

DIN EN 1520



ICS 91.100.30

Supersedes
DIN EN 1520:2003-07
See start of application

**Prefabricated reinforced components of lightweight aggregate concrete
with open structure with structural or non-structural reinforcement
English translation of DIN EN 1520:2011-06**

Vorgefertigte Bauteile aus haufwerksporigem Leichtbeton und mit statisch anrechenbarer
oder nicht anrechenbarer Bewehrung

Englische Übersetzung von DIN EN 1520:2011-06

Composants préfabriqués en béton de granulats légers à structure ouverte avec des
armatures structurales et non-structurales

Traduction anglaise de DIN EN 1520:2011-06

Document comprises 111 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

The start of application of this standard is due to be 1 December 2011.

DIN EN 1520:2003-07 may be used in parallel until 31 December 2012 (see deadline in the EU Official Journal).

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 177 “Prefabricated reinforced components of autoclaved aerated concrete or lightweight aggregate concrete with open structure” (Secretariat: DIN, Germany).

The responsible German body involved in its preparation was the *Normenausschuss Bauwesen* (Building and Civil Engineering Standards Committee), Working Committee NA 005-07-09 AA *Porenbeton und haufwerksporiger Leichtbeton* (SpA zu CEN/TC 177).

Amendments

This standard differs from DIN EN 1520:2003-07 as follows:

- a) Clause 4 “Properties and requirements of materials” has been revised and extended;
- b) Clause 5 “Properties and requirements of components” has been revised and extended;
- c) Clause 6 “Evaluation of conformity” has been revised and extended;
- d) the annexes have been updated.

Previous editions

DIN 4028: 1938-10, 1982-01

DIN 4232: 1949-09, 1950-04, 1955-10, 1972-01, 1978-123, 1987-09

DIN EN 1520: 2003-07

English Version

**Prefabricated reinforced components of lightweight aggregate
concrete with open structure with structural or non-structural
reinforcement**

Composants préfabriqués en béton de granulats légers à
structure ouverte avec des armatures structurales et non-
structurales

Vorgefertigte Bauteile aus haufwerksporigem Leichtbeton
und mit statisch anrechenbarer oder nicht anrechenbarer
Bewehrung

This European Standard was approved by CEN on 5 February 2011.

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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 1520:2011) has been prepared by Technical Committee CEN/TC 177 “Prefabricated reinforced components of autoclaved aerated concrete or lightweight aggregate concrete with open structure”, the secretariat of which is held by DIN.

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 2011, and conflicting national standards shall be withdrawn at the latest by December 2012.

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 supersedes EN 1520:2002.

Among others, the following changes have been made compared to EN 1520:2002:

- terms and definitions have been updated;
- the order of clauses has been changed;
- lightweight aggregate concrete parameters have been adapted;
- normative references for reinforcement steel have been updated;
- properties and requirements of components have been adapted, e.g. acoustic properties, thermal resistance;
- evaluation of conformity has been adapted;
- Annex A and Annex ZA have been adapted;
- the standard has been editorially edited.

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 Directives, see informative Annex ZA, which is an integral part of this document.

This document uses the methods given in the Guidance Paper L, clause 3.3, of the European Commission.

This European Standard is used together with a national application document. The national application document may only contain information on those parameters which are left open in this European Standard for national choice, known as Nationally Determined Parameters, to be used for the design of the construction products and civil engineering works to be constructed in the country concerned, i.e.:

- values and/or classes where alternatives are given in this European Standard;
- values to be used where a symbol only is given in this European Standard;
- country specific data (geographical, climatic, etc.), e.g. snow map;
- the procedure to be used where alternative procedures are given in this European Standard.

It may contain

- decisions on the application of informative annexes;
- references to non-contradictory complementary information to assist the user to apply this European Standard.

There is a need for consistency between this document for construction products and the technical rules for works. That means all the information accompanying the CE Marking of the construction products should clearly mention which Nationally Determined Parameters have been taken into account.

EN 1520 describes the design principles and requirements for safety, serviceability and durability of prefabricated components of lightweight aggregate concrete with open structure and with structural or non-structural reinforcement. The design of the components is based on the limit state concept used in conjunction with partial safety factors.

EN 1520 is intended to be used together with Eurocodes EN 1990, EN 1991 and EN 1998.

Numerical values for partial safety factors and other reliability parameters are recommended as basic values that provide an acceptable level of reliability. They have been selected assuming that an appropriate level of workmanship and of quality management applies.

This European Standard gives values with notes indicating where national choices may be made. Therefore, the National Standard implementing EN 1520 should be used with a national application document containing all Nationally Determined Parameters to be used for the design of prefabricated components of lightweight aggregate concrete with open structure and with structural or non-structural reinforcement to be constructed in the relevant country.

National choice is allowed in EN 1520 through the following clauses:

4.3	A.5.2
5.1.1.1	A.6
5.3.5	A.6.1
5.3.7	A.6.2
5.4.3	A.6.3.3.3
5.5.1	A.8.1.4
5.6.2	A.8.2.1.2
5.6.4.2	A.8.2.2.2
7.3	A.9
A.3	B.3.2
A.4.1	B.3.3
A.4.2	B.4.3.1
A.4.3	B.4.3.3
A.5.1	Annex C

Regulatory classes are only given for "Reaction to fire" and "Resistance to fire". All other classes used in this European Standard, i.e. density classes and strength classes, are technical classes.