

Irish Standard I.S. EN 480-15:2013

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

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#### I.S. EN 480-15:2013

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# EUROPEAN STANDARD NORME EUROPÉENNE

## EN 480-15

# EUROPÄISCHE NORM

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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.

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#### I.S. EN 480-15:2013

### 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of an identical text or by endorsement, at the latest by September 2013, and conflicting national standards shall be withdrawn at the latest by September 2013.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.



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