

**Admixtures for concrete, mortar and grout - Test methods - Part 15: Reference concrete and method for testing viscosity modifying admixtures**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 480-15:2013 sisaldab Euroopa standardi EN 480-15:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 480-15:2013 consists of the English text of the European standard EN 480-15:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.03.2013.	Date of Availability of the European standard is 20.03.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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English Version

**Admixtures for concrete, mortar and grout - Test methods - Part  
15: Reference concrete and method for testing viscosity  
modifying admixtures**

Adjuvant pour béton, mortier et coulis - Méthodes d'essai -  
Partie 15: Béton de référence et méthode d'essai des  
adjuvants modificateurs de viscosité

Zusatzmittel für Beton, Mörtel und Einpressmörtel -  
Prüfverfahren - Teil 15: Referenzbeton und Prüfverfahren  
zur Prüfung von viskositätsmodifizierenden Zusatzmitteln

This European Standard was approved by CEN on 19 January 2013.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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## Foreword

This document (EN 480-15:2013) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products”, 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 September 2013, and conflicting national standards shall be withdrawn at the latest by September 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been drafted by Subcommittee 3 (SC 3) of CEN/TC 104 “Admixtures for concrete, mortar and grout”.

This draft European Standard is part of the series EN 480, *Admixtures for concrete, mortar and grout — Test methods* which is comprised 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*
- *Part 13: Reference masonry mortar for testing mortar admixtures*
- *Part 14: Determination of the effect on corrosion susceptibility of reinforcing steel by potentiostatic electro-chemical test*
- *Part 15: Reference concrete and method for testing viscosity modifying admixtures* (the present document)

This European Standard is applicable together with the other standards of the EN 480 series and for testing admixtures in accordance with the EN 934 series of standards.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies the constituent materials, the composition and the mix procedure to produce a reference concrete with a prescribed consistency and segregated portion for testing viscosity modifying admixtures as defined in EN 934-2. It also describes how to determine the requirements for the test mix in comparison with the control mix.

## 2 Normative references

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

EN 196-2, *Methods of testing cement — Part 2: Chemical analysis of cement*

EN 196-6, *Methods of testing cement — Part 6: Determination of fineness*

EN 197-1, *Cement — Part 1: Composition, specifications and conformity criteria for common cements*

EN 934-2, *Admixtures for concrete, mortar and grout — Part 2: Concrete admixtures — Definitions, requirements, conformity, marking and labelling*

EN 1008, *Mixing water for concrete — Specification for sampling, testing and assessing the suitability of water, including water recovered from processes in the concrete industry, as mixing water for concrete*

EN 12350-7, *Testing fresh concrete — Part 7: Air content — Pressure methods*

EN 12350-8, *Testing fresh concrete — Part 8: Self-compacting concrete — Slump-flow test*

EN 12350-11, *Testing fresh concrete — Part 11: Self-compacting concrete — Sieve segregation test*

EN 12390-1, *Testing hardened concrete — Part 1: Shape, dimensions and other requirements for specimens and moulds*

EN 12390-2, *Testing hardened concrete — Part 2: Making and curing specimens for strength tests*

EN 12620, *Aggregates for concrete*

## 3 Constituent materials

### 3.1 Cement

The reference concrete shall be made with a CEM I cement of strength class 42,5 or 52,5 conforming to EN 197-1.

The cement used shall have a  $C_3A$  content of 7 % to 11 % by mass calculated from chemical analysis according to EN 196-2 and a specific surface of 3 200 cm<sup>2</sup>/g to 4 600 cm<sup>2</sup>/g determined according to EN 196-6.

### 3.2 Aggregate

A natural normal weight aggregate conforming to EN 12620 with low water absorption ( $\leq 2$  % by mass) shall be used. The grading shall conform to Table 1.