

**Täitematerjalide geomeetriliste omaduste katsetamine.  
Osa 3: Tera kuju määramine. Plaatsustegur  
KONSOLIDEERITUD TEKST**

**Tests for geometrical properties of aggregates - Part 3:  
Determination of particle shape - Flakiness index  
CONSOLIDATED TEXT**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 933-3:2007 sisaldab Euroopa standardi EN 933-3:1997+A1:2003 ingliskeelset teksti.	This Estonian standard EVS-EN 933-3:2007 consists of the English text of the European standard EN 933-3:1997+A1:2003.
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 22.01.1997.	Date of Availability of the European standard is 22.01.1997.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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ICS 91.100.15

Võtmesõnad: aggregates, flattening tests, geometric characteristics, tests,

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ICS 91.100.20

Descriptors: aggregates, tests, geometric characteristics, flattening tests

English version

**Tests for geometrical properties of aggregates -  
Part 3: Determination of particle shape - Flakiness  
index**

Essais pour déterminer les caractéristiques  
géométriques des granulats - Partie 3:  
Détermination de la forme des granulats -  
Coefficient d'aplatissement

Prüfverfahren für geometrische Eigenschaften  
von Gesteinskörnungen - Teil 3: Bestimmung der  
Kornform - Plattigkeitskennzahl

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European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This European Standard 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of an identical text or by endorsement, at the latest by July 1997, and conflicting national standards shall be withdrawn at the latest by July 1997.

This Standard forms part of a series of tests for geometrical properties of aggregates. Test methods for other properties of aggregates will be covered by Parts of the following draft European Standards:

prEN 932	Tests for general properties of aggregates
prEN 1097	Tests for mechanical and physical properties of aggregates
prEN 1367	Tests for thermal and weathering properties of aggregates
prEN 1744	Tests for chemical properties of aggregates

The other parts of prEN 933 will be:

- Part 1: Determination of particle size distribution - Sieving method
- Part 2: Determination of particle size distribution - Test sieves, nominal size of apertures
- Part 4: Determination of particle shape - Shape index
- Part 5: Determination of crushed and broken surfaces in coarse aggregate particles
- Part 6: Determination of texture/shape - Flow coefficient of coarse aggregates
- Part 7: Determination of shell content - Percentage of shells for coarse aggregates
- Part 8: Assessment of fines - Sand equivalent test
- Part 9: Assessment of fines - Methylene blue test
- Part 10: Determination 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This Part of this European Standard specifies the procedure for the determination of the flakiness index of aggregate and applies to aggregates of natural or artificial origin, including lightweight aggregates.

The test procedure specified in this Part of this European Standard is not applicable to particle sizes less than 4 mm or greater than 80 mm.

## 2 Normative references

This European Standard incorporates by dated or by 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.

prEN 932-2	Tests for general properties of aggregates - Part 2: Methods for reducing laboratory samples
prEN 932-5	Tests for general properties of aggregates Part 5: Common equipment and calibration
prEN 933-1	Tests for geometrical properties of aggregates Part 1: Determination of particle size distribution - Sieving method
EN 933-2	Tests for geometrical properties of aggregates Part 2: Determination of particle size distribution - Test sieves, nominal size of apertures

## 3 Definitions

For the purposes of this standard, the following definitions apply:

**3.1 particle size fraction:** Fraction of an aggregate passing the larger of two sieves and retained on the smaller.

NOTE: The lower limit may be zero.

**3.2 test portion:** The 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 (see 5.4) at  $(110 \pm 5)$  °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.