



SLOVENSKI STANDARD SIST ISO 6237:2015

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Nadomešča:
SIST ISO 6237:1998

Lepila - Lepila za les - Ugotavljanje strižne trdnosti z natezno obremenitvijo

Adhesives - Wood-to-wood adhesive bonds - Determination of shear strength by tensile loading

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Adhésifs - Joints collés de bois à bois - Détermination de la résistance au cisaillement par effort de traction

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Ta slovenski standard je istoveten z: **ISO 6237:2003**

ICS:

83.180

Lepila

Adhesives

SIST ISO 6237:2015

en,fr

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INTERNATIONAL STANDARD

**ISO
6237**

Second edition
2003-10-15

Adhesives — Wood-to-wood adhesive bonds — Determination of shear strength by tensile loading

*Adhésifs — Joints collés de bois à bois — Détermination de la
résistance au cisaillement par effort de traction*

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ISO 6237:2003(E)**Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 6237 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

This second edition cancels and replaces the first edition (ISO 6237:1987), of which it constitutes a minor revision which included the correction of an error in Figure 1 a).

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Adhesives — Wood-to-wood adhesive bonds — Determination of shear strength by tensile loading

1 Scope

This International Standard specifies a method for determining the shear strength of wood-to-wood adhesive bonds, with a standard specimen loaded in tension and under specified conditions of preparation, conditioning and testing. This method is intended for testing only those adhesives used in bonding wood to wood in either parallel-laminated or cross-laminated construction.

NOTE 1 To carry out this test, basic information regarding certain variables is needed by the test laboratory (see Annex A).

NOTE 2 This method is not intended for use in testing manufactured products.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*
[SIST ISO 6237:2015](#)

ISO 472, *Plastics — Vocabulary*
[standards.iteh.ai/catalog/standards/sist/0471e28d-e351-4ee8-8a97-4c34f23c3409/sist-iso-6237-2015](#)

3 Apparatus

3.1 Apparatus for preparation of adhesive

3.1.1 Balance and equipment capable of measuring the proportions of the adhesive mix to within a tolerance of $\pm 1\%$.

3.1.2 Mixing equipment to ensure homogeneous mixing of the constituents with minimum aeration of the adhesive (except foamed adhesive).

3.1.3 Spreading equipment such as a **wire-wound bar**, **roller spreader**, **curtain coater** or **suitable hand applicators**, capable of spreading the adhesive uniformly within $\pm 5\%$ of the desired spread.

3.1.4 Equipment, designed to exert the required pressure evenly over the whole bonded area within $\pm 5\%$ of the desired value, for example a **press** or **clamps**. If necessary, **heated platens** capable of maintaining the prescribed temperature within $\pm 2^\circ\text{C}$ during pressing.

3.2 Test apparatus

3.2.1 Analytical balance.

3.2.2 Linear measuring device, to read to 0,05 mm, e.g. vernier calipers or micrometer.

3.2.3 Test machine, capable of exerting a tensile force of at least 5 kN with an accuracy of $\pm 2\%$. The force shall be applied at a uniformly increasing rate in the range 2,5 kN/min to 6 kN/min or at a uniform crosshead speed between 0,5 mm/min and 1,0 mm/min unless otherwise agreed between the interested parties.

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The test machine shall be equipped with suitable grips and jaws so that the specimen is held tightly without slipping during testing and is held in alignment so that the stress is applied as required in Clause 8.

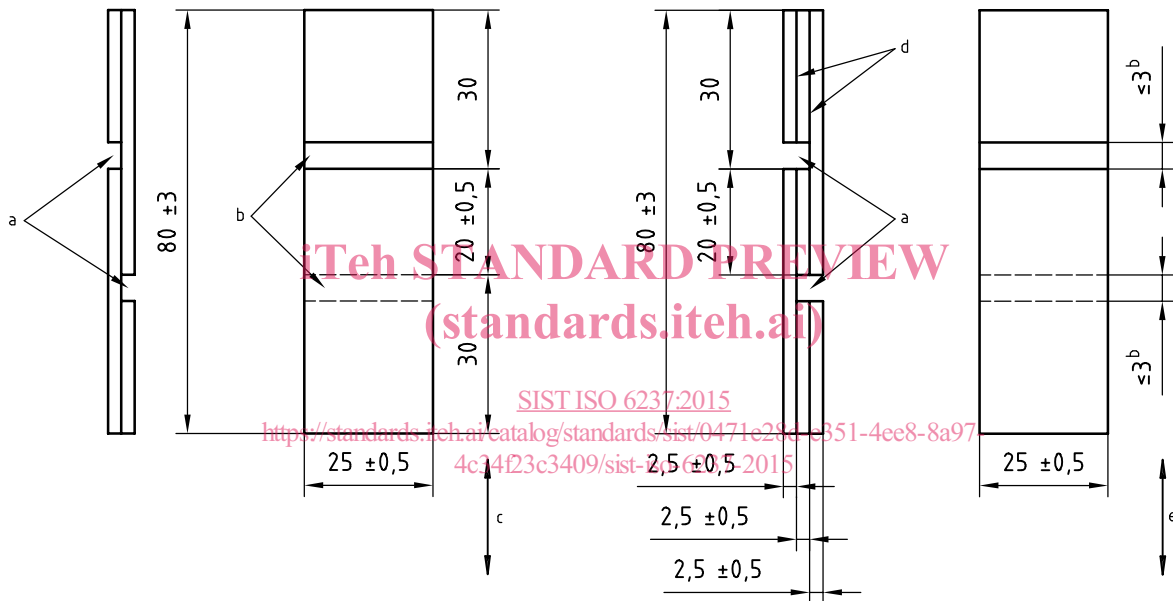
NOTE It is necessary for all equipment, including gauges, thermometers, etc., to be calibrated regularly, as prescribed by the test authority of each country.

