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Thermal insulation products for buildings - Factory made cellular glass (CG) products - Specification

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## EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

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#### **English Version**

# Thermal insulation products for buildings - Factory made cellular glass (CG) products - Specification

Produits isolants thermiques pour le bâtiment - Produits manufacturés en verre cellulaire (CG) - Spécification

Wärmedämmstoffe für Gebäude - Werkmäßig hergestellte Produkte aus Schaumglas (CG) - Spezifikation

This European Standard was approved by CEN on 6 October 2012 and includes Amendment 1 approved by CEN on 15 December 2014.

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.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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#### **Foreword**

This document (EN 13167:2012+A1:2015) has been prepared by Technical Committee CEN/TC 88 "Thermal insulating materials and products", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by August 2015, and conflicting national standards shall be withdrawn at the latest by November 2016.

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 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 Construction Products Regulation (CPR), see informative Annex ZA, which is an integral part of this standard. (4)

This document supersedes A EN 13167:2012 A.

This document includes Amendment 1 approved by CEN on 2014-12-15.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A] (A].

Compared with EN 13167:2008, the main changes are:

- a) better harmonisation between the individual standards of the package (EN 13162 to EN 13171) on definitions, requirements, classes and levels;
- b) new normative annex on multi-layered products;
- c) changes on some editorial and technical content and addition of information on some specific items, such
  as point load (move towards 4.3); compressive strength (additional levels); bending strength (additional
  levels);
- addition of links to EN 15715, Thermal insulation products Instructions for mounting and fixing for reaction to fire testing — Factory made products;
- e) changes to the Annex ZA.
- Amendment 1 modifies EN 13167:2012 identifying those clauses of the standard which are needed for the compliance of the European Standard with the Construction Products Regulation (CPR).

This amendment introduces

- f) an addition to the foreword;
- g) an addition in 3.2;
- h) a new subclause 4.3.12;
- i) modification of Clause 7;
- j) modification of Clause 8;

- k) modification of Annex B;
- I) a new Annex ZA. (A1

This standard is one of a series of standards for thermal insulation products used in buildings but this standard may be used in other areas where appropriate.

In pursuance of Resolution BT 20/1993 revised, CEN/TC 88 have proposed defining the standards listed below as a package of documents.

The package of standards comprises the following group of interrelated standards for the specifications of factory made thermal insulation products, all of which come within the scope of CEN/TC 88:

EN 13162, Thermal insulation products for buildings — Factory made mineral wool (MW) products — Specification

EN 13163, Thermal insulation products for buildings — Factory made expanded polystyrene (EPS) products — Specification

EN 13164, Thermal insulation products for buildings — Factory made extruded polystyrene foam (XPS) products — Specification

EN 13165, Thermal insulation products for buildings — Factory made rigid polyurethane foam (PU) products — Specification

EN 13166, Thermal insulation products for buildings — Factory made phenolic foam (PF) products — Specification

EN 13167, Thermal insulation products for buildings — Factory made cellular glass (CG) products — Specification

EN 13168, Thermal insulation products for buildings — Factory made wood wool (WW) products — Specification

EN 13169, Thermal insulation products for buildings — Factory made expanded perlite board (EPB) products — Specification

EN 13170, Thermal insulation products for buildings — Factory made products of expanded cork (ICB) — Specification

EN 13171, Thermal insulation products for buildings — Factory made wood fibre (WF) products — Specification

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.

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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.

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#### 1 Scope

This European Standard specifies the requirements for factory made cellular glass (CG) products, with or without facings or coatings, which are used for the thermal insulation of buildings. The products are manufactured in the form of boards or slabs.

Products covered by this standard are also used in prefabricated thermal insulation systems and composite panels; the performance of systems incorporating these products is not covered.

This standard describes product characteristics and includes procedures for testing, evaluation of conformity, marking and labelling.

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.

Products with a declared thermal resistance lower than 0,50 m<sup>2</sup>·K/W or a declared thermal conductivity greater than 0,065 W/(m·K) at 10 °C are not covered by this standard.

This standard does not cover in situ insulation products and products intended to be used for the insulation of building equipment and industrial installations (covered by EN 14305).

#### 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 822, Thermal insulating products for building applications Determination of length and width
- EN 823, Thermal insulating products for building applications Determination of thickness
- EN 824, Thermal insulating products for building applications Determination of squareness
- EN 825, Thermal insulating products for building applications Determination of flatness
- EN 826:1996, Thermal insulating products for building applications Determination of compression behaviour
- EN 1603, Thermal insulating products for building applications Determination of dimensional stability under constant normal laboratory conditions (23 °C/50 % relative humidity)
- EN 1604, Thermal insulating products for building applications Determination of dimensional stability under specified temperature and humidity conditions
- EN 1606, Thermal insulating products for building applications Determination of compressive creep
- EN 1607, Thermal insulating products for building applications Determination of tensile strength perpendicular to faces
- EN 1608, Thermal insulating products for building applications Determination of tensile strength parallel to faces
- EN 1609, Thermal insulating products for building applications Determination of short term water absorption by partial immersion

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EN 12086:1997, Thermal insulating products for building applications — Determination of water vapour transmission properties

EN 12087, Thermal insulating products for building applications — Determination of long term water absorption by immersion

EN 12089, Thermal insulating products for building applications — Determination of bending behaviour

EN 12090, Thermal insulating products for building applications — Determination of shear behaviour

EN 12430, Thermal insulating products for building applications — Determination of behaviour under point load

EN 12667, Thermal performance of building materials and products — Determination of thermal resistance by means of guarded hot plate and heat flow meter methods — Products of high and medium thermal resistance

EN 12939, Thermal performance of building materials and products — Determination of thermal resistance by means of guarded hot plate and heat flow meter methods — Thick products of high and medium thermal resistance

EN 13172:2012, Thermal insulation products — Evaluation of conformity

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

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

EN 13823, Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item

EN 15715:2009, Thermal insulation products — Instructions for mounting and fixing for reaction to fire testing - Factory made products

EN ISO 354, Acoustics — Measurement of sound absorption in a reverberation room (ISO 354)

EN ISO 1182, Reaction to fire tests for building products — Non-combustibility test (ISO 1182)

EN ISO 1716, Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value) (ISO 1716)

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

EN ISO 11654, Acoustics — Sound absorbers for use in buildings — Rating of sound absorption(ISO 11654)

EN ISO 11925-2, Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2)

ISO 16269-6:2005, Statistical interpretation of data — Part 6: Determination of statistical tolerance intervals

### koniec náhľadu – text ďalej pokračuje v platenej verzii STN