EESTI STANDARD EVS-EN 1352:1999

Autoklaavse mullbetooni või avatud pooridega kergbetooni staatilise surveelastsusmooduli määramine

Determination of static modulus of elasticity under compression of autoclaved aerated concrete or lightweight aggregate concrete with open structure

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1352:1999 sisaldab Euroopa standardi EN 1352:1996 ingliskeelset teksti. Käesolev dokument on jõustatud 23.11.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1352:1999 consists of the English text of the European standard EN 1352:1996. This document is endorsed on 23.11.1999 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: See Euroopa standard esitab meetodi staatilise surveelastsusmooduli määramiseks, kohaldatuna Euroopa eelstandardile prEN 1520 vastavale autoklaavsele mullbetoonile või avatud pooridega kergbetoonile.	**Scope:**

ICS 91.100.30

Võtmesõnad: betoon, elastsusmoodul, mehaanilised teimid, mullbetoon, määramine, surveteimid, täiteained

EUROPEAN STANDARD
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EN 1352

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ICS 91.100.30

Descriptors: Concrete, autoclaved aerated concrete, compressive strength, testing.

English version

Determination of static modulus of elasticity under compression of autoclaved aerated concrete or lightweight aggregate concrete with open structure

Détermination du module d'élasticité statique en compression du béton cellulaire autoclavé et du béton de granulats légers à structure ouverte

Bestimmung des statischen Elastizitäts-moduls unter Druckbeanspruchung von dampfgehärtetem Porenbeton und von haufwerksporigem Leichtbeton

This European Standard was approved by CEN on 1996-11-30.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Contents

Foreword

This European Standard 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.

In order to meet the performance requirements as laid down in the product standard for prefabricated components of autoclaved aerated concrete, a number of standardized test methods are necessary.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by June 1997 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

1 Scope

This European Standard specifies a method of determining the static modulus of elasticity in compression of autoclaved aerated concrete (AAC) or lightweight aggregate concrete with open structure (LAC) according to prEN 1520[1]).

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to 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 1354
Determination of compressive strength of lightweight aggregate concrete with open structure

prEN 1520
Prefabricated components of lightweight aggregate concrete with open structure

ISO 4012:1978
Testing concrete – Determination of compressive strength of test specimens

3 Principle

The modulus of elasticity (E modulus) is determined on prismatic specimens taken from prefabricated components. It is calculated from the difference of longitudinal compressive strains corresponding to the increase in longitudinal compressive stress from the basic test stress, σ_a (approximately 5 % of the declared compressive strength of the concrete), to the upper test stress, σ_b (normally, one-third of the declared compressive strength of the concrete).

4 Apparatus

The following apparatus shall be used:

a) Saw, suitable for cutting reinforced AAC or LAC components.

b) Calipers, capable of reading the dimensions of specimens to an accuracy of 0,1 mm.

c) Straightedge (at least as long as the longest diagonal of the specimen faces; in the case of cylinders: at least as long as the generatrix), feeler gauges (0,2 mm, 0,5 mm (only for LAC), and 1,0 mm for both), and a square.

d) Balance, capable of determining the mass of specimens to an accuracy of 0,1 %.

e) Compression testing machine which meets the requirements specified in ISO 4012:1978. It shall be capable of applying the required load at the specified rate and maintaining it at the required level for at least 60 s.

f) Equalizing layers of soft fibreboard with a thickness of (12 ± 2) mm and a density of (250 to 400) kg/m^3, to be inserted between the loadbearing faces of the specimens and the platens of the compression testing ma-

[1]) A European Standard for prefabricated reinforced components of autoclaved aerated concrete is in preparation.