



SLOVENSKI STANDARD
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Toplotnoizolacijski proizvodi za stavbe - Proizvodi iz ekspandiranega glinenega agregatnega proizvoda (LWA), oblikovani na mestu vgradnje - 2. del: Specifikacija za vgrajene izolacijske proizvode

Thermal insulation products for buildings - In-situ formed expanded clay lightweight aggregate products - Part 2: Specification for the installed products

Wärmedämmstoffe für Gebäude - An der Verwendungsstelle hergestellte Wärmedämmung aus Blähton-Leichtzuschlagsstoffen (LWA) - Teil 2: Spezifikation für die eingebauten Produkte

Produits isolants thermiques pour le bâtiment - Produits à base de granulats légers d'argile expansée formés en place - Partie 2: Spécifications relatives aux produits installés

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ICS:

91.100.60	Materiali za toplotno in zvočno izolacijo	Thermal and sound insulating materials
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**Thermal insulation products for buildings - In-situ formed
expanded clay lightweight aggregate products - Part 2:
Specification for the installed products**

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base de granulats légers d'argile expansée formés en place
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Verwendungsstelle hergestellte Wärmedämmung aus
Blähton-Leichtzuschlagsstoffen (LWA) - Teil 2:
Spezifikation für die eingebauten Produkte

This draft European Standard is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 88.

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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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Foreword

This document (FprEN 14063-2:2012) 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 European standard consists of two parts. The first part is the harmonised part satisfying the mandate and the CPD. It is the basis for the CE marking covering the products, which are placed on the market. The second part, which is the non-harmonised part, covers the specification for the installed products. Both parts need to be used for the application of the insulation products in the end-use applications covered by EN 14063.

Part 1 of this European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association and supports the essential requirements of EU Directives. For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of Part 1.

Attention is drawn to the need to take into account any complementary member state rules (e.g. installation rules) which together with this European Standard ensures the fitness for purpose of the installed product.

Part 2 of this European Standard contains two annexes:

- Annex A (normative) Method for the determination of density and degree of compaction of the installed product
- Annex B (normative) Installation Guidelines

This European Standard is one of a series for mineral wool, expanded clay, expanded perlite, exfoliated vermiculite, polyurethane/polyisocyanurate, cellulose, bound expanded polystyrene and expanded polystyrene in-situ formed insulation products used in buildings, but this standard can be used in other areas where appropriate.

The reduction in energy used and emissions produced during the installed life of insulation products exceeds by far the energy used and emissions made during the production and disposal processes.

FprEN 14063-2:2012 (E)**1 Scope**

This European Standard specifies the requirements for loose-fill expanded clay lightweight aggregate (LWA) products installed in roofs, ceilings, floors and ground floors.

This Part 2 is a specification for the installed product.

Part 2 of this European Standard describes, when taken together with Part 1, the product characteristics that are linked to the essential requirements of the EU Construction Products Directive. Part 2 also specifies the checks and tests to be used for the declarations made by the installer of the product.

Part 2 of this European 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 national regulations or non conflicting standards.

This European Standard does not cover factory made expanded clay lightweight aggregate products or in-situ products intended to be used for the insulation of building equipment and industrial installations.

This European Standard does not specify performance requirements for airborne sound insulation and for acoustic absorption applications.

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 823:1994, *Thermal insulating products for building applications — Determination of thickness*

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

EN ISO 9229:2007, *Thermal insulation — Vocabulary (ISO 9229:2007)*

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 9229:2007 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**design insulation thickness**

insulation thickness after compaction as specified by the designer

3.1.3**declared installed insulation thickness**

insulation thickness as installed by the installer including compaction if prescribed

3.1.4**compaction**

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

3.1.5**settlement**

decrease of installed insulation thickness with time, expressed as a percentage of the initial installed thickness (after compaction if prescribed)

3.2 Symbols and units

d_m	mean insulation thickness	m
$d_{m,a}$	mean installed insulation thickness after compaction	m
$d_{m,b}$	mean installed insulation thickness before compaction	m
R_D	installed declared thermal resistance	(m ² ·K)/W
λ_D	declared thermal conductivity	W/(m·K)
C_p	degree of compaction	%

3.3 Abbreviated terms

LWA Lightweight Aggregate

4 Requirements**4.1 General**

The installer shall use an insulation product that complies with EN 14063-1.

The installer shall inspect the building in accordance with manufacturer's guidelines in order to determine whether it is suitable for application of the product.

NOTE National regulations may also apply.

4.2 Guidelines for installation

National Practice, National Standards, National Regulations or Local rules may exist, for the installation of the product. In the absence of National Regulations, National Standards or any local rules, the manufacturer's technical information shall be followed together with the procedure given in Annex B.

FprEN 14063-2:2012 (E)**4.3 Declared installed thermal resistance, R_D**

The thermal resistance, R_D , shall be assessed by measurement of the declared installed insulation thickness according to 4.3 combined with the declared thermal conductivity, λ_D .

NOTE 1 For calculating the thermal resistance of complete building elements involving the use of these products the procedures given in EN ISO 6946 can be used.

NOTE 2 EN ISO 10456 describes how the design thermal conductivity is calculated from the declared thermal conductivity.

4.4 Declared installed insulation thickness, d_m

The mean value of the installed thickness, d_m , shall be not less than the specified thickness prescribed by the designer. No individual value shall be less than 80 % of the specified value. Installed insulation thickness is measured according to 5.1.

4.5 Declared moisture content

When required the moisture content shall be measured in accordance with EN 1097-5 and expressed in % by mass.

NOTE The declaration of moisture content is only needed if the products are to be used in contact with wooden materials, e.g. between rafters and wooden beams.

4.6 Settlement

NOTE The settlement of expanded clay lightweight aggregate products is negligible and therefore no method of measurement has been specified.

4.7 Compaction

The installer shall ensure that the degree of compaction specified by the client or designer is obtained.

The degree of compaction in percent (C_p) shall be calculated using Formula (1):

$$C_p = 100 \cdot (d_{m,b} - d_{m,a}) / d_{m,b} \quad (1)$$

Where

$d_{m,b}$ is the mean installed insulation thickness before compaction, m

$d_{m,a}$ is the mean installed insulation thickness after compaction, m

In case of dispute determination of density and degree of compaction of the installed product shall be assessed by the method given in Annex A.

The mean installed insulation thickness is calculated as described in 5.1.

NOTE The typical degree of compaction is (5-15) % for rounded aggregates and could be more for other types of shapes