

**Kergtäitematerjalid. Osa 1: Betooni ja mördi
kergtäitematerjalid**

Lightweight aggregates - Part 1: Lightweight
aggregates for concrete, mortar and grout

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13055-1:2005 sisaldab Euroopa standardi EN 13055-1:2002+AC:2004 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 18.10.2002 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 08.05.2002.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13055-1:2005 consists of the English text of the European standard EN 13055-1:2002+AC:2004.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 18.10.2002 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 08.05.2002.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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Võtmesõnad: katsetamine, kergtäitematerjalid, tootmisohje, vastavushindamine

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Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
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English version

Lightweight aggregates - Part 1: Lightweight aggregates for concrete, mortar and grout

Granulats légers - Partie 1: Granulats légers pour bétons et mortiers

Leichte Gesteinskörnungen - Teil 1: Leichte Gesteinskörnungen für Beton und Mörtel

This European Standard was approved by CEN on 21 March 2002.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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Contents

	page
Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	5
4 Physical requirements.....	6
5 Chemical requirements	8
6 Testing	9
7 Evaluation of conformity.....	10
8 Designation.....	11
Annex A (normative) Determination of crushing resistance	12
Annex B (normative) Determination of resistance to disintegration	16
Annex C (normative) Determination of resistance to freezing and thawing of lightweight aggregates	18
Annex D (informative) Guidance on how to convert quantities by mass to quantities by volume.....	21
Annex E (informative) Guidance on the effects of some chemical constituents of lightweight aggregates on the durability of concrete, mortar and grout in which they are incorporated	22
Annex F (normative) Factory production control	23
Annex ZA (informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives	28

Foreword

This document EN 13055-1:2002 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 2002, and conflicting national standards shall be withdrawn at the latest by June 2004.

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.

This European Standard forms part of a series of standards for lightweight aggregates, the other part being:

Part 2: Lightweight aggregates for bituminous mixtures and surface treatments and for unbound and bound applications excluding concrete, mortar and grout

Requirements for other types of aggregates will be specified in the following European Standards:

prEN 12620, *Aggregates for concrete.*

prEN 13043, *Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas.*

prEN 13139, *Aggregates for mortar.*

prEN 13242, *Aggregates for unbound and hydraulic bound materials for use in civil engineering work and road construction.*

EN 13383-1, *Armourstone - Part 1: Specification.*

prEN 13450, *Aggregates for railway ballast.*

The annexes A, B, C and F are normative, the annexes D and E are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies the properties of lightweight aggregates and lightweight filler aggregates obtained by processing natural, manufactured or recycled materials and mixtures of these aggregates for use in concrete, mortar and grout in buildings, roads and civil engineering works.

This European Standard covers lightweight aggregates of mineral origin having particle densities not exceeding $2\,000\text{ kg/m}^3$ ($2,00\text{ Mg/m}^3$) or loose bulk densities not exceeding $1\,200\text{ kg/m}^3$ ($1,20\text{ Mg/m}^3$) including:

- a) natural aggregates;
- b) aggregates manufactured from natural materials and/or from by-products of industrial processes;
- c) by-products of industrial processes;
- d) recycled aggregates.

It provides for the evaluation of conformity of the products to this European Standard.

The requirements specified in this standard may not be relevant to all types of lightweight aggregates. For particular applications the requirements and tolerances may be adapted for the end use.

NOTE The requirements in this European Standard are based upon experience with aggregate types with an established pattern of use. Care should be taken when considering the use of aggregates from sources with no such pattern of use, e.g., recycled aggregates and aggregates arising from certain industrial by-products. Such aggregates, which should comply with all the requirements of this European Standard, could have other characteristics not included in Mandate M 125 that do not apply to the generality of aggregate types with an established pattern of use and when required, provisions valid at the place of use can be used to assess their suitability.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

EN 932-1, *Tests for general properties of aggregates — Part 1: Methods for sampling.*

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.*

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

EN 933-2, *Tests for geometrical properties of aggregates — Part 2: Determination of particle size distribution — Test sieves, nominal size of apertures.*

EN 933-5, *Tests for geometrical properties of aggregates — Part 5: Determination of percentage of crushed and broken surfaces in coarse aggregate particles.*

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

EN 1097-3, *Tests for mechanical and physical properties of aggregates — Part 3: Determination of loose bulk density and voids.*

EN 1097-5, *Tests for mechanical and physical properties of aggregates — Part 5: Determination of the water content by drying in a ventilated oven.*

EN 1097-6:2000, *Tests for mechanical and physical properties of aggregates — Part 6: Determination of particle density and water absorption.*

EN 1744-1:1998, *Tests for chemical properties of aggregates — Part 1: Chemical analysis.*

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 European Standard, the following terms and definitions apply.

3.1

aggregate

granular material used in construction. Aggregate may be natural, manufactured, by product or recycled

3.2

lightweight aggregate

aggregate of mineral origin having a particle density not exceeding $2\,000\text{ kg/m}^3$ ($2,00\text{ Mg/m}^3$) or a loose bulk density not exceeding $1\,200\text{ kg/m}^3$ ($1,20\text{ Mg/m}^3$)

3.3

natural aggregate

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

3.4

manufactured aggregate

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

3.5

by-product aggregate

aggregate of mineral origin from an industrial process which subsequently has been subjected to nothing more than mechanical processing

3.6

recycled aggregate

aggregate resulting from processing of inorganic material previously used in construction

3.7

fines

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

3.8

filler aggregate

aggregate, most of which passes a 0,063 mm sieve, which can be added to construction materials to provide certain properties

3.9

grading

particle size distribution expressed as the percentage by mass passing a specified number of sieves