



SLOVENSKI STANDARD

SIST EN 12431:1999

01-september-1999

Toplotnoizolacijski proizvodi za uporabo v gradbeništvu – Določanje debeline izolacijskih proizvodov za plavajoče pode

Thermal insulating products for building applications - Determination of thickness for floating floor insulating products

Wärmedämmstoffe für das Bauwesen - Bestimmung der Dicke von Dämmstoffen unter schwimmendem Estrich

Produits isolants thermiques destinés aux applications du bâtiment - Détermination de l'épaisseur des produits d'isolation pour sol flottant

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Ta slovenski standard je istoveten z: EN 12431:1998

ICS:

91.060.30	Stropi. Tla. Stopnice	Ceilings. Floors. Stairs
91.100.60	Materiali za toplotno in zvočno izolacijo	Thermal and sound insulating materials

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en

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EUROPEAN STANDARD

EN 12431

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 1998

ICS

Descriptors: thermal insulation, buildings, thermal insulating materials, building slabs, thickness measurement, acoustic insulation, test equipment, specimen preparation, testing conditions, fidelity, test results

English version

Thermal insulating products for building applications - Determination of thickness for floating floor insulating products

Produits isolants thermiques destinés aux applications du
bâtiment - Détermination de l'épaisseur des produits
d'isolation pour sol flottant

Wärmedämmstoffe für das Bauwesen - Bestimmung der
Dicke von Dämmstoffen unter schwimmendem Estrich

This European Standard was approved by CEN on 5 June 1998.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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Contents

	Page
Foreword	3
1 Scope	4
2 Normative references	4
3 Definitions	4
4 Principle	4
5 Apparatus	4
6 Test specimens	5
7 Procedure	5
8 Calculation and expression of results	7
9 Accuracy of measurement	7
10 Test report	7

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Foreword

This European Standard 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 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 thermal 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 (Directive 89/106/EEC) through the consideration of the essential requirements.

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

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 December 1998, and conflicting national standards shall be withdrawn at the latest by December 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This European Standard specifies the equipment and procedures for determining the thickness of thermal insulating products for impact sound insulation in floating floor applications.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of these publications apply to this draft European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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

3 Definitions

For the purposes of this standard, the following definitions apply:

3.1 **thickness, d_L** : Thickness of the product under a load of 250 Pa.

3.2 **thickness, d_F** : Thickness of the product under a load of 2 kPa.

3.3 **thickness, d_B** : Thickness of the product under a load of 2 kPa after application of a short time additional load (48 kPa).

4 Principle

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The thickness is determined as the distance measured between a rigid flat base plate on which the test specimen rests and a rigid flat pressure plate exerting different specified pressures on the top surface of the test specimen.

5 Apparatus

5.1 **Dial gauge**, which permits reading to 0,1 mm, mounted on a rigid frame fastened to a rigid flat base plate.

5.2 **Base plate and pressure plate**, which shall be at least as large as the test specimen.

5.3 **A device**, which exerts a total pressure on the test specimen of (250 ± 5) Pa (including the force exerted by the dial gauge).

5.4 **A device**, which exerts a total pressure on the test specimen of (2000 ± 20) Pa (including the force exerted by the dial gauge).

5.5 **A device**, which exerts a total pressure on the test specimen of (50000 ± 500) Pa.

6 Test specimens

6.1 Dimensions of test specimens

The thickness of the test specimens shall be the original product thickness.

The test specimens shall be squarely cut and square having sides of (200 ± 1) mm.

The length and width shall be determined in accordance with EN 12085, with an accuracy of ± 1 mm.

6.2 Number of test specimens

The number of test specimens shall be as specified in the relevant product standard. If the number is not specified, then ten test specimens shall be used.

NOTE: In the absence of a product standard or any other European technical specification, the number of test specimens may be agreed between parties.

6.3 Preparation of the test specimens

The test specimens shall be cut so that they do not include product edges. The test specimens shall be prepared by methods that do not change the original structure of the product. Any skins, facings and/or coatings shall be retained.

6.4 Conditioning of test specimens

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

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7 Procedure

7.1 Test conditions

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

7.2 Test procedure

7.2.1 General

Figure 1, below, indicates the procedures to be followed for the determination of the test specimen thicknesses.

7.2.2 Thickness, d_t

Lay the test specimen on the rigid, flat and horizontal base plate ensuring that the measuring area is in contact with the base plate.

Place the test specimens, if faced or coated on one side, with the facing or coating against the base plate.

Load the test specimen with a device exerting a pressure of 250 Pa.

Measure the thickness (120 ± 5) s after placing the pressure plate in position, to the nearest 0,1 mm.

NOTE: The thickness may be measured with the dial gauge at two diagonally opposite corners or in the centre of the pressure plate or using a measuring device (pin) forced through an opening in the centre of the pressure plate.

7.2.3 Thicknesses d_F and d_B

The thicknesses d_F and d_B shall be determined on the same test specimens that were previously used for determining the thickness d_L .

Load the test specimens with a device exerting a pressure of 2 kPa. Measure the thickness d_F (120 ± 5) s after applying this pressure, to the nearest 0,1 mm. Apply an additional pressure of 48 kPa. Remove this additional pressure after (120 ± 5) s.

Measure the thickness d_B to the nearest 0,1 mm (120 ± 5) s or (300 ± 10) s after removing the pressure of 48 kPa. The pause before measuring the thickness, either 120 s or 300 s, shall be as specified in the relevant product standard.

NOTE: In the absence of a product standard or any other European technical specification the pause time may be agreed upon between parties.

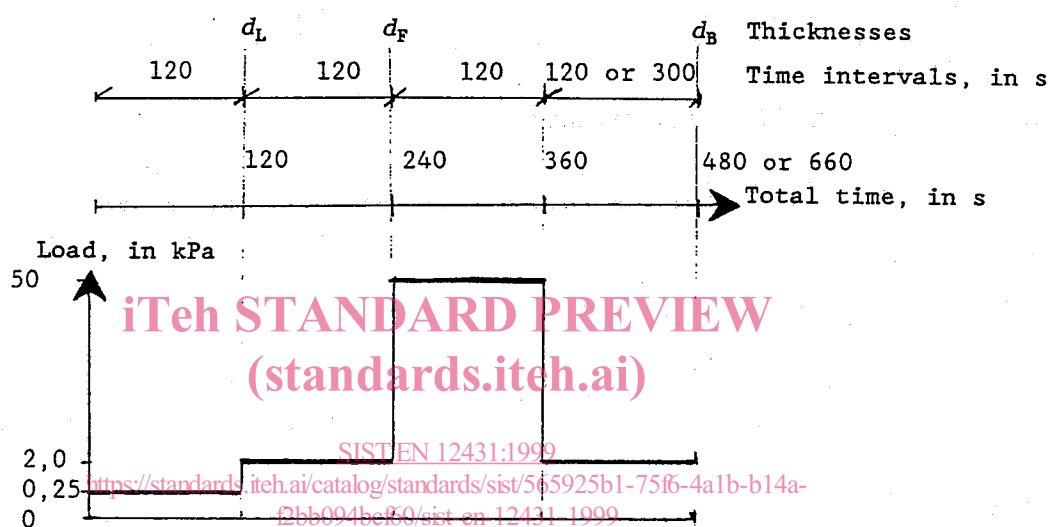


Figure 1 : Illustration of the thicknesses versus time and load