

Irish Standard I.S. EN 480-1:2014

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

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#### I.S. EN 480-1:2014

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### EUROPEAN STANDARD

# EN 480-1

# NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2014

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Supersedes EN 480-1:2006+A1:2011

**English Version** 

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

Adjuvants pour béton, mortier et coulis - Méthodes d'essai -Partie 1: Béton et mortier de référence pour essais Zusatzmittel für Beton, Mörtel und Einpressmörtel -Prüfverfahren - Teil 1: Referenzbeton und Referenzmörtel für Prüfungen

This European Standard was approved by CEN on 14 September 2014.

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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.

CEN members are the national standards bodies of 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 United Kingdom.



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### Foreword

This document (EN 480-1:2014) 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of an identical text or by endorsement, at the latest by April 2015 and conflicting national standards shall be withdrawn at the latest by April 2015.

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 supersedes EN 480-1:2006+A1:2011.

The main changes with respect to the previous edition are listed below:

- a) amendment of the cement range;
- b) editorial revision according to CEN Internal Regulations.

This European Standard is part of the series EN 480 Admixtures for concrete, mortar and grout — Test methods which comprises the following:

- 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

This standard is applicable together with the standards of the series EN 934 Admixtures for concrete, mortar and grout.

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 mixing method to produce reference concrete and reference mortar for testing the efficacy and the compatibility of admixtures in accordance with the series EN 934.

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

EN 196-2, Method 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 413-2, Masonry cement - Part 2: Test methods

EN 934 (all parts), Admixtures for concrete, mortar and grout

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 12350-2, Testing fresh concrete - Part 2: Slump-test

EN 12350-5, Testing fresh concrete - Part 5: Flow table test

EN 12350-6, Testing fresh concrete - Part 6: Density

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

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 and mortar 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<sub>3</sub>A content of 7 % to 11 % by mass calculated from chemical analysis according to EN 196-2 and a specific surface of (3 200 to 4 600) cm<sup>2</sup>/g determined according to EN 196-6.



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