Täitematerjalide mehaaniliste ja füüsikaliste omaduste katsetamine. Osa 5: Veesisalduse määramine ventileeritavas kuivatuskapis kuivatamise teel

Tests for mechanical and physical properties of aggregates - Part 5: Determination of the water content by drying in a ventilated oven

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA	NATIONAL FOREWORD
See Eesti standard EVS-EN 1097-5:2008 sisaldab Euroopa standardi EN 1097-5:2008 ingliskeelset teksti.	This Estonian standard EVS-EN 1097-5:2008 consists of the English text of the European standard EN 1097-5:2008.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 12.03.2008.	Date of Availability of the European standard is 12.03.2008.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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

ICS 91.100.15

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1097-5

March 2008

ICS 91.100.15

Supersedes EN 1097-5:1999

English Version

Tests for mechanical and physical properties of aggregates - Part 5: Determination of the water content by drying in a ventilated oven

Essais pour déterminer les caractéristiques mécaniques et physiques des granulats - Partie 5: Détermination de la teneur en eau par séchage en étuve ventilée

Prüfverfahren für mechanische und physikalische Eigenschaften von Gesteinskörnungen - Teil 5: Bestimmung des Wassergehaltes durch Ofentrocknung

This European Standard was approved by CEN on 4 February 2008.

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 CEN 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 1097-5:2008: E

Contents

Page

Foreword

This document (EN 1097-5:2008) has been prepared by Technical Committee CEN/TC 154 “Aggregates”, the secretariat of which is held by BSI.

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 2008, and conflicting national standards shall be withdrawn at the latest by September 2008.

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 1097-5:1999.

This Standard forms part of a series of tests for mechanical and physical properties of aggregates. Test methods for other properties of aggregates are covered by parts of the following European Standards:

EN 932, Tests for general properties of aggregates

EN 933, Tests for geometrical properties of aggregates

EN 1367, Tests for thermal and weathering properties of aggregates

EN 1744, Tests for chemical properties of aggregates

EN 13179, Tests for filler aggregate used in bituminous mixtures

The other parts of EN 1097 are:

Part 1: Determination of the resistance to wear (micro-Deval)

Part 2: Methods for the determination of resistance to fragmentation

Part 3: Determination of loose bulk density and voids

Part 4: Determination of the voids of dry compacted filler

Part 6: Determination of particle density and water absorption

Part 7: Determination of the particle density of filler - Pyknometer method

Part 8: Determination of the polished stone value

Part 9: Determination of the resistance to wear by abrasion from studded tyres - Nordic test

Part 10: Determination of water suction height

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard describes the reference method used for type testing and in cases of dispute for the determination of the water content of aggregates by drying in a ventilated oven. For other purposes, in particular factory production control, other methods may be used provided that an appropriate working relationship with the reference method has been established.

2 Normative references

The following referenced documents are indispensable for the application 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 932-2, *Tests for general properties of aggregates - Part 2: Methods for reducing laboratory samples*

EN 932-5, *Tests for general properties of aggregates - Part 5: Common equipment and calibration*

3 Terms and definitions

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

3.1
aggregate size
designation of aggregate in terms of lower (*d*) and upper (*D*) sieve sizes. This designation accepts the presence of some particles which will be retained on the upper sieve (oversize) and some which will pass the lower sieve (undersize)

3.2
test portion
sample used as a whole in a single test

3.3
constant mass
successive weighings after drying at least 1 h apart not differing by more than 0,1 %

NOTE In many cases constant mass can be achieved after a test portion has been dried for a pre-determined period in a specified oven at (110 ± 5) °C. Test laboratories can determine the time required to achieve constant mass for specific types and sizes of sample dependent upon the drying capacity of the oven used.

4 Principle

The oven-drying method provides a measure of the total free water present in a test portion of aggregate. The water can be from the surface of the aggregate and from water accessible pores within the aggregate particles.

A test portion is weighed and then placed in a ventilated drying oven at (110 ± 5) °C. Successive weighings are used to determine the constant mass of the dried test portion. At all stages of handling and preparation before the start of the test, the laboratory sample and subsequent test portion are protected from loss or gain of water.

The water content is determined as the difference in mass between the wet and the dry mass and is expressed as a percentage of the dry mass of the test portion.

A variation on the method for use with lightweight aggregates is specified in Annex A.