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



## EESTI STANDARDI EESSÕNA

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	This Estonian standard EVS-EN 933-2:2020 consists of the English text of the European standard EN 933-2:2020.		
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 01.07.2020.	J 1		
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# ICS 91.100.15

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# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 933-2

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ICS 91.100.15

Supersedes EN 933-2:1995

# **English Version**

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

Essais pour déterminer les caractéristiques géométriques des granulats - Partie 2: Détermination de la granularité - Tamis de contrôle, dimensions nominales des ouvertures Prüfverfahren für geometrische Eigenschaften von Gesteinskörnungen - Teil 2: Bestimmung der Korngrößenverteilung - Analysensiebe, Nennweite der Sieböffnungen

This European Standard was approved by CEN on 17 May 2020.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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# **European foreword**

This document (EN 933-2:2020) has been prepared by the 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 January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 933-2:1995.

The main technical change compared to EN 933-2:1995 is the addition of Table 1 "Applicable test sieves – Nominal size of apertures", in Clause 5.

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

- EN 932 (series), Tests for general properties of aggregates
- EN 1097 (series), *Tests for mechanical and physical properties of aggregates*
- EN 1367 (series), Tests for thermal and weathering properties of aggregates
- EN 1744 (series), *Tests for chemical properties of aggregates*
- EN 13179 (series), *Tests for filler aggregate used in bituminous mixtures*

EN 933 consists of the following parts, under the general title *Tests for geometrical properties of aggregates*:

- Part 1: Determination of particle size distribution Sieving method
- Part 3: Determination of particle shape Flakiness index
- Part 4: Determination of particle shape Shape index
- Part 5: Determination of percentage of crushed particles in coarse and all-in natural aggregates
- 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 filler aggregates (air jet sieving)
- Part 11: Classification test for the constituents of coarse recycled aggregates

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, France, Germany, Greece, Hungary, I tal, Jorth M. The United K.

October 1987 Annual Market Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

# 1 Scope

This document specifies the nominal size of apertures for test sieves used for determination of particle size of aggregates.

It applies to:

- a) test sieves of perforated metal plate having square holes of size from 4 mm and up to 125 mm;
- b) test sieves of metal wire cloth having aperture sizes below 4 mm down to 0,063 mm.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 3310-1, Test sieves - Technical requirements and testing - Part 1: Test sieves of metal wire cloth

ISO 3310-2, Test sieves - Technical requirements and testing - Part 2: Test sieves of perforated metal plate

# 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <a href="http://www.electropedia.org/">http://www.electropedia.org/</a>
- ISO Online browsing platform: available at https://www.iso.org/obp

#### 3.1

#### metal wire cloth

cloth of metal wires which cross each other to form square apertures of uniform size

#### 3.2

#### perforated metal plate

metal plate with square holes of uniform size in a regular arrangement

### 4 Requirements for applicable test sieves

Test sieves with nominal aperture size of 4 mm and above shall have a perforated plate with square holes conforming to ISO 3310-2. Test sieves with nominal aperture size below 4 mm shall have a metal wire cloth with apertures conforming to ISO 3310-1.

NOTE Test sieves of perforated metal plate with nominal aperture size of 4 mm and above have better sieving accuracy than test sieves of metal wire cloth with the same nominal size of apertures, due to tighter manufacturing tolerances.

# 5 Nominal size of apertures for applicable test sieves

Nominal size of apertures for applicable test sieves are specified in Table 1. They are taken from the series R 20 in ISO 565:1990.