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BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

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Responsible committee: B/502/6 Test methods

Interested committees:

Title: Draft BS EN 933-9 Tests for geometrical properties of aggregates. Part 9: Assessment of fines - Methylene blue test.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

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Responsible Committee Secretary: Ms Ashley Wagner (BSI)

Direct tel:

E-mail: ashley.wagner@bsigroup.com

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

English Version

Tests for geometrical properties of aggregates - Part 9: Assessment of fines - Methylene blue test

Essais pour déterminer les caractéristiques
géométriques des granulats - Partie 9 : Qualification
des fines - Essais au bleu de méthylène

Prüfverfahren für geometrische Eigenschaften von
Gesteinskörnungen - Teil 9: Beurteilung von
Feinanteilen - Methylenblau-Verfahren

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 154.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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 (prEN 933-9:2020) has been prepared by Technical Committee CEN/TC 154 “Aggregates”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 933-9:2009+A1:2013.

In comparison with the previous edition, the following technical modifications have been made:

- a) Pre-drying temperature has been increased for natural and manufactured aggregates (Clause 7);
- b) The procedure of stain tests has been clarified (8.3);
- c) The test report content has been adapted to the current rules (Clause 10);
- d) The note in Annex D, containing recommendations, has been transformed to main text (D.9).

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

The other parts of EN 933 include:

- *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 particles in coarse and all-in natural aggregates*
- *Part 6: Assessment of surface characteristics — Flow coefficient for coarse aggregates*
- *Part 7: Determination of shell content — Percentage of shells in coarse aggregates*
- *Part 8: Assessment of fines — Sand equivalent test*
- *Part 10: Assessment of fines — Grading of fillers (air jet sieving)*
- *Part 11: Classification test for the constituents of coarse recycled aggregates*

1 Scope

This document specifies the reference method used for type testing and in cases of dispute, for the determination of the methylene blue value of the 0/2 mm fraction in fine aggregates or all-in aggregates (*MB*). It also specifies the reference method for the determination of the methylene blue value of the 0/0,125 mm fraction (*MB_F*) in Annex A. Other methods can be used for other purposes, such as factory production control, provided that an appropriate working relationship with the suitable reference method has been established.

A conformity check, adding a single quantity of dye solution equivalent to a specified limiting value and which can be used as part of a production control process, is described in informative Annex B.

Annex C specifies the preparation of 10 g/l methylene blue solution and Annex D specifies the procedure for the determination of the methylene blue value of kaolinite (*MB_k*). Annexes C and D are normative.

An example of a test data sheet is given in informative Annex E.

WARNING – The use of this part of EN 933 can involve hazardous materials, operations and equipment (such as dust, noise and heavy lifts). It does not purport to address all of the safety or environmental problems associated with its use. It is the responsibility of users of this document to take appropriate measures to ensure the safety and health of personnel and the environment prior to application of the standard, and fulfil statutory and regulatory requirements for this purpose.

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.

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*

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 subsample

sample obtained by means of a sample reduction procedure

3.2 test portion

d_0/D_0

sample used as a whole in a single test

3.3 fines

particle size fraction of an aggregate which passes the 0,063 mm sieve