SLOVENSKI STANDARD
SIST EN 14315-2:2013

01-julij-2013

Toplotnoizolacijski proizvodi za stavbe - Proizvodi iz brizgane poliuretanske pene (PUR) in poliizocianuratne pene (PIR), oblikovani na mestu vgradnje - 2. del: Specifikacija za vgrajene izolacijske proizvode

Thermal insulating products for buildings - In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products - Part 2: Specification for the installed insulation products

Wärmedämmstoffe für das Bauwesen - An der Verwendungsstelle hergestellte Wärmedämmung aus Polyurethan (PUR)- und Polyisocyanurat (PIR)-Spritzschaum - Teil 2: Spezifikation für die eingebauten Produkte

Produits isolants thermiques destinés aux applications du bâtiment -Produits en mousse rigide de polyuréthanne (PUR) ou de polyisocyanurate (PIR) projetée, formés en place - Partie 2 : Spécifications relatives aux produits isolants après mise en oeuvre

Ta slovenski standard je istoveten z: **EN 14315-2:2013**

ICS:

91.100.60	Materiali za toplotno in zvočno izolacijo	Thermal and sound insulating materials

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Thermal insulating products for buildings - In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products - Part 2: Specification for the installed insulation products

Produits isolants thermiques destinés aux applications du bâtiment -Produits en mousse rigide de polyuréthanne (PUR) ou de polyisocyanurate (PIR) projetée, formés en place - Partie 2 : Spécifications relatives aux produits isolants après mise en oeuvre

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This European Standard was approved by CEN on 17 November 2012.

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.

CEN members are the national standards bodies of 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 United Kingdom.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 14315-2:2013) 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 July 2013, and conflicting national standards shall be withdrawn at the latest by July 2013.

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 European Standard consists of two parts which form a package. The first part is the harmonised part satisfying the mandate and the CPD and which 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 14315.

Attention is drawn to the need to take into account any complementary member state rules (e.g. installation rules) which together with this Part 2 of this European Standard ensures the fitness for purpose of the installed product.

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 may 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.

EN 14315, *Thermal insulating products for buildings — In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products*, consists of the following parts:

— *Part 1: Specification for the rigid foam spray system before installation*

— *Part 2: Specification for the installed insulation products* (the present document)

According to the CEN/CENELEC Internal Regulations, the national standards organisations 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 requirements for in-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products when applied to walls, ceilings, roofs, suspended ceilings and floors.

This Part 2 of this European Standard is a specification for the installed insulation product.

This Part 2 of this European Standard describes, when taken together with Part 1 of EN 14315, the product characteristics that are linked to the essential requirements of the EU Construction Products Directive. It also specifies the checks and tests to be used for the declarations made by the installer of the product.

This European Standard does not specify the required levels of all properties to be achieved by a product to demonstrate fitness for purpose in a particular application. The required levels are to be found in regulations or non-conflicting standards.

This European Standard does not cover factory made rigid polyurethane (PUR) or polyisocyanurate (PIR) foam products or in-situ products intended to be used for the insulation of building equipment and industrial installations.

NOTE Foam products are either called flexible or rigid. The flexible products are used in upholstery and mattresses and are characterised by their ability to deflect, support and recover to their original thickness continually during their in-use phase. Those that are not flexible are termed rigid and do not possess these flexible characteristics. They are mostly used for thermal insulation purposes and vary widely in their compression strength values. Once the cell structure is crushed in a rigid foam, it does not recover its thickness fully. Some of these rigid foams are very low in density with very low compression strengths and are sometimes described "commercially" as "soft foams" or "semi-rigid" foams. This note has been included to clarify that all foams with such descriptions are covered by this standard's used of the term rigid foam.

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 1602, *Thermal insulating products for building applications — Determination of the apparent density*

EN 14315-1:2013, *Thermal insulating products for buildings — In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products — Part 1: Specification for the foam system before installation*

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

3 Terms, definitions, symbols and abbreviations

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
polyurethane foam PUR
(in-situ formed products)
rigid cellular plastics insulation material or product with a structure based on polymers mainly of the polyurethane type

3.1.2
polyisocyanurate foam PIR
(in-situ formed products)
rigid cellular plastics insulation material or product with a structure based on polymers mainly of the polyisocyanurate type

3.1.3
polyurethane foam PU
rigid cellular plastics insulation materials or products including both polymer types based mainly on polyurethane (PUR) or mainly on polyisocyanurate (PIR) groups

