

**Autoklaavsest mullbetoonist või avatud
pooridega kergbetoonist valmistatud
tarielementidevaheliste vuukide
nihketugevuse määramine tasapinnas
mõjuvate jõudude korral.**

Determination of shear strength for in-plane forces of
joints between prefabricated components made of
autoclaved aerated concrete or lightweight
aggregate concrete with open structure

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1739:2007 sisaldab Euroopa standardi EN 1739:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 31.05.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1739:2007 consists of the English text of the European standard EN 1739:2007.</p> <p>This document is endorsed on 31.05.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: See Euroopa standard esitab nihketugevuse määramise meetodi tasapinnas mõjuvate jõudude korral selliste tarielementide vahelistes vuukides, mis on valmistatud autoklaavsest mullbetoonist vastavalt Euroopa eelstandardile prEN 12602 või avatud pooridega kergbetoonist vastavalt eelstandardile prEN 1520.</p>	<p>Scope: This European Standard specifies a method of determining the shear strength for in-plane forces of joints between prefabricated components made of autoclaved aerated concrete (AAC) according to prEN 12602 or lightweight aggregate concrete with open structure (LAC) according to EN 1520.</p>
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ICS 91.100.30

Võtmesõnad: betoon, mehaanilised teimid, mullbetoon, määramine, nihketeimid, nihketugevus, proovikeha, sarrusematerjalid, tarielemendid, täiteained, vuugid

English Version

**Determination of shear strength for in-plane forces of joints
between prefabricated components of autoclaved aerated
concrete or lightweight aggregate concrete with open structure**

Détermination de la résistance au cisaillement des
jonctions entre des éléments préfabriqués réalisés en
béton cellulaire autoclavé ou en béton de granulats légers à
structure ouverte, sous l'effet de forces agissant dans le
plan des éléments

Bestimmung der Schubtragfähigkeit von Fugen zwischen
vorgefertigten Bauteilen aus dampfgehärtetem Porenbeton
oder haufwerksporigem Leichtbeton bei Belastung in
Bauteilebene

This European Standard was approved by CEN on 24 February 2007.

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, 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.



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Foreword

This document (EN 1739:2007) has been prepared by Technical Committee CEN/TC 177 “Prefabricated reinforced components of autoclaved aerated concrete or light-weight 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 October 2007, and conflicting national standards shall be withdrawn at the latest by October 2007.

This document supersedes EN 1739:1998.

In order to meet the performance requirements as laid down in the product standards for prefabricated reinforced components of autoclaved aerated concrete and of lightweight aggregate concrete with open structure, a number of standardized test methods are necessary.

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, 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.

1 Scope

This European Standard specifies methods of determining the shear strength for in-plane forces of joints between prefabricated components made of autoclaved aerated concrete (AAC) according to prEN 12602 or lightweight aggregate concrete with open structure (LAC) according to EN 1520.

2 Normative references

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

EN 678, *Determination of the dry density of autoclaved aerated concrete*

EN 679, *Determination of the compressive strength of autoclaved aerated concrete*

EN 992, *Determination of the dry density of lightweight aggregate concrete with open structure*

EN 1353, *Determination of moisture content of autoclaved aerated concrete*

EN 1354, *Determination of compressive strength of lightweight aggregate concrete with open structure*

3 Principle

The shear strength for in-plane forces of longitudinal joints between two adjacent prefabricated AAC- or LAC-components or sections thereof is determined by applying an in-plane shear force parallel with to the joint.

The load is increased continuously or in steps until failure of the joint. The load-displacement diagram and the failure load are determined. The shear strength is determined from the failure load.

4 Apparatus

- a) saw for cutting components and test specimens;
- b) compression testing machine or a hydraulic jack, capable of applying a compressive load without shock continuously or in steps. The precision of the compression testing machine or of the hydraulic jack and of the load indication shall be such that the failure load can be determined to an accuracy of $\pm 3\%$. The measuring range shall be such that the failure load is higher than one-tenth of the range used;
- c) callipers and/or rule, capable of measuring the dimensions of the test specimens and the joints to an accuracy of 1 mm;
- d) loading frame and/or devices (e.g. steel plates, flat steel bars, steel rollers, soft fibre board) according to Figures 1, 2, 3 or 4 (or Figures 5 or 6, for alternative tests) for transmitting the load and support reactions to the test specimen;
- e) dial gauge or a displacement transducer with a reading accuracy of 0,01 mm for measuring the relative displacement between the loaded and the supported part of the test specimen.