SLOVENSKI STANDARD
SIST EN 480-4:2005

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Nadomeġļa:
SIST EN 480-4:1998

Kemijski dodatki za beton, malto in injekcijsko maso ï Preskusne metode ï 4. del: Ugotavljanje izloļanja vode iz betona

Admixtures for concrete, mortar and grout - Test methods - Part 4: Determination of bleeding of concrete

Zusatzmittel für Beton, Mörtel und Einpressmörtel - Prüfverfahren - Teil 4: Bestimmung der Wasserabsonderung des Betons (Bluten)

Adjuvants pour béton, mortier et coulis - Méthodes d'essai -Partie 4: Détermination du ressuage du béton

Ta slovenski standard je istoveten z: **EN 480-4:2005**

ICS:

91.100.10	Cement. Mavec. Apno. Malta	Cement. Gypsum. Lime. Mortar
91.100.30	Beton in betonski izdelki	Concrete and concrete products

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EUROPEAN STANDARD

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Admixtures for concrete, mortar and grout - Test methods - Part 4: Determination of bleeding of concrete

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Zusatzmittel für Beton, Mörtel und Einpressmörtel - Prüfverfahren - Teil 4: Bestimmung der Wasserabsonderung des Betons (Bluten)

This European Standard was approved by CEN on 28 July 2005.

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.

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Contents

Foreword

This European Standard (EN 480-4:2005) 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of an identical text or by endorsement, at the latest by April 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

It has been drafted by Subcommittee 3 (SC 3) of TC 104 "Admixtures for concrete, mortar and grout".

This document 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 *Admixtures for concrete, mortar and grout - Test methods - Part 14: Measurement of corrosion susceptibility of reinforcing steel in concrete - Potentiostatic electro-chemical test method* [1)]

This document is applicable together with the other standards of the EN 480 series.

This document supersedes EN 480-4:1996.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1) This part is under preparation

1 Scope

This document describes a method to determine the relative quantity of mixing water that will bleed from a sample of freshly mixed concrete. This method applies to concrete mixes with aggregates having a maximum size up to 50 mm.

2 Apparatus

2.1 A rigid cylindrical vessel of inside diameter of (250 ± 10) mm and inside height of (280 ± 10) mm with a removable lid. The vessel shall be made from non-absorbent material that will not react with the binder and the inside shall be smooth and free from corrosion, coatings or lubricants;

2.2 Balance of sufficient capacity to weigh the load required with an accuracy of 0,1 %;

2.3 Pipette, or other similar instrument, to draw off the free water from the surface of the test specimen;

2.4 Graduated 100 ml measuring cylinder to collect and measure the amount of water withdrawn;

2.5 Cylindrical steel tamper, approximately 16 mm in diameter and 600 mm long with a hemispherical end;

2.6 Scoop;

2.7 Stopwatch;

2.8 Flat rounded steel float with a diameter of (100 ± 10) mm.

3 Procedure

The vessel (2.1) shall be filled with a representative sample of the concrete to be tested to a height of (250 ± 10) mm as follows:

— using the scoop (2.6), fill the container in three layers, each corresponding to a third of the whole volume, and compact each layer with 25 strokes of the tamper (2.5).

— The tamper strokes shall be distributed uniformly over the whole section and the different layers shall be compacted so that the tamper penetrates each layer as far as the surface of underlying layer, but not beyond.

— The compaction of the concrete may be completed by vibration except when testing for declaration of conformity and certification purposes.

— Level the top of the concrete to a reasonably smooth surface by a minimum amount of troweling using the float (2.8).

— Determine the weight of the sample.

The room in which the test is carried out shall have a temperature of (20 ± 2) °C and a relative humidity not less than 65 %. Place the vessel on a level platform or floor free of vibration and cover it with a suitable lid. Keep this lid in place throughout the test except when drawing off the water.

Using a pipette (2.3) (or similar instrument), draw off the water that has accumulated on the surface at 10 min intervals during the first 40 min and at 30 min intervals thereafter until cessation of bleeding.

To facilitate the collection of the bleed water, the container may be tilted carefully, by placing a small block not more than 50 mm high under one side of the container, 2 min before the water is withdrawn. In this case, after removing the water, return the container to the vertical position carefully, without jarring.

After each withdrawal, transfer the water to the measuring cylinder (2.4) and record the accumulated quantity of water.

4 Results

The bleeding B is expressed as a percentage of the total water in the concrete as follows:

$$B = \frac{m_w}{w \times m_s} \times 100 \quad (1)$$

where

m_w is the mass of the bleed water, in grams

m_s is the mass of the sample, in grams

w is the proportion of water in the fresh concrete by mass in percent

It is assumed that the density of the bleed water is 1 kg/l.

5 Test report

The bleeding shall be recorded as a percentage of the total amount of water to the nearest 0,1 %.

The test report shall contain:

— Date of test,

— Bleeding water recorded as a percentage of the total amount of water to the nearest 0,1 %,

— Details of concrete tested, including maximum size of aggregate,

— Details of the admixture used in the concrete mix,

Person who performed the test.