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NSAI Standards

Irish Standard
I.S. EN 1766:2017

Products and systems for the protection and repair of concrete structures - Test methods - Reference concretes for testing

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National Foreword

I.S. EN 1766:2017 is the adopted Irish version of the European Document EN 1766:2017, Products and systems for the protection and repair of concrete structures - Test methods - Reference concretes for testing

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1766

February 2017

ICS 91.080.40

Supersedes EN 1766:2000

English Version

Products and systems for the protection and repair of concrete structures - Test methods - Reference concretes for testing

Produits et systèmes pour la protection et la réparation des structures en béton - Méthodes d'essais - Bétons de référence pour essais

Produkte und Systeme für den Schutz und die Instandsetzung von Betontragwerken - Prüfverfahren - Referenzbetone für Prüfungen

This European Standard was approved by CEN on 4 December 2016.

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European foreword

This document (EN 1766:2017) 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of an identical text or by endorsement, at the latest by August 2017, and conflicting national standards shall be withdrawn at the latest by November 2018.

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

This document supersedes EN 1766:2000.

The main technical changes that have been made in this new edition are as follows:

a) Definition of 3 new reference MC concretes;

b) Definition of thresholds for the tensile bond strength for reference concretes C(0,40); C(0,45); C(O,70) and new MC concretes.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Serbia, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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1 Scope

This European Standard specifies the composition, characteristics and preparation procedure for reference concrete substrates, which are to be used in the test methods to measure performances of products and systems for the repair and protection of concrete structures.

The provisions of this Standard are applicable to concrete with a maximum aggregate size of 16 mm or 20 mm or with a maximum aggregate size of 8 mm or 10 mm.

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

EN 206, *Concrete — Specification, performance, production and conformity*

EN 933-2, *Tests for geometrical properties of aggregates - Part 2: Determination of particle size distribution - Test sieves, nominal size of apertures*

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 1542, *Products and systems for the protection and repair of concrete structures - Test methods - Measurement of bond strength by pull-off*

EN 12390-3, *Testing hardened concrete - Part 3: Compressive strength of test specimens*

EN 12620, *Aggregates for concrete*

3 Principle

Reference concrete test specimens with reproducible surface texture and appropriate strength are cast to enable the resistance against physical or chemical exposure of repair materials to be evaluated.

The required surface roughness is obtained by grit blasting the surface of the hardened concrete.

4 Equipment

4.1 Concrete mixer (forced action pan mixer)

4.2 Moulds

Moulds for producing concrete specimens, of non-absorbent, rigid material, not attacked by cement paste, of a size 300 mm × 300 mm × 100 mm or other sizes specified in individual test method standards, corresponding to the property to be tested, shall be used.

4.3 High frequency vibrating table

Or vibration rod suitable for compaction of the concrete in the moulds.

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