SLOVENSKI STANDARD
SIST EN 13163:2013+A2:2017/oprA3:2018

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Toplotnoizolacijski proizvodi za stavbe - Proizvodi iz ekspandiranega polistirena (EPS) - Specifikacija

Thermal insulation products for buildings - Factory made expanded polystyrene (EPS) products - Specification

Wärmedämmstoffe für Gebäude - Werkmäßig hergestellte Produkte aus expandiertem Polystyrol (EPS) - Spezifikation

Produits isolants thermiques pour le bâtiment - Produits manufacturés en polystyrène expansé (EPS) - Spécification

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ICS:

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

SIST EN 13163:2013+A2:2017/oprA3:2018 **en,fr,de**

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English Version

Thermal insulation products for buildings - Factory made expanded polystyrene (EPS) products - Specification

Produits isolants thermiques pour le bâtiment - Produits manufacturés en polystyrène expansé (EPS) - Spécification

Wärmedämmstoffe für Gebäude - Werkmäßig hergestellte Produkte aus expandiertem Polystyrol (EPS) - Spezifikation

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 88.

This draft amendment A3, if approved, will modify the European Standard EN 13163:2012+A2:2016. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Contents

Page

European foreword ... 3
1 Modification to the European foreword ... 4
2 Modification to the Scope ... 4
3 Modification to Clause 2, "Normative references" ... 4
4 Modification to Clause 3 "Terms, definitions, symbols, units and abbreviated terms" ... 5
5 Modification to Clause 4, "Requirements" ... 5
6 Modification to 4.1, "General" ... 5
7 Modifications to 4.3, "For specific applications" ... 5
8 Modification to 5.3.2, "Thermal resistance and thermal conductivity" ... 6
9 Modification to Clause 6, "Designation code" ... 7
10 Modification to Clause 7, "Assessment and Verification of the Constancy of Performance (AVCP)" ... 8
11 Modification to Clause 8, "Marking and labelling" ... 8
12 Modification to Annex B, "Product type determination (PTD) and factory production control (FPC)" ... 8
13 Modification to Annex D, "Multi layered EPS products" ... 14
14 Modification to Annex E, "Verification of the reaction to fire classification of raw materials" ... 14
15 Modification to Annex F, "Additional properties" ... 14
16 Modification to the Annex ZA, "Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation" ... 14

European foreword

This document (EN 13163:2012+A2:2016/prA3:2018) has been prepared by Technical Committee CEN/TC 88 "Thermal insulating materials and products", the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association.

For relationship with Regulation (EU) No. 305/2011, see informative Annex ZA, which is an integral part of this document.

1 Modification to the European foreword

In the fourth paragraph, delete the text ", and supports essential requirements of the EU Construction Products Regulation (CPR).*"*.

*Replace the fifth paragraph with the following: "*For relationship with Regulation (EU) No. 305/2011, see informative Annex ZA, which is an integral part of this standard.".

Delete the ninth paragraph (list of changes) and replace the tenth paragraph with the following:

"Amendment A3 modifies EN 13163:2012 and its A1 and A2 amendments. The amendment introduces or corrects:

a) Deletion of clause 4.3.18 Continuous glowing combustion;

b) Modification of clause 4.3.19 Release of Dangerous substances;

c) Modification of the definition for "class F" in the clause "reaction to fire";

d) Editorial modifications in different parts of the text and linked to the above modifications;

e) Addition in Table 9 to clarify testing of complicated shapes;

f) Modifications to be in line with the CPR e.g. PTD replaced by TT;

g) Change the reference Directive to Regulation;

h) Change the word Requirement to Characteristic for those sentences in which the text deals with a Requirement/Characteristic in terms of the CPR;

i) Modification of Annex ZA.".

Delete the eleventh paragraph (additional list of changes).

In the fourteenth paragraph, add the following standard to the end of the list of standards:

*"*EN 16069, *Thermal insulation products for buildings — Factory made products of polyethylene foam (PEF) — Specification*".

2 Modification to the Scope

Replace the first sentence with:

"This European Standard specifies the characteristics for factory made expanded polystyrene products, with or without rigid or flexible facings or coatings, which are used for the thermal insulation of buildings.".

Replace the third paragraph with:

"This standard describes product characteristics and includes procedures for testing, assessment and verification of constancy of performance (AVCP), marking and labelling.".

3 Modification to Clause 2, "Normative references"

Add the following reference:

"EN 16516, *Construction products — Assessment of release of dangerous substances — Determination of emissions into indoor air"*

4 Modification to Clause 3 "Terms, definitions, symbols, units and abbreviated terms"

In 3.1, delete the term and definition for "3.1.6 level" *and* "3.1.7 class" *and modify the numbers of the following terms accordingly.*

In 3.2, delete the following abbreviated terms:

PTD is **P**roduct **T**ype **D**etermination (previously named ITT for Initial Type Test)

VCP is **V**erification of **C**onstancy of **P**erformance (previously named evaluation of conformity)

Please add the following abbreviated term:

"

TT is **T**ype **T**esting

".

