SLOVENSKI STANDARD
SIST EN 1607:2013

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Nadomešča:
SIST EN 1607:1997
SIST EN 1607:1997/AC:1999

Toplotnoizolacijski proizvodi za uporabo v gradbeništvu - Ugotavljanje natezne trdnosti v smeri debeline

Thermal insulating products for building applications - Determination of tensile strength perpendicular to faces

Wärmedämmstoffe für das Bauwesen - Bestimmung der Zugfestigkeit senkrecht zur Plattenebene

Produits isolants thermiques destinés aux applications du bâtiment - Détermination de la résistance à la traction perpendiculairement aux faces

Ta slovenski standard je istoveten z: **EN 1607:2013**

ICS:

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

SIST EN 1607:2013 **en,fr,de**

EUROPEAN STANDARD

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EN 1607

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Supersedes EN 1607:1996

English Version

Thermal insulating products for building applications - Determination of tensile strength perpendicular to faces

Produits isolants thermiques destinés aux applications du bâtiment - Détermination de la résistance à la traction perpendiculairement aux faces

Wärmedämmstoffe für das Bauwesen - Bestimmung der Zugfestigkeit senkrecht zur Plattenebene

This European Standard was approved by CEN on 15 December 2012.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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Foreword

This document (EN 1607:2013) 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of an identical text or by endorsement, at the latest by September 2013, and conflicting national standards shall be withdrawn at the latest by September 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1607:1996.

The revision of this standard contains no major changes, only minor corrections and clarifications of an 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 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 building, but it may also be used in other areas where it is relevant.

This European 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 fall 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*
- 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 materials for building applications — Determination of organic content*

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: 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 the United Kingdom.

1 Scope

This European Standard specifies the equipment and procedures for determining the tensile strength of a product perpendicular to its faces. It is applicable to thermal insulating products.

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

ISO 5725-1, *Accuracy (trueness and precision) of measurement methods and results — Part 1: General principles and definitions*

ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*

3 Terms and definitions

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

3.1
tensile strength perpendicular to faces
σ_{mt}
maximum recorded tensile force perpendicular to the product faces during the pulling operation, divided by the cross-sectional area of the test specimen

4 Principle

A test specimen is attached between two rigid plates or blocks, fastened in a tensile testing machine and pulled apart at a given speed.

The maximum tensile force is recorded and the tensile strength of the test specimen is calculated.

5 Apparatus

5.1 Tensile testing machine, appropriate for the range of force and displacement involved, capable of having a constant crosshead speed adjusted to (10 ± 1) mm/min and capable of measuring the force to an accuracy of ± 1 %.

5.2 Rigid plates or blocks, with self-aligning attachment to avoid uneven distribution of tensile stress during the test.

Examples of suitable arrangement to bond the test specimen are shown in Figure 1.

5.3 Adhesive, used to bond the test specimen between the rigid plates or blocks:

— The adhesive shall not reinforce or damage the surface layers of the product.

— Hot adhesives shall be avoided if they damage the product.

— Any solvent used shall be compatible with the product.

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 thickness of test specimens shall be equal to the original product thickness including any skins, facings and/or coatings.

The test specimens shall be prisms of square cross section having sides of the following recommended dimensions:

50 mm × 50 mm or
100 mm × 100 mm or
150 mm × 150 mm or
200 mm × 200 mm or
300 mm × 300 mm.

Dimensions used shall be as specified in the relevant product standard.

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

The linear dimensions shall be determined in accordance with EN 12085 to an accuracy of ± 0,5 %.

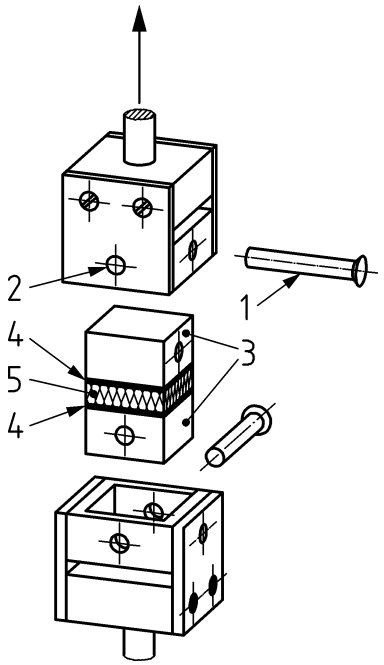

Figure 1 a)

Key

1 bolt
2 connecting shaft
3 metal blocks
4 adhesive
5 test specimen

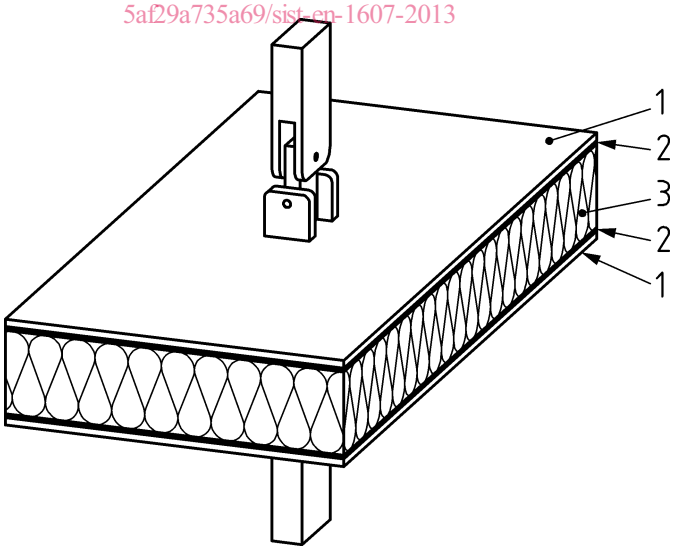

Figure 1 b)

Key

1 rigid plate
2 adhesive
3 test specimen

Figure 1 — Examples of suitable arrangement to bond the specimen