BS EN 15037-5:2013



BSI Standards Publication

Precast concrete products — Beam-and-block floor systems

Part 5: Lightweight blocks for simple formwork

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW



BS EN 15037-5:2013 BRITISH STANDARD

National foreword

This British Standard is the UK implementation of EN 15037-5:2013.

The UK participation in its preparation was entrusted to Technical Committee B/524, Precast concrete products.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2013. Published by BSI Standards Limited 2013

ISBN 978 0 580 69598 8

ICS 91.100.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2013.

Amendments issued since publication

Date Text affected

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.

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

© 2013 CEN

All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 15037-5:2013: E

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.

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

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	
ZA.2	Procedure for attestation of conformity of lightweight blocks for beam-and-block floor systems	49
ZA.3	CE marking and labelling	
Biblio	graphy	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

- 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.