civil Engineering Standards Committee), Working Committee NA 005-07-08 AA *Betonfertigteile*.

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.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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	4
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Requirements	8
4.1 Material requirements	8
4.2 Production requirements	9
4.3 Finished product requirements	9
5 Test methods	13
5.1 Measuring of dimensions	13
5.2 Determination of the weight	17
5.3 Mechanical strength	17
5.4 Reaction to fire test	27
5.5 Thermal conductivity	27
5.6 Thermal resistance of the floor system	27
6 Evaluation of conformity	28
6.1 General	28
6.2 Initial type tests	28
6.3 Factory production control	28
7 Marking	29
8 Technical documentation	29
Annex A (normative) Sampling for initial type testing and for independent testing of consignments	30
A.1 General	30
A.2 Sampling procedure	30
Annex B (normative) Factory production control	32
Annex C (normative) Gravity loading tests	34
C.1 Test rig	34
C.2 Procedure	37
C.3 Test report	38
Annex D (informative) Calibration of mechanical strength testing machine	39
D.1 Sample	39
D.2 Procedure	39
D.3 Validity	40
Annex E (normative) Compliance criteria for mechanical strength	41
Annex F (normative) Fire testing test for thin blocks	43
F.1 General	43
F.2 Terminology	43
F.3 Mounting and fixing	43
F.4 End Use Application Rules	45

F.5	Additional conditions for polypropylene blocks.....	46
Annex ZA	(informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive	48
ZA.1	Scope and relevant characteristics	48
ZA.2	Procedure for attestation of conformity of lightweight blocks for beam-and-block floor systems.....	49
ZA.3	CE marking and labelling.....	55
Bibliography.....		58

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*