KIVISTUNUD BETOONI KATSETAMINE. OSA 18: KLORIIDI MIGRATSIOONITEGURI MÄÄRAMINE

Testing hardened concrete - Part 18: Determination of the chloride migration coefficient

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12390-18:2021 sisaldab Euroopa standardi EN 12390-18:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 12390-18:2021 consists of the English text of the European standard EN 12390-18:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 17.03.2021.	Date of Availability of the European standard is 17.03.2021.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.100.30

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12390-18

March 2021

ICS 91.100.30

English Version

Testing hardened concrete - Part 18: Determination of the chloride migration coefficient

Essais pour béton durci - Partie 18 : Détermination du coefficient de migration des chlorures

Prüfung von Festbeton - Teil 18: Bestimmung des Chloridmigrationskoeffizienten

This European Standard was approved by CEN on 8 February 2021.

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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.

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

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Ref. No. EN 12390-18:2021 E

Contents

Page

European foreword

This document (EN 12390-18:2021) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products”, the secretariat of which is held by SN.

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 2021, and conflicting national standards shall be withdrawn at the latest by September 2021.

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.

A list of all parts in the EN 12390 series, published under the general title “Testing hardened concrete”, can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document specifies the procedure for obtaining the non-steady-state chloride migration coefficient of specimens of hardened concrete at a specified age (see Annex A). The test procedure does not take into account any interaction of concrete with the saline solution over time. The test result is a durability indicator with respect to the resistance of the concrete investigated against chloride penetration.

The test procedure does not apply to concrete specimens with surface treatments such as silanes.

If the aggregate or any other embedded elements (such as metallic fibres or conducting particles) are electrically conductive, this will influence the magnitude of chloride migration. This fact is taken into account when establishing threshold values. It prevents comparison of chloride migration values between concretes if the aggregates induce a difference of half an order of magnitude (higher or lower) of chloride migration.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12390-2, *Testing hardened concrete - Part 2: Making and curing specimens for strength tests*

EN 14488-1, *Testing sprayed concrete - Sampling fresh and hardened concrete*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
migration cell
apparatus for holding a cylindrical test specimen with a lateral sealing of non-conductive material enabling the test specimen to be exposed on two parallel surfaces to test solutions

3.2
migration test set-up
test container with a migration cell support, migration cell test solutions, sleeve, sleeve clamps, electrodes and electronics

3.3
migration
movement of ions under the action of an external electrical field

3.4
chloride migration coefficient
transport property which reflects the resistance against chloride penetration under the action of an externally applied electrical field