5 Modification to Clause 4, "Requirements"

In the title of the clause, replace "Requirements" *with* "Characteristics".

6 Modification to 4.1, "General"

Replace the text in the clause with the following:

"Product characteristics shall be assessed in accordance with Clause 5. To comply with this standard, products shall meet the characteristics of 4.2 and the characteristics of 4.3, as appropriate.

NOTE Information on additional characteristics is given in Annex F.

For multi-layered products, additional characteristics are given in Annex D.

One test result for a product characteristic is the average of the measured values on the number of test specimens given in Table 9.".

7 Modifications to 4.3, "For specific applications"

In 4.3.1, replace the text in the clause with the following:

"If there is no requirement for a characteristic described in 4.3 for a product in use, then the characteristic does not need to be determined and declared by the manufacturer.".

In 4.3.4, replace the last sentence of the clause with:

"If EPS products are classified according to Table C.1, the products shall fulfil the characteristics of bending strength given in Table C.1**.".**

Delete subclause 4.3.18.

In 4.3.19, renumber as "4.3.18" and replace the text in the clause with the following:

"If the release of dangerous substances[1)] into indoor air is tested, this shall be done according to EN 16516.

NOTE An informative database covering European and national provisions on dangerous substances is available at the Construction web site on EUROPA accessed through: http://ec.europa.eu/growth/tools-databases/cp-ds.".

1) See for reference the LCI list of the European Commission "Agreed EU-LCI values" (http://ec.europa.eu/growth/sectors/construction/eu-lci/values_en).

8 Modification to 5.3.2, "Thermal resistance and thermal conductivity"

Replace Table 9 with the following new table:

"Table 9 — Test methods, test specimens and conditions

Clause		Test method	Test specimen Length and width [a,h] Dimensions in millimetres	Minimum number of measurements to get one test result	Specific conditions
No	Title				
4.2.1	Thermal conductivity and thermal resistance	EN 12667 or EN 12939	See EN 12667 or EN 12939	1[b]	–
4.2.2	Length and width	EN 822	Full-size	1	–
4.2.3	Thickness	EN 823	Full-size	1	Load of (250 ± 5) Pa
4.2.4 4.3.3	Squareness	EN 824	Full-size	1	–
4.2.5	Flatness	EN 825	Full-size	1	–
4.2.6	Reaction to fire of the product as placed on the market	See EN 13501-1 and EN 15715			See EN 15715:2009, Clause 5
4.3.2	Dimensional stability under constant normal laboratory conditions	EN 1603	500 x 500 x *d*	3	Method B1
4.3.2	Dimensional stability under specified temperature and humidity conditions	EN 1604	200 × 200 x *d*	3	–
4.3.4	Compressive stress at 10 % deformation	EN 826	50 × 50 × *d* [c]	5	Grinding
			$l^d * b^d * d^d$	3	
4.3.5	Bending strength	EN 12089	300 ×150 × 50 [d] or (5 × *d* + 50) × 150 × *d* [e]	3	Method B
4.3.6	Tensile strength perpendicular to faces	EN 1607	50 × 50 × *d* [c]	5	–
			$l^d * b^d * d^d$	3	
4.3.7	Deformation under specified compressive load and temperature conditions	EN 1605	50 × 50 × *d* [c]	5	Layers or coverings have to be cut off
			$l^d * b^d * d^d$	3	
4.3.8	Compressive creep	EN 1606	50 × 50 × 50 [c]	2	Grinding [f]
4.3.9	Shear behaviour	EN 12090	50 x 250 x *d* [g]	5 or	Single test specimen
				3	Double test specimen
4.3.10	Dynamic load resistance	EN 13793	150 x 150 x *d*	1	-
4.3.11.1	Long term water absorption by immersion	EN 12087	200 x 200 x *d*	3	Total immersion: Method 2A

Clause		Test method	Test specimen Length and width [a,h] Dimensions in millimetres	Minimum number of measurements to get one test result	Specific conditions
No	Title				
4.3.11.2	Long term water absorption by diffusion	EN 12088	500 × 500 x *d*	2	–
4.3.12	Freeze-thaw resistance	EN 12091	500 × 500 x *d*	3	Preparation by EN 12087, method 2A or EN 12088
4.3.13	Water vapour transmission	EN 12086	See EN 12086:1997, 6.1	5	Set B
4.3.14	Dynamic stiffness	EN 29052-1	200 × 200 x *d*	3	–
4.3.15.2	Thickness, d_L	EN 12431	200 × 200 x *d*	3	–
4.3.15.3 4.3.15.4	Thickness, d_B	EN 12431			Measure 300 s after the preload has been removed
	Long term thickness reduction	EN 1606			–
4.3.16	Apparent density	EN 1602	Full-size	5	–
4.3.17	Reaction to fire of the product in standardises assemblies simulating end-use applications	See EN 13501-1 and EN 15715			See EN 15715:2009, Clause 6
4.3.18	Release of dangerous substances	EN 16516	See EN 16516	See EN 16516	See 4.3.18

[a] Test specimen dimensions shall be determined in accordance with EN 12085.

