



SLOVENSKI STANDARD
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**Toplotnoizolacijski in lahki polnilni proizvodi za inženirske objekte (CEA) -
Proizvodi iz ekspandiranega glinenega agregatnega proizvoda (LWA)**

Light weight fill and thermal insulation products for civil engineering applications (CEA) -
Expanded clay lightweight aggregate products (LWA)

Leichte Schütt- und Wärmedämmstoffe für bautechnische Anwendungen (CEA) -
Produkte aus Blähton-Leichtzuschlagstoffen (LWA)

Matériaux de remplissage légers et produits isolants thermiques pour les applications du
génie civil - Produits à base de granulats légers d'argile expansée

Ta slovenski standard je istoveten z: FprEN 15732

ICS:

91.100.60	Materiali za toplotno in zvočno izolacijo	Thermal and sound insulating materials
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**Light weight fill and thermal insulation products for civil
engineering applications (CEA) - Expanded clay lightweight
aggregate products (LWA)**

Matériaux de remplissage légers et produits isolants
thermiques pour les applications du génie civil - Produits à
base de granulats légers d'argile expansée

Leichte Schütt- und Wärmedämmstoffe für bautechnische
Anwendungen (CEA) - Produkte aus Blähton-
Leichtzuschlagstoffen (LWA)

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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.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (FprEN 15732:2012) has been prepared by Technical Committee CEN/TC 88 “Thermal insulating materials and products”, the secretariat of which is held by DIN.

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 Directive(s).

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

This standard is the harmonised part satisfying the mandate, the CPD and is the basis for the CE marking, covers the products which are placed on the market.

1 Scope

This standard describes the product characteristics and includes procedures for testing, marking and labelling.

This European Standard specifies the requirements for loose-fill expanded clay lightweight aggregate (expanded clay LWA) products for Civil Engineering Applications excluding the use as thermal insulation in and under buildings which are covered by European Standard EN 14063-1. The standard covers the use of expanded clay LWA as lightweight fill and insulation materials in embankments for roads, railways and other trafficked areas and as lightweight backfill for structures.

This standard does not specify the required level of a given property to be achieved by a product to demonstrate fitness for purpose in a particular application. The levels required for a given application are to be found in regulations or non-conflicting standards.

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

EN 932-2, *Tests for general properties of aggregates - Part 2: Method for reducing laboratory samples*

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

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 water content by drying in a ventilated oven*

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

EN ISO 10456, *Building materials and products – Procedures for determining declared and design thermal values (ISO 10456:1999)*

EN 12524, *Building materials and products – Hygrothermal properties – Tabulated design values*

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 or unbound and bound applications.*

EN 13172, *Thermal Insulation products - Evaluation of conformity*

EN 13286-4, *Unbound and hydraulically bound mixtures - Part 4: Test methods for laboratory reference density and moisture content - Vibrating hammer.*

EN 13286-5, *Unbound and hydraulically bound mixtures - Part 5: Test methods for laboratory reference density and moisture content - Vibrating table.*

EN 13286-7, *Unbound and hydraulically bound mixtures - Part 7: Cyclic load triaxial test for unbound mixtures*

EN 13501-1, *Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire test*

EN 13820, *Thermal insulating materials for building applications - Determination of organic content*

EN 14063-1, *Thermal insulating materials and products – In-situ formed expanded clay lightweight aggregate products (LWA) – Part 1: Specification for the loose-fill products before installation*

EN ISO 9229, *Thermal insulation – Definitions of terms (ISO/DIS 9229:2005)*

3 Terms definitions, symbols, units and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 9229, and the following apply.

3.1.1

expanded clay lightweight aggregate

Insulation material or product composed of lightweight granular material having a cellular structure formed by expanding clay minerals by heat.

3.1.2

compressibility

Deformation at a certain load of a vibrated specimen, given as a load-deformation curve

3.1.3

compressive strength, CS(10)

The load where the deformation of a vibrated specimen is 10%

3.1.4

stiffness modulus

The stiffness modulus is given as the tangent to the load-deformation curve and is related to the level of deformation.

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3.1.5

compressive creep (CC)

Compressive creep is the deformation at a constant load in a specified time.

3.1.6

compaction

Mechanical compression (e.g. by vibrator) of the installed insulation layer, expressed as a percentage of the initial untreated layer thickness.

3.1.7

level

Given value, which is the upper or lower limit of a requirement. The level is given by the declared value of the characteristic concerned.

3.1.8

class

Combination of two levels of the same property, between which the performance falls, where the levels are given by the declared value of the characteristic concerned.

3.2 Symbols, units and abbreviated terms

Symbols and units used in this standard:

LD is the symbol of the declared level for loose bulk density

PS is the symbol of the declared level for aggregate size (mm)

CS(10) is the symbol of the declared level for compressive strength at 10 % deformation

CC is the symbol of the declared level for compressive creep

Abbreviated terms used in this standard:

LWA is **L**ightweight **A**ggregate

ITT is **I**nitial **T**ype **T**est

CEA is **C**ivil **E**ngineering **A**pplications

4 Requirements

4.1 General

Product properties shall be assessed in accordance with Clause 5. To conform with this standard, products shall meet the requirements of 4.2 and the requirements of 4.3 as appropriate.

Sampling of expanded clay LWA shall be performed according to EN 932-1 and splitting of samples according to EN 932-2.

One test result on a product property is the average of the measured values on the number of test specimens given in Table 1.