

**Täitematerjalide geomeetriliste omaduste
katsetamine. Osa 4: Tera kuju määramine.
Kujutegur**

Tests for geometrical properties of aggregates -
Part 4: Determination of particle shape - Shape
index

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 933-4:2002 sisaldab Euroopa standardi EN 933-4:1999 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 21.10.2002 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 933-4:2002 consists of the English text of the European standard EN 933-4:1999.

This standard is ratified with the order of Estonian Centre for Standardisation dated 21.10.2002 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

ICS 91.100.15

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English version

Tests for geometrical properties of aggregates

Part 4: Determination of particle shape – Shape index

Essais pour déterminer les caractéristiques géométriques des granulats –
Partie 4: Détermination de la forme
des grains – Indice de forme

Prüfverfahren für geometrische
Eigenschaften von Gesteins-
körnungen – Teil 4: Bestimmung der
Kornform – Kornformkennzahl

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

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

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Contents

	Page
Foreword	2
1 Scope	3
2 Normative references	3
3 Definitions	3
4 Principle	4
5 Apparatus	4
6 Preparation of test portion	5
7 Procedure	5
8 Calculation and expression of results	7
9 Test report	8
Annex A (informative) Example of a test data sheet used for determining the shape index of coarse aggregate	8

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of an identical text or by endorsement, at the latest by April 2000, and conflicting national standards shall be withdrawn at the latest by December 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom

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
prEN 13179	Tests for filler aggregate used in bituminous mixtures

The other parts of EN 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 3	Determination of particle shape - Flakiness index
Part 5	Determination of percentage of crushed and broken surfaces in coarse aggregate particles
Part 6	Determination of particle shape - Flakiness index
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	Assessment of fines - Grading of fillers (air jet sieving)

1 Scope

This European standard specifies a method for the determination of the shape index of coarse aggregates. It applies to aggregates of natural or artificial origin, including lightweight aggregates.

The test method specified in this European Standard is applicable to particle size fractions d/D where $D \leq 63$ mm and $d \geq 4$ mm.

2 Normative references

This European standard incorporates by dated or undated reference, provisions from other publications. The 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.

EN 932-2	Test 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
EN 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
prEN 1097-6	Tests for mechanical and physical properties of aggregates - Part 6: Determination of the particle density and water absorption

3 Definitions

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

3.1 aggregate size: Designation of aggregate in terms of lower (d) and upper (D) sieve sizes, expressed as d/D .

NOTE: 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 particle size fraction d/D : Fraction of an aggregate passing the larger (D) of two sieves and retained on the smaller (d).

3.3 test portion: Sample used as a whole in a single test.

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 (see 5.5) 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.