საქართველოს სტანდარტი

თბოსაიზოლაციო პროდუქცია შენობებისთვის -ქარხნული წნეხილი პოლისტიროლის ქაფი (XPS) პროდუქცია - სპეციფიკაცია

საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტო თბილისი

სსტ ენ 13164:2012+A1:2015/2015

საინფორმაციო მონაცემები

- 1 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს 2015 წლის 2 დეკემბრის \mathbb{N}° 91 და 2015 წლის 09 ივლისის \mathbb{N}° 46 განკარგულებებით
- 2 მიღებულია გარეკანის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 13164:2012+A1:2015 "თბოსაიზოლაციო პროდუქცია შენობებისთვის -ქარხნული წნეხილი პოლისტიროლის ქაფი (XPS) პროდუქცია -სპეციფიკაცია"

3 პირველად

4 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2015 წლის 2 დეკემბერი N268-1.3-8324

აკრძალულია ამ სტანდარტის გადაცემა მესამე პირებისათვის ან/და მისი სხვა ფორმით გავრცელება

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 13164:2012+A1

February 2015

ICS 91.100.60

Supersedes EN 13164:2012

English Version

Thermal insulation products for buildings - Factory made extruded polystyrene foam (XPS) products - Specification

Produits isolants thermiques pour le bâtiment - Produits manufacturés en mousse de polystyrène extrudé (XPS) -Spécification Wärmedämmstoffe für Gebäude - Werkmäßig hergestellte Produkte aus extrudiertem Polystyrolschaum (XPS) - 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.

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

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

Cont	Contents Pag			
Foreword5				
1	Scope	7		
2	Normative references	7		
3	Terms, definitions, symbols, units, abbreviated terms	8		
3.1	Terms and definitions			
3.2	Symbols, units and abbreviated terms	9		
4	Requirements			
4.1	General			
4.2	For all applications			
4.2.1 4.2.2	Thermal resistance and thermal conductivity			
4.2.2	Length, width, squareness, flatness			
4.2.3	Reaction to fire of the product as placed on the market			
4.2.5	Durability characteristics			
4.3	For specific applications			
4.3.1	General			
4.3.2	Dimensional stability under specified conditions			
4.3.3	Deformation under specified compressive load and temperature conditions			
4.3.4	Compressive stress or compressive strength			
4.3.5	Tensile strength perpendicular to faces			
4.3.6	Compressive creep			
4.3.7 4.3.8	Water absorption Freeze-thaw resistance			
4.3.8	Water vapour transmission			
4.3.10	Release of dangerous substances			
4.3.11	Reaction to fire of the product in standardized assemblies simulating end-use			
	applications			
	Continuous glowing combustion			
4.3.13	Shear strength	18		
5	Test methods	18		
5.1	Sampling			
5.2	Conditioning			
5.3	Testing			
5.3.1	General			
5.3.2	Thermal resistance and thermal conductivity			
6	Designation code	21		
7	Assessment and Verification of the Constancy of Performance (AVCP)	22		
7.1	General			
7.2	Product Type Determination (PTD)			
7.3	Factory Production Control (FPC)	22		
8	Marking and labelling	22		
Annex A (normative) Determination of the declared values of thermal resistance and thermal conductivity				
A.1	General	24		
A.2	Input data			
		-		

A.3	Declared values	24
A.3.1	General	24
A.3.2	Case where thermal resistance and thermal conductivity are declared	24
A.3.3	Case where only thermal resistance is declared	25
Annex	B (normative) A Product type determination (A) (A) PTD (A) and Factory production control (FPC)	26
Annex	C (normative) Determination of the aged values of thermal resistance and thermal conductivity	30
C.1	General	30
C.2	Procedure for XPS foam without diffusion tight facings	30
C.2.1	Principle	30
C.2.2	Sample preparation	30
C.2.3	Procedure	30
C.3	Procedure for XPS foam for use with diffusion tight facing on both sides	31
C.3.1	Principle	31
C.3.2	Ageing procedure	31
C.4	Determination of value after ageing: "aged value"	31
C.4.1	Determination of aged value for XPS products without diffusion tight facings on both sides	31
C.4.2	Determination of aged value for XPS products for use with diffusion tight facing on both sides	32
C.5	Blowing agent	33
C.6	Product grouping	33
Annex	D (normative) XPS multi-layered insulation products	34
D.1	General	34
D.2	Requirements	34
D.2.1	For all applications	34
D.2.2	For specific applications	35
D.3	Test methods	35
D.4	Evaluation of conformity	35
Annex	E (informative) Additional properties	36
E.1	General	36
E.2	Behaviour under cyclic loading	36
E.3	Compressive modulus of elasticity	36
E.4	Bending strength	36
E.5	Determination of volume percentage of closed cells	36
Annex	F (informative) Plan for cutting test specimen	38
Annex	ZA (informative) A Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation A	40
ZA.1	Scope and relevant characteristics	40

ZA.Z	Procedures for AVCP of factory made extruded polystyrene products	41
ZA.2.1	Systems of AVCP	41
ZA.2.2	Declaration of Performance (DoP)	45
ZA.3	CE Marking and labelling	48
Bibliog	graphy	50
Tables		
Table '	1 — Tolerances of length, width, squareness and flatness	13
Table 2	2 — Classes for thickness tolerances	13
Table :	3 — Dimensional stability under specified conditions	14
Table 4	4 — Levels for deformation under specified compressive load and temperature conditions	15
Table !	5 — Levels for compressive stress or compressive strength	15
Table (6 — Levels for tensile strength, perpendicular to faces	16
Table 7	7 — Levels for long term water absorption by total immersion	16
Table 8	8 — Levels for long term water absorption by diffusion	17
Table 9	9 — Test methods, test specimens and conditions	19
Table A	A.1 — Values for k for one sided 90 % tolerance interval with a confidence level of 90 %	25
Table I	B.1 — Minimum number of tests for !PTD" and minimum product testing frequencies	26
Table I	B.2 – Minimum product testing frequencies for the reaction to fire characteristics	28
Table I	E.1 — Test methods, test specimens, conditions and minimum testing frequencies	37
Table 2	ZA.1 — Relevant clauses for factory made extruded polystyrene foam and intended use	40
Table 2	ZA.2 — Systems of AVCP	42
Table 2	ZA.3.1 — Assignment of AVCP tasks for factory made extruded polystyrene foam products under system 1 for reaction to fire and system 3 (see Table ZA.2)	42
Table 2	ZA.3.2 — Assignment of AVCP tasks for factory made extruded polystyrene foam products under system 3 (see Table ZA.2)	44
Table 2	ZA.3.3 — Assignment of AVCP tasks for factory made extruded polystyrene foam products under combined system 4 for reaction to fire and system 3 (see Table ZA.2)	44
Figure	s	
Figure	7A 1 — Example CE marking information of products under AVCP system 3"	10

Foreword

This document (EN 13164:2012+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 A EN 13164:2012 (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 🗗 街.

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)

Compared with EN 13164:2008, 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 of some editorial and technical content and addition of information on some specific items such as for XPS: Annex C;
- d) addition to 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 13164:2012 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 4.3.10;
- i) modification of Clause 7;
- j) modification of Clause 8;
- k) modification of Annex B;

EN 13164:2012+A1:2015 (E)

- I) modification of Annex E;
- m) a new Annex ZA. (A1

This European 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 reductions in energy used and emissions produced during the installed life of the 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.