Täitematerjalide keemiliste omaduste katsetamine. Osa 1: Keemiline analüüs

Tests for chemical properties of aggregates - Part 1: Chemical analysis

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1744-1:2010+A1:2012 sisaldab Euroopa standardi EN 1744-1:2009+A1:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 1744-1:2010+A1:2012 consists of the English text of the European standard EN 1744-1:2009+A1:2012.
Standard on kinnitatud Eesti Standardikeskuse 31.12.2012 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 31.12.2012 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 28.11.2012.	Date of Availability of the European standard text 28.11.2012.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 91.100.15

definitsioonid, keemilised analüüsid, keemilised omadused, kloriidid, kuumutuskadu, lahustuvus, lubi, orgaanilised lisandid, sulfaadid, sulfiidid, täitematerjalid, väävel

EUROPEAN STANDARD

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English Version

Tests for chemical properties of aggregates - Part 1: Chemical analysis

Essais visant à déterminer les propriétés chimiques des granulats - Partie 1: Analyse chimique

Prüfverfahren für chemische Eigenschaften von Gesteinskörnungen - Teil 1: Chemische Analyse

This European Standard was approved by CEN on 17 October 2009 and includes Amendment 1 approved by CEN on 15 October 2012.

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

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Foreword

This document (EN 1744-1:2009+A1:2012) 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of an identical text or by endorsement, at the latest by May 2012, and conflicting national standards shall be withdrawn at the latest by May 2012.

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 ⟩A1⟨ EN 1744-1:2009 ⟩A1⟨.

This document includes Amendment 1, approved by CEN on 2012-10-15.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ⟩A1⟨ ⟩A1⟨.

This standard forms part of a series of tests for chemical properties of aggregates. Test methods for other properties of aggregates are covered by the following European Standards:

EN 932 (all parts), *Tests for general properties of aggregates*

EN 933 (all parts), *Tests for geometrical properties of aggregates*

EN 1097 (all parts), *Tests for mechanical and physical properties of aggregates*

EN 1367 (all parts), *Tests for thermal and weathering properties of aggregates*

The other parts of EN 1744, *Tests for chemical properties of aggregates*, are:

— *Part 3: Preparation of eluates by leaching of aggregates*

— *Part 4: Determination of water susceptibility of fillers for bituminous mixtures*

— *Part 5: Determination of acid soluble chloride salts*

— *Part 6: Determination of the influence of recycled aggregate extract on the initial setting time of cement*

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies procedures for the chemical analysis of aggregates. It specifies the reference procedures and, in certain cases, an alternative method which can be considered as giving equivalent results.

Unless otherwise stated, the test methods specified in this standard may be used for factory production control, for audit tests or for type tests.

This standard describes the reference methods used for type testing and in cases of dispute (and alternatives methods) for chemical analyses of aggregates. For the purpose of type testing and in cases of dispute only the reference method should be used. 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 196-1, *Methods of testing cement — Part 1: Determination of strength*

EN 196-2:2005, *Methods of testing cement — Part 2: Chemical analysis of cement*

EN 459-2, *Building lime — Part 2: Test methods*

EN 932-1, *Tests for general properties of aggregates — Part 1: Methods for sampling*

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*

EN 932-6, *Tests for general properties of aggregates — Part 6: Definitions of repeatability and reproducibility*

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

EN 1015-4, *Methods of test for mortar for masonry — Part 4: Determination of consistence of fresh mortar (by plunger penetration)*

EN 1015-9, *Methods of test for mortar for masonry — Part 9: Determination of workable life and correction time of fresh mortar*

EN 1015-11, *Methods of test for mortar for masonry — Part 11: Determination of flexural and compressive strength of hardened mortar*

EN 1097-6, *Tests for mechanical and physical properties of aggregates — Part 6: Determination of particle density and water absorption*

ISO 384:1978, *Laboratory glassware — Principles of design and construction of volumetric glassware*

ISO 385, *Laboratory glassware — Burettes*

ISO 648, *Laboratory glassware — Single-volume pipettes*

ISO 649-1, *Laboratory glassware — Density hydrometers for general purposes — Part 1: Specification*

ISO 1042, *Laboratory glassware — One-mark volumetric flasks*

ISO 4788, *Laboratory glassware — Graduated measuring cylinders*

DIN 12242-1:1980, *Laboratory glassware; interchangeable conical ground joints, dimensions, tolerances*

3 Terms and definitions

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

3.1
test portion
subsample used as a whole in a single test

3.2
test specimen
sample used in a single determination when a test method requires more than one determination of a property

3.3
laboratory sample
sample intended for laboratory testing

3.4
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 Reagents

4.1 General

4.1.1 Unless otherwise stated, use only analytical grade reagents and demineralized water, or water of equivalent purity.

NOTE 1 Unless otherwise stated "%" means "% by mass".

NOTE 2 Where no tolerances are given for reagent volumes or masses, the values quoted are approximate. In such cases volumes delivered from measuring cylinders and indicated masses using the ordinary balances specified in 5.2.4 and 5.2.5 are considered sufficiently accurate for the purposes of this European Standard.

NOTE 3 Unless otherwise stated reagent solutions may be assumed to have long-term stability.

NOTE 4 All chemicals should be treated as potential poisons with toxic properties and appropriate precautions taken before their use. Always take time to assess possible hazards before starting any procedures and constant attention should be maintained.