



BSI Standards Publication

## Tests for geometrical properties of aggregates

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Part 2: Determination of particle size distribution —  
Test sieves, nominal size of apertures

EUROPEAN STANDARD

**EN 933-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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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

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

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Requirements for applicable test sieves</b> .....	<b>5</b>
<b>5 Nominal size of apertures for applicable test sieves</b> .....	<b>5</b>
<b>Bibliography</b> .....	<b>7</b>

## 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of an identical text or by endorsement, at the latest by January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.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*

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## 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 <http://www.electropedia.org/>
- 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.

Table 1 — Applicable test sieves – Nominal size of apertures

Dimensions in millimetres

Test sieves of perforated metal plate with square holes	Test sieves of metal wire cloth
—	3,15
<b>125</b>	<b>2,8</b>
112	2,5
100	2,24
<b>90</b>	<b>2</b>
80	1,8
71	1,6
<b>63</b>	<b>1,4</b>
56	1,25
50	1,12
<b>45</b>	<b>1</b>
40	0,90
35,5	0,800
<b>31,5</b>	<b>0,710</b>
28	0,630
25	0,560
<b>22,4</b>	<b>0,500</b>
20	0,450
18	0,400
<b>16</b>	<b>0,355</b>
14	0,315
12,5	0,280
<b>11,2</b>	<b>0,250</b>
10	0,224
9	0,200
<b>8</b>	<b>0,180</b>
7,1	0,160
6,3	0,140
<b>5,6</b>	<b>0,125</b>
5	0,112
4,5	0,100
<b>4</b>	<b>0,090</b>
3,55	0,080
	0,071
	<b>0,063</b>

NOTE Bold figures represent the principal series of nominal sizes of apertures for test sieves.

## **Bibliography**

ISO 565:1990, *Test sieves – Metal wire cloth, perforated metal plate and electroformed sheet – Nominal sizes of openings*

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