

**Betooni, mördi ja süstmördi lisandid.
Teimimismeetodid. Osa 2: Tardumisaja
määramine**

Admixtures for concrete, mortar and grout - Test
methods - Part 2: Determination of setting time

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 480-2:2000 sisaldab Euroopa standardi EN 480-2:1996 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.07.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 480-2:2000 consists of the English text of the European standard EN 480-2:1996.</p> <p>This document is endorsed on 19.07.2000 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 kirjeldab tardumisaja määramise meetodit lisandiga ja lisandita mõrdis. See on standardis EN 196-3 kirjeldatud tardumisajateimi lihtsam variant.</p>	<p>Scope:</p>
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ICS 91.100.10, 91.100.30

Võtmesõnad: betoon, betooni lisandid, ehitusmaterjalid, materjal, määramine, mõrdid, tardumisaeg, teimid, tsementeerimine

ICS 91.100.10; 91.100.30

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

English version

Admixtures for concrete, mortar and grout

Test methods

Part 2: Determination of setting time

Adjuvants pour béton, mortier et coulis –
Méthodes d'essai – Partie 2: Détermination
du temps de prise

Zusatzmittel für Beton, Mörtel und
Einpreßmörtel – Prüfverfahren – Teil 2:
Bestimmung der Erstarrungszeit

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	3
3 Test principle	3
4 General requirements for testing	3
5 Setting time test	4
6 Test report	7

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 method for determining setting time of mortar with and without admixtures. It is an adaptation of the setting time test described in EN 196-3.

This standard describes the reference method; it allows the use of alternative apparatus as indicated in notes provided that they do not effect the results.

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 196-3 Methods of testing cement - Part 3: Determination of setting time and soundness

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

prEN 1008 Mixing water for concrete

3 Test principle

The setting time is determined by observing the penetration of a needle into a reference mortar until it reaches a specified value.

The reference mortar with admixture (test mix) shall have the same consistence as the reference mortar without admixture (control mix) that conforms to EN 480-1.

For this purpose the mixing water required shall be determined in advance according to EN 413-2.

4 General requirements for testing

4.1 Laboratory

The laboratory in which specimens are prepared and tested shall be maintained at a temperature of $(20 \pm 2) ^\circ\text{C}$ and a relative humidity not less than 65 %.

After preparation and between tests the specimens shall be stored in a room or cabinet having a relative humidity of not less than 90 % and a temperature of $(5 \pm 1) ^\circ\text{C}$ or $(20 \pm 2) ^\circ\text{C}$ as appropriate to the test requirements.

4.2 Apparatus

- a) Balance, accurate to 1 g.
- b) Graduated cylinder or burette, accurate to 1 % of the volume measured.
- c) Mixer, complying with EN 196-1.

4.3 Materials

Mortar shall be prepared by using the standard sand described in EN 196-1.

Water according to prEN 1008 shall be used as mixing water¹⁾.

¹⁾ Distilled or de-ionized water may be used.