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DIN EN 13747

ICS 91.100.30

Supersedes
DIN EN 13747:2009-06
See start of validity

Precast concrete products – Floor plates for floor systems (includes Amendment A2:2010) English translation of DIN EN 13747:2010-08

Betonfertigteile –
Deckenplatten mit Ortbetonergänzung (enthält Änderung A2:2010)
Englische Übersetzung von DIN EN 13747:2010-08

Produits préfabriqués en béton –
Prédalles pour systèmes de planchers (Amendement A2:2010 inclus)
Traduction anglaise de DIN EN 13747:2010-08

Document comprises 89 pages

Translation by DIN-Sprachendienst.
In case of doubt, the German-language original shall be considered authoritative.

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A comma is used as the decimal marker.

Start of validity

This standard is due to take effect on 1 September 2010.

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

National foreword

This standard 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 (SpA CEN/TC 229)*.

Amendments

This standard differs from DIN EN 13747:2009-06 as follows:

a) Amendment A2:2010 approved by CEN on 2010-02-14 has been incorporated in this document.

b) Clause 1 “Scope” has been modified:

   — reference is made to EN 1168 or EN 13224 if major part of mechanical resistance is taken up by precast stiffening ribs;

   — floor plates for bridge decks have been deleted from the scope.

c) Specifications relating to protruding reinforcements have been rendered more precise.

d) Requirements relating to the compressive strength of reinforced and prestressed floor plates have been rendered more precise (4.2.2.2).

e) The evaluation of spalling stress in the ribs without shear reinforcement has been specified and requirements have been included (4.2.3.2.1).

f) The conditions for use have been slightly modified (4.3.3.6.3).

g) Descriptions of reinforcement positions now explicitly include the position of transverse reinforcement (5.2.1.1).

h) In Annex C (informative), the nominal width of stiffening ribs has been limited.

i) In Annex E (informative), Figures E.2c and E.6a have been revised.

j) In Annex F (informative), the reference to Annex C has been replaced by reference to Annex D.

k) The headings of some subclauses in clause 4 have been modified.

Previous editions

DIN EN 13747: 2007-04, 2009-06

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13747:2005+A2

March 2010

ICS 91.100.30

Supersedes EN 13747:2005+A1:2008

English Version

Precast concrete products - Floor plates for floor systems

Produits préfabriqués en béton - Prédalles pour systèmes de planchers

Betonfertigteile - Deckenplatten mit Ortbetonergänzung

This European Standard was approved by CEN on 17 February 2005 and includes Corrigendum 1 issued by CEN on 6 December 2006, Amendment 1 approved by CEN on 14 September 2008 and Amendment 2 approved by CEN on 14 February 2010.

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, Croatia, 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
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Ref. No. EN 13747:2005+A2:2010: E

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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.

Foreword

This document (EN 13747:2005+A2:2010) 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-CEN/TC 250, particularly for its compatibility with structural Eurocodes.

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

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 European Standard includes Corrigendum 1 issued by CEN on 2006-12-06, Amendment 1 approved by CEN on 2008-09-14 and Amendment 2 approved by CEN on 2010-02-14.

This document supersedes ⟦A2⟩ EN 13747:2005+A1:2008 ⟨A2⟧.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ⟦A1⟩ ⟨A1⟧ and ⟦A2⟩ ⟨A2⟧.

The modifications of the related CEN Corrigendum have been implemented at the appropriate places in the text and are indicated by the tags ⟦AC⟩ ⟨AC⟧.

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 89/106/EEC.

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/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: *Execution of concrete structures — Part 1: Common rules*, 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 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 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 13747, *Precast concrete products — Floor plates for floor systems*

— [AC] prEN 15037, *Precast concrete products — Beam-and-block floor systems* [AC]

— EN 13224, *Precast concrete products — Ribbed floor elements*

— EN 13225, *Precast concrete products — Linear structural elements*

— EN 14992, *Precast concrete products — Wall elements*

— EN 13693, *Precast concrete products — Special roof elements*

— EN 14844, *Precast concrete products — Box culverts*

— EN 13978, *Precast concrete products — Precast concrete garages*

— EN 14991, *Precast concrete products — Foundation elements*

— EN 15050, *Precast concrete products — Bridge elements*

— EN 14843, *Precast concrete products — Stairs*

This standard defines in Annex ZA the application methods of CE marking to products designed using the relevant EN Eurocodes (EN 1992-1-1:2004 and EN 1992-1-2:2004). 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, Croatia, 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 the United Kingdom.

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

In clauses 4.3.3 and 4.3.4, the present standard includes specific provisions resulting from the application of EN 1992-1-1:2004 and EN 1992-1-2:2004 rules made specific for the concerned product. The use of these provisions is consistent with a design of works made with EN 1992-1-1:2004 and EN 1992-1-2:2004.