Autoklaavse mullbetooni mahukahanemise määramine

Determination of the drying shrinkage of autoclaved aerated concrete

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 680:1999 sisaldab Euroopa standardi EN 680:1993 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 680:1999 consists of the English text of the European standard EN 680:1993. 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 standard piiritleb autoklaavse mullbetooni kuivamisega kaasneva suhtelise pikkuse muutuse (tavalise mahukahanemise) määramise mooduse.	**Scope:**

ICS 91.100.30

Võtmesõnad: betoon, kuivatus, kuivekahanemine, mullbetoon, määramine

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Descriptors: Concrete, cellular concrete, tests, measurements, density, dry density.

English version

Determination of the drying shrinkage of autoclaved aerated concrete

Détermination du retrait de séchage du béton cellulaire autoclavé

Bestimmung des Schwindens von dampfgehärtetem Porenbeton

This European Standard was approved by CEN on 1993-10-07.

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.

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 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 United Kingdom.

CEN

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

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

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Foreword

This European Standard has been prepared by 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, and conflicting national standards withdrawn, by June 1994 at the latest.

The Standard was approved and in accordance with the CEN/CENELEC Internal Regulations, 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 United Kingdom.

1 Scope

This European Standard specifies the procedure for the determination of the relative length change during drying (conventional drying shrinkage) of autoclaved aerated concrete.

2 Normative reference

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 the amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 678 Determination of dry density of autoclaved aerated concrete.

3 Principle

Prismatic test specimens are cut from prefabricated components and, if necessary, moistened by underwater storage until their moisture content is at least 30 % by mass.

Subsequently, the test specimens are stored in air under specified conditions until a moisture content of ≤ 4 % by mass has been reached, and changes of length and mass are determined at appropriate intervals.

Finally, the test specimens are dried to constant mass at (105 ± 5) °C in order to determine the dry density and to enable the calculation of the moisture content from the mass of the test specimen recorded at each measuring date.

A graph relative length change versus moisture content is plotted, and from the curve the conventional value of drying shrinkage, ϵ_{cs}, is determined as the relative length change between the two specified moisture contents 30 % by mass and 6 % by mass.

4 Apparatus

a) a saw with rotating carborundum or diamond blade or similar equipment for cutting test specimens;

b) a balance, capable of determining the mass of the test specimens to an accuracy of 0,1 %;

c) calipers, capable of reading the dimensions of the test specimens to an accuracy of 0,1 mm;

d) a temperature controlled room, capable of maintaining a temperature of (20 ± 2) °C and a relative humidity of not less than 45 % for storing the test specimens during the drying period and for performing the measurement of length changes (see note 1);