Hoonete tehnoseadmete ja tööstuspaigaldiste soojusisolatsioonitooted. Pihustatud jäigad vahtpolüuretaan- (PUR) ja vahtpolüisotsüanuraattooted (PIR). Osa 1: Paigaldamata toodete spetsifikatsioon

Thermal insulating products for building equipment and industrial installations - In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate foam (PIR) products - Part 1: Specification for the rigid foam spray system before installation

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA	NATIONAL FOREWORD
See Eesti standard EVS-EN 14320-1:2013 sisaldab Euroopa standardi EN 14320-1:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 14320-1:2013 consists of the English text of the European standard EN 14320-1:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 16.01.2013.	Date of Availability of the European standard is 16.01.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.100.60

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14320-1

January 2013

ICS 91.100.60

English Version

Thermal insulating products for building equipment and industrial installations - In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate foam (PIR) products - Part 1: Specification for the rigid foam spray system before installation

Produits isolants thermiques pour l'équipement du bâtiment et les installations industrielles - Produits en mousse rigide de polyuréthanne (PUR) ou de polyisocyanurate (PIR) projetée, formés en place - Partie 1 : Spécifications relatives aux systèmes de projection de la mousse rigide avant mise en œuvre

Wärmedämmstoffe für die technische Gebäudeausrüstung und für betriebstechnische Anlagen in der Industrie - An der Verwendungsstelle hergestellter Wärmedämmstoff aus Polyurethan (PUR)- und Polyisocyanurat (PIR)-Spritzschaum - Teil 1: Spezifikation für das Schaumsystem vor dem Einbau

This European Standard was approved by CEN on 24 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.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 14320-1:2013: E

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Foreword

This document (EN 14320-1:2013) 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 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 European Standard consists of two parts which form a package. The first part is the harmonised part satisfying the mandate and the CPD and 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 the EN 14320.

This European Standard is one of a series for expanded perlite, exfoliated vermiculite and polyurethane/polyisocyanurate in-situ formed insulation products used in building equipment and industrial installations, 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.

This document is one of a series of standards as listed below:

EN 14320, *Thermal insulating products for building equipment and industrial installations — In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate foam (PIR) products consists of the following parts:*

— *Part 1: Specification for the rigid foam dispensed system before installation* (the present document)

— *Part 2: Specification for the installed insulation products*

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 for the insulation of building equipment and industrial installations, for example storage vessels, pipes and ducts used for the supply of fuels, oil, other liquids, hot and cold water, air and other gases.

Depending on the type of foam products complying with this standard, they may have service temperature ranges which lie within the limits of ± 200 °C.

This Part 1 of this European Standard is a specification for the rigid foam system before installation.

Part 1 of this European Standard describes the product characteristics and it includes procedures for testing, marking and labelling and the rules for evaluation of conformity.

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

This European Standard does not cover factory made rigid polyurethane or polyisocyanurate foam insulation products or in-situ products intended to be used for the insulation of buildings.

This standard does not specify performance requirements for direct airborne sound insulation and acoustic absorption applications.

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 312, *Particleboards — Specifications*

EN 508-1, *Roofing products from metal sheet — Specification for self-supporting products of steel, aluminium or stainless steel sheet — Part 1: Steel*

EN 520, *Gypsum plasterboards — Definitions, requirements and test methods*

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

EN 826, *Thermal insulating products for building applications — Determination of compression behaviour*

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

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

EN 1607:1996, *Thermal insulating products for building applications — Determination of tensile strength perpendicular to faces*

EN 1609:1996, *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*

EN 12667:2001, *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 13238*, Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*

EN 13468, *Thermal insulating products for building equipment and industrial installations — Determination of trace quantities of water soluble chloride, fluoride, silicate, sodium ions and pH*

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

EN 13823:2010, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

EN 14308:2009, *Thermal insulation products for building equipment and industrial installations — Factory made rigid polyurethane foam (PUR) and polyisocyanurate foam (PIR) products — Specification*

EN 14706, *Thermal insulating products for building equipment and industrial installations — Determination of maximum service temperature*

EN ISO 1182*, Reaction to fire tests for 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 11925-2:2010, *Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Single-flame source test (ISO 11925-2:2010)*

EN ISO 13787, *Thermal insulation products for building equipment and industrial installations — Determination of declared thermal conductivity (ISO 13787)*

ISO 4590, *Rigid cellular plastics — Determination of the volume percentage of open cells and of closed cells*

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.