



**SLOVENSKI STANDARD**  
**kSIST FprEN 14304:2015**  
**01-julij-2015**

---

**Toplotnoizolacijski proizvodi za opremo stavb in industrijske inštalacije -  
Proizvodi iz fleksibilne elastomerne pene (FEF) - Specifikacija**

Thermal insulation products for building equipment and industrial installations - Factory made flexible elastomeric foam (FEF) products - Specification

Wärmedämmstoffe für die technische Gebäudeausrüstung und für betriebstechnische Anlagen in der Industrie - Werkmäßig hergestellte Produkte aus flexiblem Elastomerschaum (FEF) - Spezifikation

Produits isolants thermiques pour l'équipement du bâtiment et les installations industrielles - Produits manufacturés en mousse élastomère flexible (FEF) - Spécification

**Ta slovenski standard je istoveten z: FprEN 14304**

---

**ICS:**

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

**kSIST FprEN 14304:2015**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**FINAL DRAFT**  
**FprEN 14304**

April 2015

ICS 91.100.60

Will supersede EN 14304:2009+A1:2013

English Version

**Thermal insulation products for building equipment and industrial  
installations - Factory made flexible elastomeric foam (FEF)  
products - Specification**

Produits isolants thermiques pour l'équipement du bâtiment  
et les installations industrielles - Produits manufacturés en  
mousse élastomère flexible (FEF) - Spécification

Wärmedämmstoffe für die technische Gebäudeausrüstung  
und für betriebstechnische Anlagen in der Industrie -  
Werkmäßig hergestellte Produkte aus flexiblem  
Elastomerschaum (FEF) - Spezifikation

This draft European Standard is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 88.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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.

**Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

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

<b>Contents</b>		<b>Page</b>
Foreword.....		4
<b>1</b>	<b>Scope .....</b>	<b>6</b>
<b>2</b>	<b>Normative references .....</b>	<b>6</b>
<b>3</b>	<b>Terms, definitions, symbols, units and abbreviated terms .....</b>	<b>8</b>
<b>3.1</b>	<b>Terms and definitions .....</b>	<b>8</b>
<b>3.1.1</b>	<b>Terms and definitions as given in EN ISO 9229:2007 .....</b>	<b>8</b>
<b>3.1.2</b>	<b>Additional terms and definitions .....</b>	<b>8</b>
<b>3.2</b>	<b>Symbols, units and abbreviated terms.....</b>	<b>9</b>
<b>3.2.1</b>	<b>Symbols and units used in this standard .....</b>	<b>9</b>
<b>3.2.2</b>	<b>Abbreviated terms used in this standard .....</b>	<b>10</b>
<b>4</b>	<b>Requirements .....</b>	<b>10</b>
<b>4.1</b>	<b>General.....</b>	<b>10</b>
<b>4.2</b>	<b>For all applications .....</b>	<b>10</b>
<b>4.2.1</b>	<b>Thermal conductivity.....</b>	<b>10</b>
<b>4.2.2</b>	<b>Dimensions and tolerances .....</b>	<b>11</b>
<b>4.2.3</b>	<b>Dimensional stability .....</b>	<b>11</b>
<b>4.2.4</b>	<b>Reaction to fire of the product as placed on the market .....</b>	<b>12</b>
<b>4.2.5</b>	<b>Durability characteristics .....</b>	<b>12</b>
<b>4.3</b>	<b>For specific applications.....</b>	<b>12</b>
<b>4.3.1</b>	<b>General.....</b>	<b>12</b>
<b>4.3.2</b>	<b>Maximum service temperature .....</b>	<b>12</b>
<b>4.3.3</b>	<b>Minimum service temperature .....</b>	<b>13</b>
<b>4.3.4</b>	<b>Water absorption .....</b>	<b>13</b>
<b>4.3.5</b>	<b>Water vapour diffusion resistance.....</b>	<b>13</b>
<b>4.3.6</b>	<b>Trace quantities of water soluble ions and the pH-value .....</b>	<b>14</b>
<b>4.3.7</b>	<b>Structure-borne sound transmission .....</b>	<b>14</b>
<b>4.3.8</b>	<b>Sound absorption .....</b>	<b>14</b>
<b>4.3.9</b>	<b>Release of dangerous substances.....</b>	<b>14</b>
<b>4.3.10</b>	<b>Continuous glowing combustion.....</b>	<b>14</b>
<b>5</b>	<b>Test methods.....</b>	<b>15</b>
<b>5.1</b>	<b>Sampling .....</b>	<b>15</b>
<b>5.2</b>	<b>Conditioning.....</b>	<b>15</b>
<b>5.3</b>	<b>Testing .....</b>	<b>15</b>
<b>5.3.1</b>	<b>General.....</b>	<b>15</b>
<b>5.3.2</b>	<b>Thermal conductivity.....</b>	<b>17</b>
<b>5.3.3</b>	<b>Reaction to fire.....</b>	<b>17</b>
<b>6</b>	<b>Designation code .....</b>	<b>17</b>
<b>7</b>	<b>Assessment and Verification of the Constancy of Performance (AVCP) .....</b>	<b>18</b>
<b>7.1</b>	<b>General.....</b>	<b>18</b>
<b>7.2</b>	<b>Product Type Determination (PTD).....</b>	<b>18</b>
<b>7.3</b>	<b>Factory Production Control (FPC) .....</b>	<b>18</b>
<b>8</b>	<b>Marking and labelling .....</b>	<b>19</b>
<b>Annex A (normative)</b>	<b>Factory production control .....</b>	<b>20</b>
<b>Annex B (normative)</b>	<b>Determination of minimum service temperature .....</b>	<b>22</b>
<b>B.1</b>	<b>Definitions .....</b>	<b>22</b>
<b>B.2</b>	<b>Principle.....</b>	<b>22</b>

