



NSAI
Standards

Irish Standard
I.S. EN 13043:2013

Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas

I.S. EN 13043:2013

Incorporating amendments/corrigenda/National Annexes issued since publication:

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

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English Version

Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas

Granulats pour mélanges bitumineux et pour enduits superficiels utilisés dans la construction des chaussées, aérodromes et autres zones de circulation

Gesteinskörnungen für Asphalt und Oberflächenbehandlung für Straßen, Flugplätze und andere Verkehrsflächen

This European Standard was approved by CEN on 24 August 2011.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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Foreword

This document (EN 13043:2013) 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of an identical text or by endorsement, at the latest by November 2013, and conflicting national standards shall be withdrawn at the latest by February 2015.

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

This document supersedes EN 13043:2002.

The main changes compared to the previous edition are:

- a) Description of evaluation of conformity of aggregates - initial type testing and factory production control in a separate new standard EN 16236;
- b) Implementing recycling aggregates;
- c) Implementing general sentences on dangerous substances and adding a new normative Annex A dealing with all source materials considered;
- d) Unification of categories which are common across the four main aggregate standards: EN 12620, EN 13043, EN 13139 and EN 13242;
- e) Unification of definitions which are common across the four main aggregate standards: EN 12620, EN 13043, EN 13139 and EN 13242, i. e. for coarse, fine, all-in aggregates and natural graded 0/8 aggregates;
- f) Adding requirements for the sand equivalent value for fines quality;
- g) Implementation of new methylene blue values for fines quality;
- h) Slight modifications of flakiness/shape indices and Los Angeles-, Micro Deval- and Nordic Abrasion values;
- i) Reorganisation of chemical requirements;
- j) Reorganisation of durability including a new requirement for the resistance to freezing and thawing in the presence of salt (extreme conditions);
- k) Precision of carbonate content of filler aggregate and calcium carbonate content of limestone filler aggregate;
- l) Deletion of the old Annexes A and B.

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 Directive(s).

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

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

- EN 12620, *Aggregates for concrete*;
- EN 13055, *Lightweight aggregates*;
- 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 13450, *Aggregates for railway ballast*.

Requirements for evaluation of conformity are specified in EN 16236.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the properties of aggregates and filler aggregates obtained by processing natural, manufactured or recycled materials and mixtures of these aggregates for use in bituminous mixtures and surface treatments for roads, airfields and other trafficked areas.

This standard does not cover the use of reclaimed bituminous mixtures.

It also covers recycled aggregate with particle densities greater than $1,50 \text{ Mg/m}^3$ ($1\,500 \text{ kg/m}^3$) with appropriate caveats and recycled fine aggregate with appropriate caveats.

A list of the source materials that have been considered and indicating those which 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 EN 16236.

It incorporates a general requirement that aggregates shall 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.

The tables in this standard include categories which 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 for bituminous mixtures.

Categories, notes, comments etc., which are grey shaded, should not be used for aggregates for bituminous mixtures.

Aggregates used in construction should comply with all the requirements of the relevant European Standards. 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, should conform fully to this standard but may also be required to conform to 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 1 Requirements for lightweight aggregates are specified in prEN 13055.

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

NOTE 2 Requirements for reclaimed asphalt for use as a constituent of asphalt mixtures are specified in EN 13108-8 and are not therefore covered in detail in this standard. EN 13108-8 does however call up the general requirements of EN 13043 for the aggregate component of reclaimed asphalt.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 196-2, *Methods of testing cement — Part 2: Chemical analysis of cement*

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