



**SLOVENSKI STANDARD**  
**SIST EN 1609:1997**

**01-december-1997**

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**Toplotnoizolacijski proizvodi za uporabo v gradbeništvu - Določanje vpojnosti vode z metodo delne kratkotrajne potopitve**

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

Wärmedämmstoffe für das Bauwesen - Bestimmung der Wasseraufnahme bei kurzzeitigem teilweisem Eintauchen

Produits isolants thermiques destinés aux applications du bâtiment - Détermination de l'absorption d'eau a court terme: essai par immersion partielle

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**Ta slovenski standard je istoveten z: EN 1609:1996**

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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

EN 1609

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 1996

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Descriptors: buildings, thermal insulation, thermal insulating materials, water absorption tests, immersion tests

English version

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

Produits isolants thermiques destinés aux  
applications du bâtiment - Détermination de  
l'absorption d'eau à court terme: essai par  
immersion partielle

Wärmedämmstoffe für das Bauwesen - Bestimmung  
der Wasseraufnahme bei kurzzeitigem teilweisem  
Eintauchen

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This European Standard was approved by CEN on 1996-10-05. 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.

The European Standards exist 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CEN**

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

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

**Contents**

Foreword . . . . .	3
1 Scope . . . . .	5
2 Normative references . . . . .	5
3 Definitions . . . . .	5
4 Principle . . . . .	5
5 Apparatus . . . . .	5
6 Test specimens . . . . .	7
7 Procedure . . . . .	7
8 Calculation and expression of results . . . . .	9
9 Precision of the method . . . . .	9
10 Test report . . . . .	9

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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 May 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   |
| 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
prEN 12085	Thermal insulating products for building applications - Determination of linear dimensions of test specimens
prEN 12086	Thermal insulating products for building applications - Determination of water vapour transmission properties
prEN 12087	Thermal insulating products for building applications - Determination of long term water absorption by immersion
prEN 12088	Thermal insulating products for building applications - Determination of long term water absorption by diffusion
prEN 12089	Thermal insulating products for building applications - Determination of bending behaviour
prEN 12090	Thermal insulating products for building applications - Determination of shear behaviour
prEN 12091	Thermal insulating products for building applications - Determination of freeze-thaw resistance

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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 equipment and procedures for determining the short term water absorption of test specimens by partial immersion. It is applicable to thermal insulating products.

NOTE: It is intended to simulate the water absorption caused by a 24 h raining period during construction work.

## 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 any 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:

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

## 3 Definitions

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This European Standard **(contains no definitions)**

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## 4 Principle

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A test specimen is placed with the lower part in contact with water, for a period of 24 h and its change in mass is measured.

The excess water adhering to the surface but not absorbed by the test specimen is removed by drainage in method A or taken into account by deduction of the initial water uptake in method B.

## 5 Apparatus

5.1 Balance, capable of determining the mass of a test specimen to an accuracy of 0,1 g.

5.2 Water tank, with a device for keeping the water level constant to within  $\pm 2$  mm, and a device to keep the test specimen in position. The device to keep the test specimen in position shall not cover more than 15 % of the cross section area of the test specimen, which is exposed to water. An example is shown in figure 1.

5.3 Tap water, adjusted to a temperature of  $(23 \pm 5)$  °C.

5.4 Equipment for drainage. Examples are shown in figures 2a) and 2b).

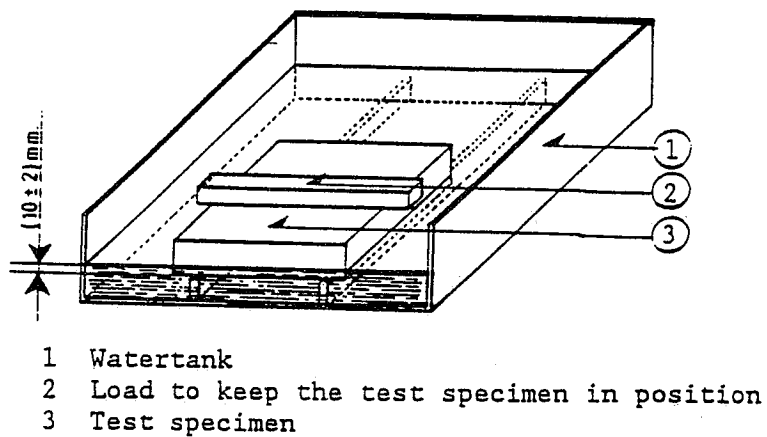
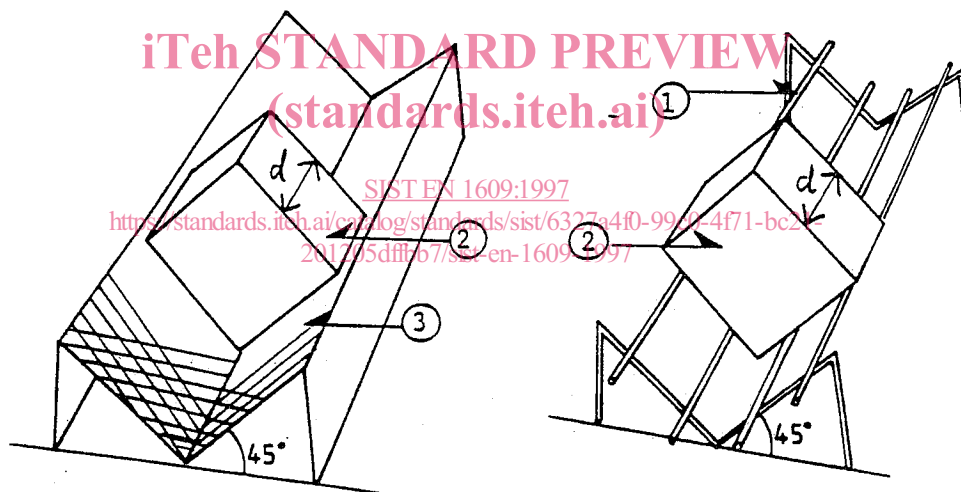


Figure 1: Example of partial immersion test device



- a)
- 1 Stainless steel mesh
  - 2 Test specimen
  - 3 Perforated stainless steel
- b)

Figure 2: Examples of equipment for drainage



## 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 prisms of square cross section having sides of  $(200 \pm 1)$  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 at least four 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 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.

NOTE: Special methods of preparation, when needed, are given in the relevant product standard or any other European technical specification.

### 6.4 Conditioning of test specimens SIST EN 1609:1997

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

## 7 Procedure

### 7.1 Test conditions

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

### 7.2 Test procedure

The choice of the method A or B shall be as specified in the relevant product standard.

NOTE: In the absence of a product standard or any other European technical specification, the method A or B may be agreed between parties.

The dimensions of the test specimens shall be measured in accordance with prEN 12085.