<b>B.3</b>	<b>Apparatus .....</b>	<b>22</b>
<b>B.3.1</b>	<b>Micrometer .....</b>	<b>22</b>
<b>B.3.2</b>	<b>Sliding calliper .....</b>	<b>22</b>
<b>B.4</b>	<b>Test specimens.....</b>	<b>22</b>
<b>B.4.1</b>	<b>Dimensions of test specimens.....</b>	<b>22</b>
<b>B.4.2</b>	<b>Number of test specimens.....</b>	<b>22</b>
<b>B.4.3</b>	<b>Conditioning of the test specimens .....</b>	<b>22</b>
<b>B.5</b>	<b>Procedure.....</b>	<b>23</b>
<b>B.5.1</b>	<b>Test conditions .....</b>	<b>23</b>
<b>B.5.2</b>	<b>Test procedure.....</b>	<b>23</b>
<b>B.6</b>	<b>Calculation and expression of results .....</b>	<b>23</b>
<b>B.6.1</b>	<b>Dimensional changes.....</b>	<b>23</b>
<b>B.6.2</b>	<b>Additional tests and/or observation .....</b>	<b>24</b>
<b>B.7</b>	<b>Test report.....</b>	<b>24</b>
	<b>Annex C (normative) Thermal conductivity measurement .....</b>	<b>25</b>
	<b>Annex D (informative) Additional properties .....</b>	<b>26</b>
<b>D.1</b>	<b>General .....</b>	<b>26</b>
<b>D.2</b>	<b>Water vapour diffusion resistance .....</b>	<b>26</b>
<b>D.3</b>	<b>Fire resistance of penetrations .....</b>	<b>26</b>
<b>D.4</b>	<b>Density.....</b>	<b>26</b>
<b>D.5</b>	<b>Compressive Strength .....</b>	<b>27</b>
	<b>Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation.....</b>	<b>28</b>
<b>ZA.1</b>	<b>Scope and relevant characteristics .....</b>	<b>28</b>
<b>ZA.2</b>	<b>Procedures for AVCP of factory made flexible elastomeric foam (FEF) products .....</b>	<b>30</b>
<b>ZA.2.1</b>	<b>Systems of AVCP .....</b>	<b>30</b>
<b>ZA.2.2</b>	<b>Declaration of Performance (DoP).....</b>	<b>33</b>
<b>ZA.2.2.1</b>	<b>General.....</b>	<b>33</b>
<b>ZA.2.2.2</b>	<b>Content.....</b>	<b>33</b>
<b>ZA.2.2.3</b>	<b>Example of DoP.....</b>	<b>34</b>
<b>ZA.3</b>	<b>CE Marking and labelling.....</b>	<b>36</b>
	<b>Bibliography.....</b>	<b>38</b>

**FprEN 14304:2015 (E)****Foreword**

This document (FprEN 14304:2015) 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 Unique Acceptance Procedure.

