



SLOVENSKI STANDARD
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Agregati za malte

Aggregates for mortar

Gesteinskörnungen für Mörtel

Granulats pour mortiers

Ta slovenski standard je istoveten z: FprEN 13139

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91.100.15	Mineralni materiali in izdelki	Mineral materials and products
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English Version

Aggregates for mortar

Granulats pour mortiers

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This draft European Standard is submitted to CEN members for unique acceptance procedure. 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.

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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.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (FprEN 13139:2011) has been prepared by Technical Committee CEN/TC 154 “Aggregates”, the secretariat of which is held by BSI.

This document will supersede EN 13139:2002.

This document is currently submitted to the Unique Acceptance Procedure.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directives including 89/106/EEC (CPD).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

Annex A is normative.

Requirements for other end uses of aggregates are specified in the following European Standards:

- EN 12620, *Aggregates for concrete*;
- EN 13043, *Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas*;
- EN 13055-1, *Lightweight aggregates — Part 1: Lightweight aggregates for concrete, mortar and grout*;
- EN 13055-2, *Lightweight aggregates — Part 2: Lightweight aggregates for bituminous mixtures and surface treatments and for unbound and bound applications*;
- EN 13139, *Aggregates for mortar*;
- EN 13242, *Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction*;
- EN 13383-1, *Armourstone — Part 1: Specification*;
- EN 13383-2, *Armourstone — Part 2: Test methods*;
- EN 13450, *Aggregates for railway ballast*.

Requirements for evaluation of conformity are specified in FprEN 16236, Evaluation of Conformity¹.

¹ To be published.

FprEN 13139:2011 (E)**1 Scope**

This European Standard specifies the properties of aggregates obtained by processing natural, manufactured or recycled materials and mixtures of these aggregates for use in mortars, renders and screeds, e.g.

- a) masonry mortar,
- b) floor/screed mortar,
- c) surfacing of internal walls (plastering mortar),
- d) rendering of external walls,
- e) special bedding materials,
- f) repair mortar,
- g) grouts,

for buildings, roads and civil engineering works.

It covers aggregates having an oven dried particle density greater than $2,00 \text{ Mg/m}^3$ ($2\,000 \text{ kg/m}^3$). It also covers recycled aggregate with densities between $1,50 \text{ Mg/m}^3$ ($1\,500 \text{ kg/m}^3$) and $2,00 \text{ Mg/m}^3$ ($2\,000 \text{ kg/m}^3$).

A list of the source materials that have been considered and are within the scope of this standard is given in Annex A (normative)

Requirements for the evaluation of conformity of the products to this European Standard are given in FprEN 16236.

It incorporates a general requirement that aggregates will not release any dangerous substances in excess of the maximum permitted levels specified in a relevant European Standard for the material or permitted in the national regulations of the member state of destination (see Note 3).

NOTE 1 Aggregates used in construction should comply with all the relevant requirements of the appropriate European Standards for aggregates. These standards include comprehensive and specific requirements for natural aggregates, iron and steel making slag and recycled aggregates, dealing with, for example, the stability of certain basalts, the expansion of certain slags and the constitution of recycled aggregates.

For materials from some other secondary sources, however, work is ongoing and the requirements are incomplete. In the meantime such materials, when placed on the market as aggregates, will comply fully with this standard but may also be required to comply with specific relevant additional requirements at the place of use. Additional characteristics and requirements may be specified on a case-by-case basis depending upon experience of use of the product, and defined in specific contractual documents.

NOTE 2 Properties for lightweight aggregates are specified in EN 13055.

NOTE 3 Requirements for the declaration of the potential of aggregates to release regulated dangerous substances are currently under development. Until such time as these are finalized, attention should be paid to requirements at the place of use.

NOTE 4 The Tables in this standard include categories that are common across the four main aggregate standards: EN 12620, EN 13043, EN 13139 and EN 13242. Not all of these categories are appropriate for aggregates for use in mortars, renders and screeds. Those categories, which are appropriate for mortar, are shown grey shaded.

2 Normative references

The following referenced documents are indispensable for the application 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 932-3, *Tests for general properties of aggregates — Part 3: Procedure and terminology for simplified petrographic description*

EN 933-1, *Tests for geometrical properties of aggregates — Part 1: Determination of particle size distribution — Sieving method*

EN 933-3, *Tests for geometrical properties of aggregates — Part 3: Determination of particle shape — Flakiness index*

EN 933-7, *Tests for geometrical properties of aggregates — Part 7: Determination of shell content — Percentage of shells in coarse aggregates*

EN 933-8, *Tests for geometrical properties of aggregates — Part 8: Assessment of fines — Sand equivalent test*

EN 933-9, *Tests for geometrical properties of aggregates — Part 9: Assessment of fines — Methylene-blue test*

EN 933-10, *Tests for geometrical properties of aggregates — Part 10: Assessment of fines — Grading of filler aggregates (air jet sieving)*

EN 1097-6, *Tests for mechanical and physical properties of aggregates — Part 6: Determination of particle density and water absorption*

EN 1367-1, *Tests for thermal and weathering properties of aggregates — Part 1: Determination of resistance to freezing and thawing*

EN 1367-2, *Tests for thermal and weathering properties of aggregates — Part 2: Magnesium sulfate test*

EN 1744-1:2009, *Tests for chemical properties of aggregates — Part 1: Chemical analysis*

FprEN 16236, *Evaluation of Conformity of aggregates*²

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

3 Terms and definitions

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

3.1

aggregate

granular material of natural, manufactured or recycled origin, used in construction

² To be published.

FprEN 13139:2011 (E)**3.2****natural aggregate**

aggregate from mineral sources which has been subjected to nothing more than mechanical processing

3.3**manufactured aggregate**

aggregate of mineral origin resulting from an industrial process involving thermal or other modification

3.4**recycled aggregate**

aggregate resulting from the processing of inorganic or mineral material previously used in construction

3.5**category**

level of a property of an aggregate expressed as a range of values or a limiting value

NOTE There is no relationship between the categories of different properties.

3.6**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 are retained on the upper sieve (oversize) and some which pass the lower sieve (undersize).

3.7**grading**

particle size distribution expressed as the percentages by mass passing a specified set of sieves

3.8**fines**

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

3.9**coarse aggregate**

designation given to the larger aggregate sizes with D greater than 4 mm and d greater than or equal to 1 mm

NOTE Aggregates that do not fit the definitions for fine or coarse (1 mm to 3 mm or 2 mm to 4 mm) are treated as coarse aggregate.

3.10**fine aggregate**

designation given to the smaller aggregate sizes with D less than or equal to 4 mm and $d = 0$

NOTE Fine aggregate can be produced from natural disintegration of rock or gravel and/or by the crushing of rock or gravel or processing of manufactured aggregates.

3.11**all-in aggregate**

aggregate consisting of a mixture of coarse and fine aggregates with D greater than 4 mm and $d = 0$

NOTE It can be produced without separating into coarse and fine fractions or it can be produced by combining coarse and fine aggregates.