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BS EN 13165:2012+A1:2015



BSI Standards Publication

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

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English Version

Thermal insulation products for buildings - Factory made rigid polyurethane foam (PU) products - Specification

Produits isolants thermiques pour le bâtiment - Produits manufacturés en mousse rigide de polyuréthane (PU) - Spécification

Wärmedämmstoffe für Gebäude - Werkmäßig hergestellte Produkte aus Polyurethan-Hartschaum (PU) - Spezifikation

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Foreword

This document (EN 13165:2012+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of an identical text or by endorsement, at the latest by August 2015, and conflicting national standards shall be withdrawn at the latest by November 2016.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 supersedes $\overline{A_1}$ EN 13165:2012 $\overline{A_1}$.

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 $\overline{A_1}$ $\overline{A_1}$.

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).

$\overline{A_1}$ For relationship with EU Construction Products Regulation (CPR), see informative Annex ZA, which is an integral part of this standard. $\overline{A_1}$

Compared with EN 13165:2008, the main changes are:

- a) better harmonisation between the different 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 for PU products such as: PU product term, dimensional stability, point load (cancelled), water absorption, water vapour transmission;
- d) 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.

$\overline{A_1}$ Amendment 1 modifies EN 13165:2012 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 4.3.11;
- i) modification of Clause 7;
- j) modification of Clause 8;
- k) modification of Annex B;
- l) a new Annex ZA. $\overline{A_1}$

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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 has 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.

1 Scope

This European Standard specifies the requirements for factory made rigid polyurethane foam (PU) products, with or without facings or coatings, which are used for the thermal insulation of buildings. PU includes both PIR and PUR products. The products are manufactured in the form of boards.

A1 This European Standard includes PU multi-layered insulation products, see Annex D. **A1**

Products covered by this standard are also used in prefabricated thermal insulation systems and **A1** composite insulation products **A1**; 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 $0,25 \text{ m}^2 \cdot \text{K/W}$ or a declared thermal conductivity greater than $0,060 \text{ W/(m} \cdot \text{K)}$ at $10 \text{ }^\circ\text{C}$ are not covered by this European 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 14308).

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, *Thermal insulating products for building applications — Determination of compression behaviour*

EN 1604, *Thermal insulating products for building applications — Determination of dimensional stability under specified temperature and humidity conditions*

EN 1605, *Thermal insulating products for building applications — Determination of deformation under specified compressive load and temperature 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 1609, *Thermal insulating products for building applications — Determination of short term water absorption by partial immersion*

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