This document will supersede EN 14304:2009+A1:2013.

This document is identifying those clauses of the standard which are needed for the compliance of the European Standard with the Construction Products Regulation (CPR).

The main technical changes that have been made in this new edition of EN 14304 are the following:

- a) an addition to the foreword;
- b) an addition in Clause 3;
- c) a new 4.3.9;
- d) modification of 5.3.2;
- e) modification of Clause 7;
- f) modification of Clause 8;
- g) modification of Annex A;
- h) a new Annex ZA.

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 Regulation (EU) No. 305/2011.

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

Locally responsible authorities and contracting entities, who are bound by EU Directives to specify their requirements using European harmonized product standards, are allowed to demand additional properties outside the provisions of this standard if this is technically necessary because of prevailing operational conditions of the building equipment or the industrial installation projected or because of safety regulations.

This European Standard contains five annexes:

- Annex A (normative), Factory production control;
- Annex B (normative), Determination of minimum service temperature;
- Annex C (normative), Thermal conductivity measurement;
- Annex D (informative), Additional properties;
- Annex ZA (informative), Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation.

This document includes a bibliography.

This European Standard is one of a series of standards for insulation products used in building equipment and industrial installations, but this standard can 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 European package of standards, setting (21 months after availability) as the date of withdrawal (dow) of national standards which conflict with the European standards of this package.

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 14303, *Thermal insulation products for building equipment and industrial installations — Factory made mineral wool (MW) products — Specification*

EN 14304, *Thermal insulation products for building equipment and industrial installations — Factory made flexible elastomeric foam (FEF) products — Specification*

EN 14305, *Thermal insulation products for building equipment and industrial installations — Factory made cellular glass (CG) products — Specification*

EN 14306, *Thermal insulation products for building equipment and industrial installations — Factory made calcium silicate (CS) products — Specification*

EN 14307, *Thermal insulation products for building equipment and industrial installations — Factory made extruded polystyrene foam (XPS) products — Specification*

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

EN 14309, *Thermal insulation products for building equipment and industrial installations — Factory made products of expanded polystyrene (EPS) — Specification*

EN 14313, *Thermal insulation products for building equipment and industrial installations — Factory made polyethylene foam (PEF) products — Specification*

EN 14314, *Thermal insulation products for building equipment and industrial installations — Factory made phenolic foam (PF) products — Specification*

EN 15501, *Thermal insulation products for building equipment and industrial installations — Factory made expanded perlite (EP) and exfoliated vermiculite (EV) products — Specification*

**FprEN 14304:2015 (E)****1 Scope**

This European Standard specifies the requirements for factory made flexible elastomeric foam products which are used for the thermal insulation of building equipment and industrial installations with an operating temperature in the range of approximately - 200 °C to + 175 °C.

Below an operating temperature of - 50 °C, tests regarding the suitability of the products in the intended application should be performed. Manufacturer's advice should be heeded in all cases.

The products are manufactured in the form of sheets, tubes, rolls and tapes with or without coating and/or self-adhesive backing and/or different closure systems.

This European Standard describes product characteristics and includes procedures for testing, evaluation of conformity, marking and labelling.

Products covered by this standard are also used in prefabricated thermal insulation systems and composite panels; the performance of systems incorporating these products is not covered.

This European Standard does not specify the required level of a given property that should be achieved by a product to demonstrate fitness for purpose in a particular application. The levels required for a given application can be found in regulations and invitations to tender.

Products with a declared thermal conductivity greater than 0,050 W/(m·K) at 10 °C are not covered by this standard.

This European Standard does not cover products for the insulation of the building structure.

The normative part of this European Standard does not cover compressive stress (see D.5).

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

EN 1609, *Thermal insulating products for building applications - Determination of short term water absorption by partial immersion*

EN 12085, *Thermal insulating products for building applications - Determination of linear dimensions of test specimens*

EN 12086:2013, *Thermal insulating products for building applications - Determination of water vapour transmission properties*

EN 12667, *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*