[b] For calculation of the 90 % fractile and 90 % confidence level, the individual measurement shall be used.

[c] Sample size with thickness d < 50 mm.

[d] Sample size used for boards ≥ 50 mm.

[e] For boards of thickness $d \leq 50$ mm and shape moulded products.

[f] The specimens shall have the same thickness and shall not deviate in density more than 1,5 kg/m^3.

[g] Maximum thickness 50 mm.

[h] For complicated shapes mechanical test and tests on thermal conductivity, samples will be made plan parallel, for other tests the original shape will be tested. Any difference from the dimensions of the original product must be reported.

".

9 Modification to Clause 6, "Designation code"

Replace the first paragraph with the following:

"If a designation code is provided, it shall be given as follows: The following shall be included except when there is no requirement for a characteristic described in 4.3:".

10 Modification to Clause 7, "Assessment and Verification of the Constancy of Performance (AVCP)"

Replace the subclauses with the following:

"7.1 General

The manufacturer or his authorized representative shall be responsible for the conformity of his product with the characteristics of this European Standard. The Assessment and Verification of Constancy of Performance (AVCP) shall be carried out in accordance with EN 13172 and shall be based on Type Testing (TT), Factory Production Control (FPC) by the manufacturer, including product assessment and tests on samples taken at the factory.

The compliance of the product with the characteristics of this standard and with the stated values (including classes) shall be demonstrated by:

— Type Testing (TT),

— Factory Production Control (FPC) by the manufacturer, including product assessment.

If a manufacturer decides to group his products, it shall be done in accordance with EN 13172.

7.2 Type Testing (TT)

All characteristics defined in 4.2 and those in 4.3 if declared, shall be subject to Type Testing (TT) in accordance with Annex B.

For the relevant characteristics, TT on products corresponding also to EN 13499, EN 14309, EN 14933 and EN 15037-4 may be used for the purpose of TT and Declaration of Performance (DoP) according to this standard.

7.3 Factory Production Control (FPC)

The manufacturer shall establish, document and maintain an FPC system to ensure that the products placed on the market comply with the declared performance of the essential characteristics.

The minimum frequencies of tests in the factory production control (FPC) shall be in accordance with Annex B of this standard. When indirect testing is used, the correlation to direct testing shall be established in accordance with EN 13172.

For the relevant characteristics, FPC on products corresponding also to EN 13499, EN 14309, EN 14933 and EN 15037-4 may be used for the purpose of FPC and DoP according to this standard.

7.4 Initial inspection

The initial inspection of the factory and of FPC shall be done in accordance with EN 13172.

7.5 Continuous surveillance

The continuous surveillance of FPC shall be done in accordance with EN 13172.".

11 Modification to Clause 8, "Marking and labelling"

Delete the note and example.

12 Modification to Annex B, "Product type determination (PTD) and factory production control (FPC)"

Change the title to: "Type testing (TT) and factory production control (FPC)".

Replace Table B.1 with the following new table:

"Table B.1 — Minimum number of tests for TT and minimum product testing frequencies

Clause		TT [b,e]	FPC [a,b,d,e]		
No.	Title	Minimum number of tests [c]	Minimum testing frequency		
			Direct testing	Indirect testing	
				Test method	Frequency
4.2.1	Thermal resistance and thermal conductivity	10 [f]	1 per 24 h or	–	–
			1 per year	and weight per moulded item or density (using a manufacturer's correlation)	1 per 2 h
4.2.2	Length and width	4	1 per 2 h	–	–
4.2.3	Thickness	4	1 per 2 h	–	–
4.2.4 and 4.3.3	Squareness	4	1 per 4 h	Manufacturer's method	1 per 4 h
4.2.5	Flatness	4	1 per 8 h	–	–
4.2.6	Reaction to fire of the product as placed on the market	1	See Table B.2		
4.3.2.	Dimensional stability under normal laboratory conditions	4	1 per year	–	–
4.3.2	Dimensional stability under specified temperature and humidity conditions	4	1 per 5 years	-	-
4.3.4	Compressive stress at 10 % deformation	4	1 per day or	-	-
			1 per 3 month or	and weight per moulded item or density (using a manufacturer 's correlation)	1 per 2 h
			1 per year	and weight per moulded item or density (using the correlation given in B.2.3)	1 per 2 h