SLOVENSKI STANDARD
kSIST FprEN 823:2012

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Toplotno izolacijski proizvodi za uporabo v gradbeništvu - Ugotavljanje debeline

Thermal insulating products for building applications - Determination of thickness

Wärmedämmstoffe für das Bauwesen - Bestimmung der Dicke

Produits isolants thermiques destinés aux applications du bâtiment - Détermination de l'épaisseur

Ta slovenski standard je istoveten z: **FprEN 823**

ICS:

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

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English Version

Thermal insulating products for building applications - Determination of thickness

Produits isolants thermiques destinés aux applications du bâtiment - Détermination de l'épaisseur

Wärmedämmstoffe für das Bauwesen - Bestimmung der Dicke

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (FprEN 823:2012) 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 823:1994.

The revision of this standard contains no major changes only minor corrections and clarifications of editorial nature.

This European Standard is one of a series of standards which specify test methods for determining dimensions and properties of thermal insulating materials and products. It supports a series of product standards for insulating materials and products which derive from the Council Directive of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (89/106/EEC) through the consideration of the essential requirements.

This European Standard gives the reference method. Other methods may be used (e.g. for quality control), provided a correlation has been established with this reference method; Annex B gives some examples of such methods.

This European standard has been drafted for applications in building but it may also be used in other areas where it is relevant.

This EN test standard is one of the following group of interrelated standards on test methods for determining dimensions and properties of thermal insulation materials and products, all of which come within the scope of CEN/TC 88:

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 825, *Thermal insulating products for building applications — Determination of flatness*

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 1603, *Thermal insulating products for building applications — Determination of dimension and shape stability under constant normal laboratory conditions (23 °C/50 % relative humidity)*

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

EN 1605, *Thermal insulating products for building applications — Determination of deformation under specified compressive load and temperature conditions*

EN 1606, *Thermal insulating products for building applications — Determination of compressive creep*

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

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EN 1608, *Thermal insulating products for building applications — Determination of tensile strength parallel to faces*

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, *Thermal insulating products for building applications — Determination of water vapour transmission properties*

EN 12087, *Thermal insulating products for building applications — Determination of long-term water absorption by immersion*

EN 12088, *Thermal insulating products for building applications — Determination of long-term water absorption by diffusion*

EN 12089, *Thermal insulating products for building applications — Determination of bending behaviour*

EN 12090, *Thermal insulating products for building applications — Determination of shear behaviour*

EN 12091, *Thermal insulating products for building applications — Determination of freeze-thaw resistance*

EN 12429, *Thermal insulating products for building applications — Conditioning to moisture equilibrium under specified temperature and humidity conditions*

EN 12430, *Thermal insulating products for building applications — Determination of behaviour under point load*

EN 12431, *Thermal insulating products for building applications — Determination of thickness for floating floor insulating products*

EN 13793, *Thermal insulating products for building applications — Determination of behaviour under cyclic loading*

EN 13820, *Thermal insulating products for building applications — Determination of organic content*

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1 Scope

This European Standard specifies the equipment and procedures for determining the thickness of full-size products. It is applicable to thermal insulating products.

2 Normative references

This European Standard contains no normative references.

3 Terms and definitions

For the purposes of this document, the following term and definition apply.

3.1
thickness
d
linear dimension measured perpendicularly to the length and width plane

4 Principle

The distance is measured between a hard flat reference surface on which the test specimen rests and a pressure plate resting freely on the top face of the test specimen.

5 Apparatus

A measuring device comprising a dial gauge and a square pressure plate. An example of a suitable apparatus is given in Figure 1.

5.1 A dial gauge, capable of measuring to an accuracy of at least 0,5 mm[1)] and mounted on a rigid frame fastened to a flat rigid base plate which is at least as large as the test specimen.

5.2 A pressure plate, 200 mm square, which exerts a total pressure on the test specimen of either (50 ± 1,5) Pa or (250 ± 5) Pa (including the force exerted by the dial gauge). The pressure shall be as given in the relevant product standard.

NOTE Any test equipment which provides the same result with at least the same accuracy may be used.

6 Test specimens

6.1 Dimensions of test specimens

The test specimen shall be the full-size product, but it may be necessary to cut the product into pieces of appropriate size.

6.2 Number of test specimens

The number of test specimens shall be as specified in the relevant product standard.

NOTE In the absence of a product standard the number of test specimens may be agreed between parties.

1) If a higher accuracy is required, it is specified in the relevant product standard or agreed between parties.

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6.3 Conditioning of test specimens

The test specimens shall be stored for at least 6 h at (23 ± 5) °C. In cases of dispute, they shall be stored at (23 ± 2) °C and (50 ± 5) % relative humidity for the time specified in the relevant product standard.

6.4 Preparation of test specimens

Any facings or coatings shall be retained.

For compressed products, the preparation of test specimens shall be in accordance with Annex A.

7 Procedure

7.1 Test conditions

The test shall be carried out at (23 ± 5) °C. In cases of dispute, it shall be carried out at (23 ± 2) °C and (50 ± 5) % relative humidity.

7.2 Test procedure

Lay the test specimen carefully on the flat rigid base plate, ensuring that the measuring area is in contact with the base plate. Test specimens faced or coated on one side shall be placed with the facing or coating against the base plate. Place the pressure plate on the test specimen, exerting a total pressure of either (50 ± 1,5) Pa or (250 ± 5) Pa at a designated position with the dial gauge centrally located.

Take two measurements for test specimens of lengths less than or equal to 600 mm, four measurements for test specimens greater than 600 mm and less than or equal to 1 500 mm in length, and one additional measurement for each additional 500 mm exceeding 1 500 mm in length.

Take the measurements d_1, d_2, ... and d_n at positions on the surface, as shown in Figure 2.

Measure to an accuracy in accordance with 5.1.

8 Calculation and expression of results

The thickness of the test specimen shall be expressed in millimetres, to the nearest millimetre, as the mean value of the measurements made at all the points for the test specimen (see Figure 2)[1)].

9 Accuracy of measurement

NOTE It has not been possible to include a statement of the accuracy of the method in this edition of the standard, but it is intended to include such a statement when the standard is next revised.

10 Test report

The test report shall include the following information:

a) reference to this European Standard;

b) product identification:

   1) product name, factory, manufacturer or supplier;

   2) production code number;

   3) type of product;