4 Test specimens

4.1 The timber species, timber quality and timber moisture content for the specimens shall be as described in Annex B.

4.2 The test specimen shall be of a two-ply or three-ply construction and shall conform to the form and dimensions shown in Figures 1 and 2. The test specimens shall be cut from test panels prepared as described in this clause and Clause 5.

Dimensions in millimetres



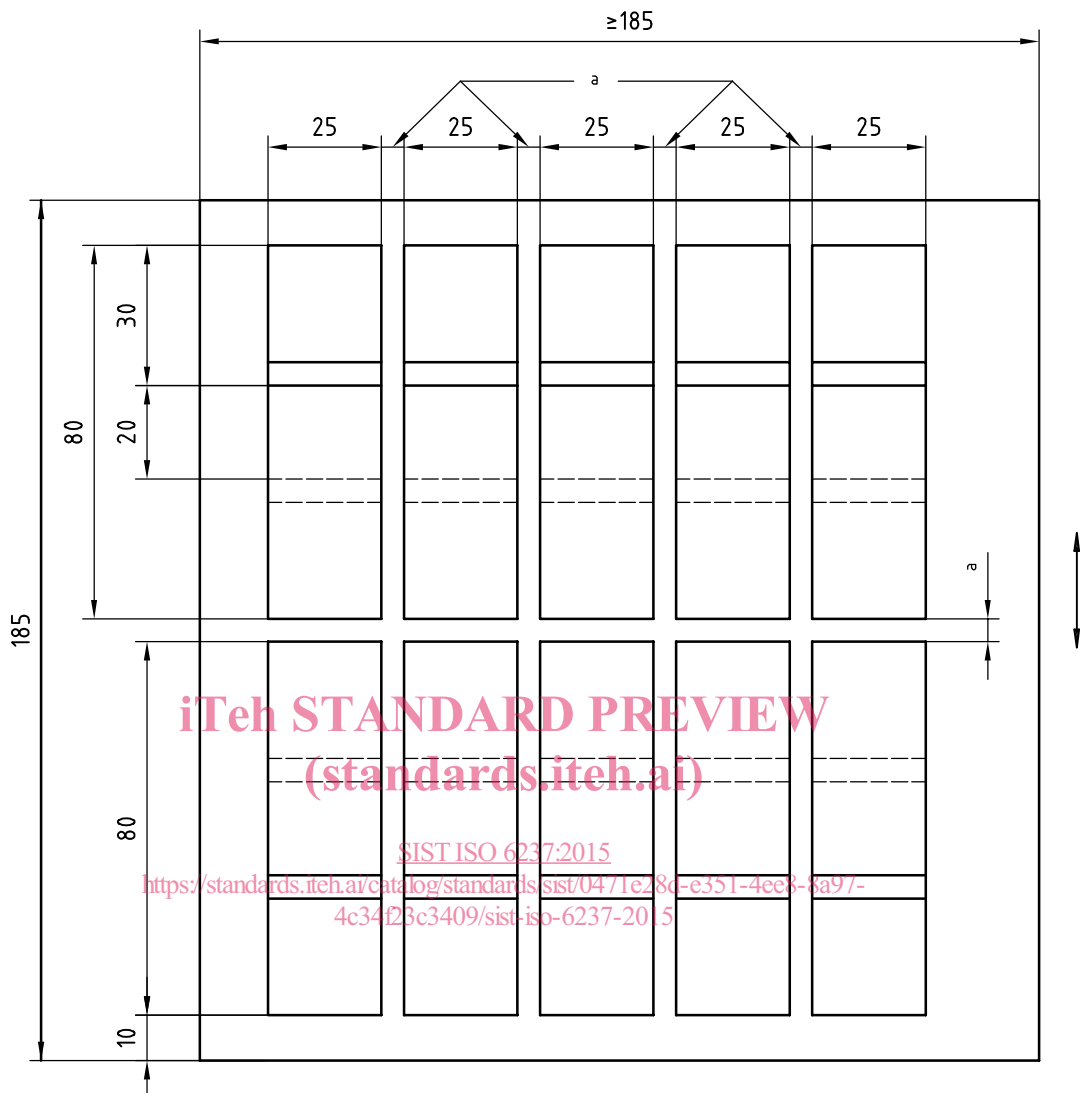
a) Two-ply tensile shear specimen

b) Three-ply tensile shear specimen

- a Cut up to but not beyond glue line
- b Width of sawcut
- c Direction of grain of both veneers
- d Glue lines
- e Direction of grain of face veneers (direction of grain of central veneer shall be at right angles to grain of two face veneers)

Figure 1 — Test specimens

Dimensions in millimetres



- a Width of sawcut
- b Direction of grain

Figure 2 — Suggested arrangement of specimens

4.2.1 For the specimen of two-ply construction, the grain of both plies shall be parallel to the long dimension of the specimen.

4.2.2 For the specimen of three-ply or cross-laminated construction, the grain of the face plies shall be parallel to the long dimension of the specimen and the grain of the centre ply shall be parallel to the short dimension of the specimen and at right angles to the grain of the two outer plies.

NOTE Both types are suitable for general testing of close contact adhesives but values obtained with the two different specimens are not comparable. Two-ply specimens are often used for applications where the grain of the adherends is parallel while the three-ply specimens may be preferred for adhesives predominantly used in the production of wooden panels such as plywood or particle board.

4.2.3 For adhesive quality control purposes, test a minimum of four specimens from each of three panels of similar construction.