Products and systems for the protection and repair of concrete structures - Test methods - Water absorption and resistance to alkali for hydrophobic impregnations

Products and systems for the protection and repair of concrete structures - Test Methods - Water absorption and resistance to alkali tests hydrophobic porelining impregnation

EESTI STANDARDI EESSÕNA

Käesolev Eesti standard EVS-EN 13580:2002 sisaldab Euroopa standardi EN 13580:2002 ingliskeelset teksti. Käesolev dokument on jõustatud 18.10.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 13580:2002 consists of the English text of the European standard EN 13580:2002. This document is endorsed on 18.10.2002 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

NATIONAL FOREWORD

Käsitlusala: This European Standard specifies a test method to evaluate the effect of a hydrophobic impregnation. It deals with the rate at which treated concrete absorbs water and with the alkali resistance of that surface treatment. The method primarily relates to the protection of concrete structures.	**Scope:** This European Standard specifies a test method to evaluate the effect of a hydrophobic impregnation. It deals with the rate at which treated concrete absorbs water and with the alkali resistance of that surface treatment. The method primarily relates to the protection of concrete structures.

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Võtmesõnad: binders, materials, reference ma, renewal, repair, repairs, roughness, roughness (surface), sampling, sampling methods, specification (approval), specifications, structures, surface protection, surface treatment, testing, water absorption, water absorption tests

EUROPEAN STANDARD

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English version

Products and systems for the protection and repair of concrete structures - Test Methods - Water absorption and resistance to alkali for hydrophobic impregnations

Produits et systèmes pour la protection et la réparation des structures en béton - Méthodes d'essai - Absorption d'eau et résistance aux alcalis pour imprégnations hydrofuges

Produkte und Systeme für den Schutz und die Instandsetzung von Betontragwerken - Prüfverfahren - Wasseraufnahme und Alkalibeständigkeit für hydrophobierende Imprägnierungen

This European Standard was approved by CEN on 23 December 2001.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents

Foreword

This document (EN 13580:2002) has been prepared by Technical Committee CEN/TC 104 "Concrete and related products", the secretariat of which is held by DIN.

It has been elaborated by Subcommittee SC 8 “Products and systems for the protection and repair of concrete structures”, the secretariat of which is held by AFNOR.

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 February 2003, and conflicting national standards shall be withdrawn at the latest by February 2003.

The Annexes A and B are informative.

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

1 Scope

This European Standard specifies a test method to evaluate the effect of a hydrophobic impregnation. It deals with the rate at which treated concrete absorbs water and with the alkali resistance of that surface treatment. The method primarily relates to the protection of concrete structures.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1766, *Products and systems for the protection and repair of concrete structures – Test methods – Reference concretes for testing.*

EN 13579, *Products and systems for the protection and repair of concrete structures – Test methods – Drying test for hydrophobic impregnation.*

3 Symbols

Symbol	Explanation	Unit
AR	Absorption ratio	%
$AR_{(alk)}$	Absorption ratio after exposure to alkali	%
C_m	Mean consumption of impregnant during treatment	g/m^2
C_n	Consumption of impregnant for each face of test cube during treatment	g/m^2
i_1	Weight of a test cube at start of immersion test	g
i_2	Weight of a test cube at end of immersion test	g
I_t	Rate of increase in weight of a treated test cube	g/(m^2 · h^{0,5})
$I_{t(alk)}$	Rate of increase in weight of a treated test cube after exposure to alkali	g/(m^2 · h^{0,5})
I_{tm}	Mean rate of increase in weight of three treated test cubes	g/(m^2 · h^{0,5})
$I_{tm(alk)}$	Mean rate of increase in weight of three treated test cubes after exposure to alkali	g/(m^2 · h^{0,5})
I_u	Rate of increase in weight of an untreated test cube	g/(m^2 · h^{0,5})
I_{um}	Mean rate of increase in weight of three untreated test cubes	g/(m^2 · h^{0,5})
M'_t	Estimated moisture content of each test cube after conditioning	%
M_m	Mean saturated surface dry moisture content of 3 oven dry test cubes	%
M_{ssd}	Saturated surface dry moisture content of a test cube	%
W'_{od}	Estimated weight of a test cube in oven dry condition	g
W_{od}	Weight of a test cube in oven dry condition	g
W_{ssd}	Weight of a test cube in saturated surface dry condition	g
W_t	Actual weight of test cube after conditioning	g
W_{t1}	Weight of test cube immediately prior to treatment	g
W_{t2}	Weight of test cube immediately after treatment	g