

**Betooni, mördi ja süstmördi lisandid.**

**Teimimismeetodid. Osa 5: Kapillaarimavuse määramine**

Admixtures for concrete, mortar and grout - Test methods -  
Part 5: Determination of capillary absorption

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 480-5:2000 sisaldab Euroopa standardi EN 480-5:1996 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 19.07.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 480-5:2000 consists of the English text of the European standard EN 480-5:1996.

This standard is ratified with the order of Estonian Centre for Standardisation dated 19.07.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

ICS 91.100.10, 91.100.30

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Descriptors: Admixtures, concrete, mortar, grout, testing.

**English version**

**Admixtures for concrete, mortar and grout**

**Test methods**

**Part 5: Determination of capillary absorption**

Adjuvants pour béton, mortier et coulis –  
Méthodes d'essai – Partie 5: Détermination  
de l'absorption capillaire

Zusatzmittel für Beton, Mörtel und  
Einpreßmörtel – Prüfverfahren – Teil 5:  
Bestimmung der kapillaren Wasser-  
aufnahme

This European Standard was approved by CEN on 1996-08-04.

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 the United Kingdom.

**CEN**

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

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## Contents

	Page
Foreword .....	2
1 Scope .....	2
2 Normative references .....	2
3 Principle .....	3
4 Apparatus .....	3
5 Reference mortar .....	3
6 Test Specimens .....	3
7 Procedure .....	4
8 Results .....	4

### Foreword

This European Standard has been prepared by Technical Committee CEN/TC 104 "Concrete (performance, production, placing and compliance criteria)", 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 March 1997, and conflicting national standards shall be withdrawn at the latest by March 1997.

This standard is applicable together with the other standards of the series EN 480 for testing admixtures according to the series EN 934.

This Standard series EN 480 consists of the following parts:

Part 1: Reference concrete and reference mortar for testing

Part 2: Determination of setting time

Part 4: Determination of bleeding of concrete

Part 5: Determination of capillary absorption

Part 6: Infrared analysis

Part 8: Determination of the conventional dry material content

Part 10: Determination of water soluble chloride content

Part 11: Determination of air void characteristics in hardened concrete

Part 12: Determination of the alkali content of admixtures

According to 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 describes a test method for the determination of the effect of admixtures on the capillary absorption of mortar.

### 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 196-1 Methods of testing cement - Part 1: Determination of strength

EN 413-2 Masonry cement - Part 2: Test methods

EN 480-1    Admixtures for concrete, mortar and grout - Test methods - Part 1: Reference concrete and reference mortar for testing

### 3 Principle

The test consists of measuring the mass of water absorbed by a mortar test sample under specified conditions.

### 4 Apparatus

- a) Balance with an accuracy of 0,1 g;
- b) Receptacle 200 mm high large enough to contain twelve prismatic specimens, with a flat base and a cover;
- c) A means of allowing a constant level of water to be maintained in the receptacle;
- d) Equipment for the preparation of (40 x 40 x 160) mm prisms made of mortar that conforms to EN 196-1;
- e) An enclosure controlled at  $(20 \pm 2) ^\circ\text{C}$  and  $(65 \pm 5) \%$  relative humidity.

### 5 Reference mortar

The reference mortar shall be as specified in EN 480-1. The test mix shall either have the same consistence as the control mix as described in EN 480-1 or the test mix shall have the same water/cement ratio as the control mix <sup>1)</sup>. The water content of the admixture shall be taken into account when calculating the required water content of the test mix.

### 6 Test Specimens

#### 6.1 Preparation of test specimens

Materials for the control mix and test mix, and moulds for the test specimens, shall be conditioned for at least 24 h before use. Conditioning shall be by placing in an enclosure maintained at  $(20 \pm 2) ^\circ\text{C}$  and  $(65 \pm 5) \%$  relative humidity.

Mixing of the mortar shall be as described in EN 480-1. Mortar specimens (40 x 40 x 160) mm shall be prepared as described in EN 196-1 except that the moulds shall not be oiled.

In case of equal w/c ratio the water content of the admixture shall be taken into account when calculating the required water content of the mortar.

In case the test mix shall have the same consistence as the control mix this shall be measured by using the workability meter in accordance with EN 413-2.

#### 6.2 Number of specimens

Twelve specimens shall be tested as follows:

- 6 specimens for control mix;
- 6 specimens for test mix.

#### 6.3 Curing of specimens

On both the control mix and the test mix, two series of measurements of capillary absorption shall be carried out. The first series shall be performed on three specimens of test mix and three specimens of control mix after 7 days curing. The second series shall be carried out on the other specimens after 90 days curing. The specimens shall be demoulded after 24 h and further cured in the enclosure (see 4e) until 7 days and 90 days old respectively.

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<sup>1)</sup> The use of constant consistence or constant water/cement ratio is specified in the requirements or agreed between the purchaser and supplier.