Tests for geometrical properties of aggregates - Part 11: Classification test for the constituents of coarse T. S. B. Oreniew Generalis of the state of t recycled aggregate



### **FESTI STANDARDI FESSÕNA**

### **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 933-11:2009 sisaldab Euroopa standardi EN 933-11:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 29.05.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.04.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 933-11:2009 consists of the English text of the European standard EN 933-11:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 29.05.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 15.04.2009.

The standard is available from Estonian standardisation organisation.

ICS 91.100.15

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# EUROPEAN STANDARD

### EN 933-11

# NORME EUROPÉENNE EUROPÄISCHE NORM

April 2009

ICS 91.100.15

### **English Version**

## Tests for geometrical properties of aggregates - Part 11: Classification test for the constituents of coarse recycled aggregate

Essais pour déterminer les caractéristiques géométriques des granulats - Partie 11: Essai de classification des constituants de gravillons recyclés Prüfverfahren für geometrische Eigenschaften von Gesteinskörnungen - Teil 11: Einteilung der Bestandteile in grober recyclierter Gesteinskörnung

This European Standard was approved by CEN on 1 March 2009.

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

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### **Foreword**

This document (EN 933-11:2009) 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 October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.

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 European Standard is one of a series of standards for tests for geometrical 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 1097	Tests for mechanical and physical 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 933 are:

- Part 1: Determination of particle size distribution Sieving method
- Part 2: Determination of particle size distribution Test sieves, nominal size of apertures
- Part 3: Determination of particle shape Flakiness index
- Part 4: Determination of particle shape Shape index
- Part 5: Determination of percentage of crushed and broken surfaces in coarse aggregate particles
- Part 6: Assessment of surface characteristics Flow coefficient of aggregates
- Part 7: Determination of shell content Percentage of shells in coarse aggregates
- Part 8: Assessment of fines Sand equivalent test
- Part 9: Assessment of fines Methylene blue test
- Part 10: Assessment of fines Grading of fillers (air jet sieving)

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 European Standard describes a simple method for the examination of coarse recycled aggregates for the purpose of identifying and estimating the relative proportions of constituent materials. This reference test method should be used for type testing and in case of dispute. 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.

NOTE 1 This method is not appropriate for lightweight aggregates covered by EN 13055 series.

NOTE 2 If dangerous substances are found in while carrying out this method, they should be dealt with in accordance with regulations in the place of use.

### 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 932-1, 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 933-2, Tests for geometrical properties of aggregates – Part 2: Determination of particle size distribution – Test sieves, nominal size of apertures