



SLOVENSKI STANDARD

SIST EN 12085:1999

01-september-1999

Toplotnoizolacijski proizvodi za uporabo v gradbeništvu – Določanje linearnih dimenzij preskušancev

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

Wärmedämmstoffe für das Bauwesen - Bestimmung der linearen Maße von Probekörpern

Produits isolants thermiques destinés aux applications du bâtiment - Détermination des dimensions linéaires des éprouvettes d'essai

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ICS:

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

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EUROPÄISCHE NORM

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Descriptors: buildings, thermal insulation, thermal insulating materials, dimensional measurements, measuring instruments, categories, fidelity, procedure

English version

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

Produits isolants thermiques destinés aux applications du bâtiment - Détermination des dimensions linéaires des éprouvettes d'essai
Wärmedämmstoffe für das Bauwesen - Bestimmung der linearen Maße von Probekörpern

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This European Standard was approved by CEN on 1997-04-26. 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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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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 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 1997, and conflicting national standards shall be withdrawn at the latest by December 1997.

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.

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 December 31, 1997 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 inter-related 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 standards.iteh.ai/catalog/standards/sist/55638ff7-4a53-4759-ac47-2fa3d658e6fd/sist-en-12085-1999
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 dimensional 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
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

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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.

1 Scope

This European Standard specifies the characteristics and choice of measuring equipment and the procedure for determining the linear dimensions of test specimens which are taken from thermal insulating products. The procedures for measuring the dimensions of full size products are specified in EN 822 and EN 823.

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 European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to 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

3 Definitions

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

3.1 linear dimension: The distance between two points, between two parallel lines or between two parallel planes, defined by corners, edges or surfaces of the test specimen.

3.2 test specimen: Single item or part of an item used for a test.

4 Principle

The linear dimensions of a test specimen are measured using an apparatus giving the required degree of accuracy.

5 Apparatus

5.1 Flat surface, larger than the largest dimensions of the test specimen.

5.2 Dial gauge, permitting reading to at least 0,05 mm. The measuring surface shall be of such a size that the total resultant measuring pressure is ≤ 1 kPa.

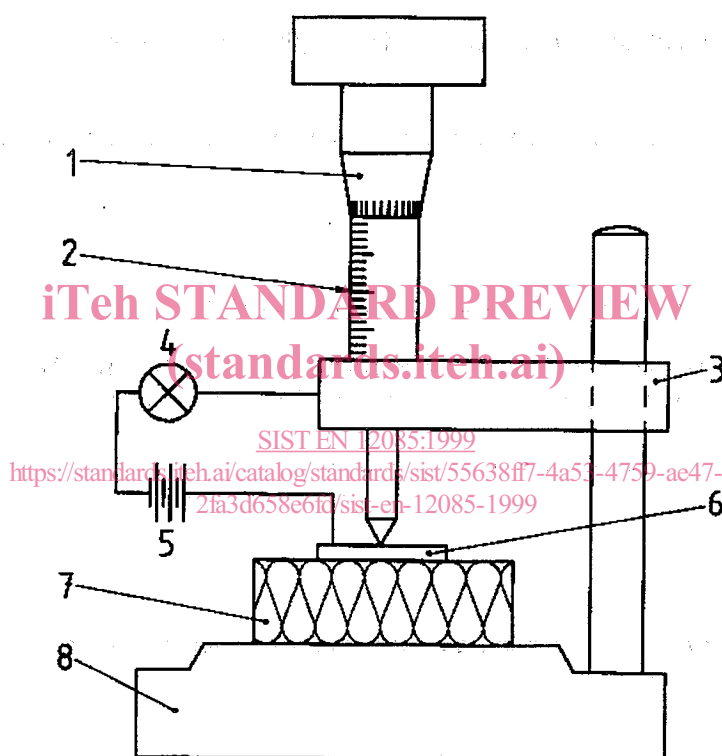
NOTE: The measuring pressure of the dial gauge can be reduced by removing the spring. The dial gauge, or any other electrical or optical measuring instrument having at least the same accuracy, can be fixed to a device to adapt the testing equipment to the size of the test specimen.

5.3 Micrometer, permitting readings to at least 0,05 mm. A micrometer shall only be used if it incorporates a device which indicates the onset of the force applied by the micrometer when it contacts the test specimen surface. An example of such a device is an electrical circuit, consisting of a flexible wire, battery, lamp and an aluminium plate exerting a pressure of $(50 \pm 1,5)$ Pa on the test specimen. An example of such an apparatus is given in figure 1.

5.4 Sliding caliper, permitting readings to at least 0,1 mm. The sliding caliper shall only be used if it does not cause any deformation of the test specimen.

5.5 Metal rule or metal tape, graduated in millimetres and permitting reading to at least 0,5 mm.

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



- 1 Screw micrometer
- 2 Millimetre scale
- 3 Adjustable support
- 4 Lamp
- 5 Battery
- 6 Aluminium plate, 10 cm²
- 7 Test specimen
- 8 Base plate

Figure 1: Example of apparatus conforming to 5.3

6 Test specimens

The number, dimensions and conditioning of test specimens shall be as defined in the relevant test method standard or any other European technical specification.

7 Procedure

7.1 Test conditions

The test conditions shall be as defined in the relevant test method standard or any other European technical specification.

7.2 Choice of measuring equipment

The choice of measuring equipment shall be in accordance with the required accuracy of the measured value as given in the relevant test method standard or any other European technical specification. Where no such standard or specification exists, the required accuracy shall be agreed between parties, but it shall correspond to the dimensions to be measured.

If the required accuracy of the dimension is expressed in millimetres the choice of the equipment shall be as shown in table 1.

Table 1
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Required accuracy mm	Measuring equipment	Readings to the nearest mm	Median of readings at each position rounded to the nearest mm
0,1	dial gauge or micrometer 1)	0,05	0,1
0,2	sliding caliper 2)	0,1	0,2
1,0	metal tape or rule 3)	0,5	1,0

1) A dial gauge shall only be used if the result is unaffected by dial gauge pressure up to 1 kPa.

2) A dial gauge or a micrometer may also be used, but then the instrument accuracy need be no better than that of a sliding caliper.

3) A sliding caliper or even a dial gauge or micrometer may be used, but then the instrument accuracy need be no better than that of the metal tape or rule.

Table 2 shall be used to provide the means for the selection of the equipment to be used where the accuracy is expressed in percentage terms. The choice depends on both the required accuracy and on the test specimens dimensions.