3.1.4
rigid foam spray system
kit of constituent components which when sprayed generates the rigid polyurethane (PUR) or the rigid polyisocyanurate (PIR) foam characterised by the specified properties of the foam generated

3.1.5
isocyanate component
liquid isocyanate product which is one of the components of the rigid foam spray system

3.1.6
polyol component
liquid polyhydroxyl product containing an expanding agent, catalysts and other additives which is one of the components of the rigid foam spray system

3.1.7
machine
equipment used to mix and spray the foam

3.1.8
mixing ratio
proportions of the components of the rigid foam spray system specified by the manufacturer to be sprayed to generate the rigid polyurethane or polyisocyanurate foam

Note 1 to entry: This can be expressed either as a weight or a volume ratio or both.

3.1.9
installation
process of spraying the mixture of the components onto the surface to be insulated

Note 1 to entry: The procedure is carried out by the application of successive rigid foam layers until the specified foam thickness is obtained.

3.1.10
declared installed insulation density
representative overall density for the installed insulation product (see 5.3)

3.1.11
declared installed insulation thickness
insulation thickness as installed by the installer (see 5.1)

3.1.12
declared installed aged thermal resistance
time average value of the thermal resistance of the installed insulation over 25 years (see 5.2)

3.1.13
protective layer
final layer added to the exposed surface of the installed foam, which may otherwise in its end-use application, be exposed to damage by UV radiation

3.2 Symbols and abbreviations

Symbols used in this standard:

R_D	is the declared installed aged thermal resistance	m^2K/W
d	is the declared installed insulation thickness	m

Abbreviations used in this standard:

PUR is **R**igid **P**oly**U**rethane foam

PU is rigid polyurethane foam including PUR and PIR types

PIR is **R**igid **P**oly**I**socyanurate foam

4 Requirements

4.1 General

The installer shall use a PUR or PIR foam system that complies with EN 14315-1.

NOTE The range of properties exhibited by PUR products is very wide. The same is true for PIR products and these two ranges often overlap. Although not in every case, generally PIR products have a higher upper service temperature and can perform better in reaction to fire tests. In all cases, for both PIR and PUR products, their individual performance claimed by the manufacturer are described by the levels of properties obtained. Accordingly, therefore, all the declaration clauses will be completed using the term PU to include both PUR and PIR products (see 3.1.3).

4.2 Suitability of the building for the installation of the product

The installer shall inspect the building in accordance with manufacturer's technical information and any national rules, in order to determine whether it is suitable for application of the product (see Annex D).

5 In-situ measurements and calculations

5.1 Declared installed insulation thickness

The declared installed insulation thickness, d, shall be measured in accordance with the procedure given in Annex A. However, the value shall not be less than the minimum installed insulation thickness specified by the client or given in the manufacturer's technical information.

5.2 Declared installed aged thermal resistance, R_D

The declared installed aged thermal resistance R_D for the installed insulation shall be declared according to the performance chart given by the manufacturer in accordance with the procedure given in EN 14315-1.

NOTE 1 The correction of the values of thermal conductivity due to the influence of moisture and temperature can be calculated using the procedures given in EN ISO 10456.

NOTE 2 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.

5.3 Declared installed insulation density

The declared installed insulation density when determined by the methods given in Annex B shall not be less than the minimum specified by the client and comply with the manufacturer's technical information.

5.4 Foam quality checks carried out by the installer

The installer shall carry out those on site checks defined by the manufacturer, and check compliance with EN 14315-1 prior to commencing the application of the foam, generate test samples in accordance with either the procedures in Annex D of EN 14315-1:2013 and by any procedures required by the local rules of a Member State.

6 Guidelines for installation

National Practice, National Standards, National Regulations or Local Rules may exist, covering for example the spraying conditions and the mixing ratio. 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 E.

7 Installer's declaration

The installer shall declare to the customer that the work has been carried out in accordance with the requirements of this Part 2 of this standard using a foam system that complies with Part 1 of this standard.

The installer shall also state at least the following information:

a) date of the installation;

b) declared installed insulation thickness;

c) declared installed aged thermal resistance according to 5.2;

d) declared installed insulation density;

e) surface area of the sprayed insulation product;

f) for the installed product, the trade name, designation code of the foam system (complying with Part 1 of this standard, from which it has been generated);

g) the number of the EC certificate of conformity.

NOTE Further information may be declared as in the examples given in Annex E.