
**Laminate floor coverings —
Determination of long-side friction for
mechanically assembled panels**

*Revêtements de sol stratifiés — Détermination de la force de frottement
latérale des panneaux assemblés mécaniquement*

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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 25620 was prepared by Technical Committee ISO/TC 219, *Floor coverings*.

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Laminate floor coverings — Determination of long-side friction for mechanically assembled panels

1 Scope

This International Standard specifies a method for the determination of the long-side friction of joints between laminate floor panels which are held together on the floor by mechanical locking systems.

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 7500-1:2004, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system*

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3 Principle

ISO 25620:2008

The long-side friction of mechanically assembled panels is determined in a tensile test. During the test, a test specimen with long-side joints is moved through two outer mechanically assembled panel parts. The maximum force determined is the parameter for the long-side friction.

4 Apparatus

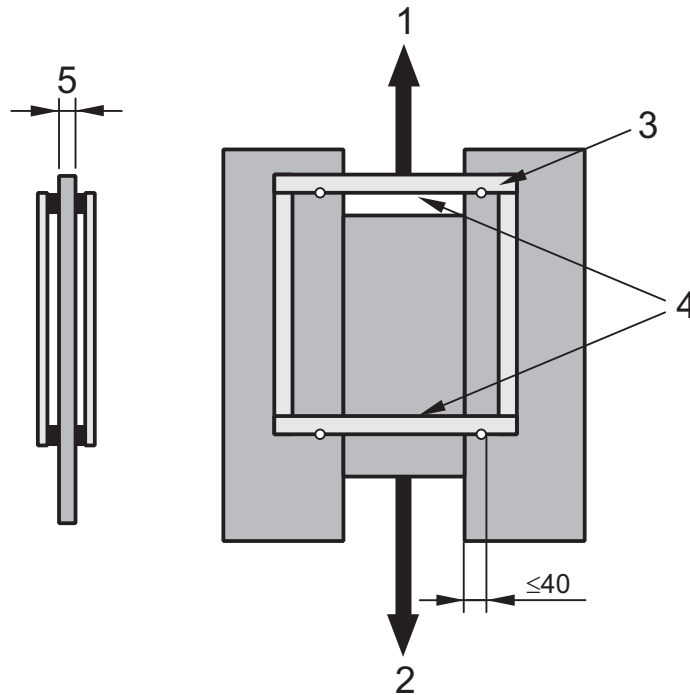
4.1 Tensile testing machine, verified and calibrated in accordance with ISO 7500-1:2004, and conforming to class 3 for the force range which is applied by the locking strength measurement.

4.2 Measuring instrument (caliper gauge), to determine the length, width and thickness of the specimen.

4.3 Balance, which can be read to the nearest 0,1 g.

4.4 Supporting frames of steel, thickness ≥ 6 mm, width ≥ 25 mm, for a parallel tensile measurement of the friction of the long-side joints, assembled (see Figure 1) using

- a) **4 screws** (e.g. M12),
- b) **8 washers**, and
- c) **4 nuts**.



Key

- 1 upper grip
- 2 lower grip
- 3 screws M12
- 4 parallel tension
- 5 washers

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Figure 1 — Specimen position in tensile test

5 Sampling and conditioning of panels

Sample ten panels for the preparation of five specimens.

Condition the panels from which the specimens are cut to constant mass at $(50 \pm 5) \%$ relative humidity and $(23 \pm 2) ^\circ\text{C}$.

Constant mass is considered to have been reached when the results of two successive weighing operations, carried out at an interval of 24 h, do not differ by more than 0,1 % of the mass of the panels.

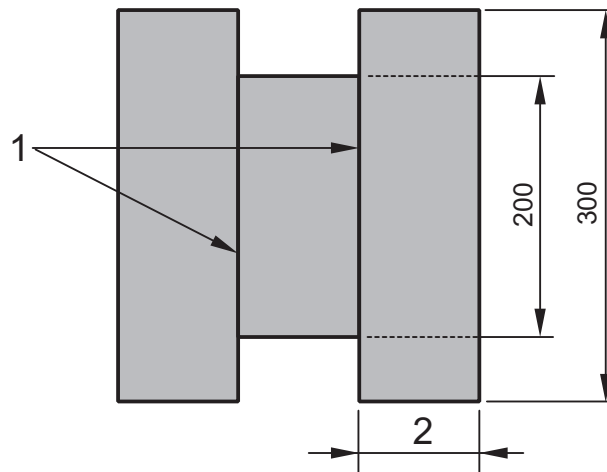
6 Testing

6.1 Cutting and assembling of test specimens

Assemble the test specimen from panel parts cut from the centre parts of two different panels (see Figure 2) and drill parallel holes for the screws on the 300 mm long panels. The position of the holes are indicated in Figure 1. The diameter of the holes shall be 0,2 mm greater than the outer diameter of the screws. Assemble the specimen along the long-side joints according to the instructions of the laminate producer, without pressure or tensile forces, on the profiles. For testing, assemble the specimen with the supporting frames according to 4.4, with the use of washers on all four screws on both sides of the specimen to ensure that the centre part of the specimen is free from contact with the frame.

The specimen shall be flat and without torsion. The test shall be carried out using a cardanic suspension. For each product type, a minimum of five specimens shall be tested.

Dimensions in millimetres



Key

- 1 long-side joints
- 2 panel width

Figure 2 — Cutting of samples

6.2 Determination of the long-side friction

The pulling direction is parallel to the long-side joints. The suspension of the tensile testing machine (4.1) shall be assembled in the middle of the moved part of the specimen (i.e. the 200 mm-long part).

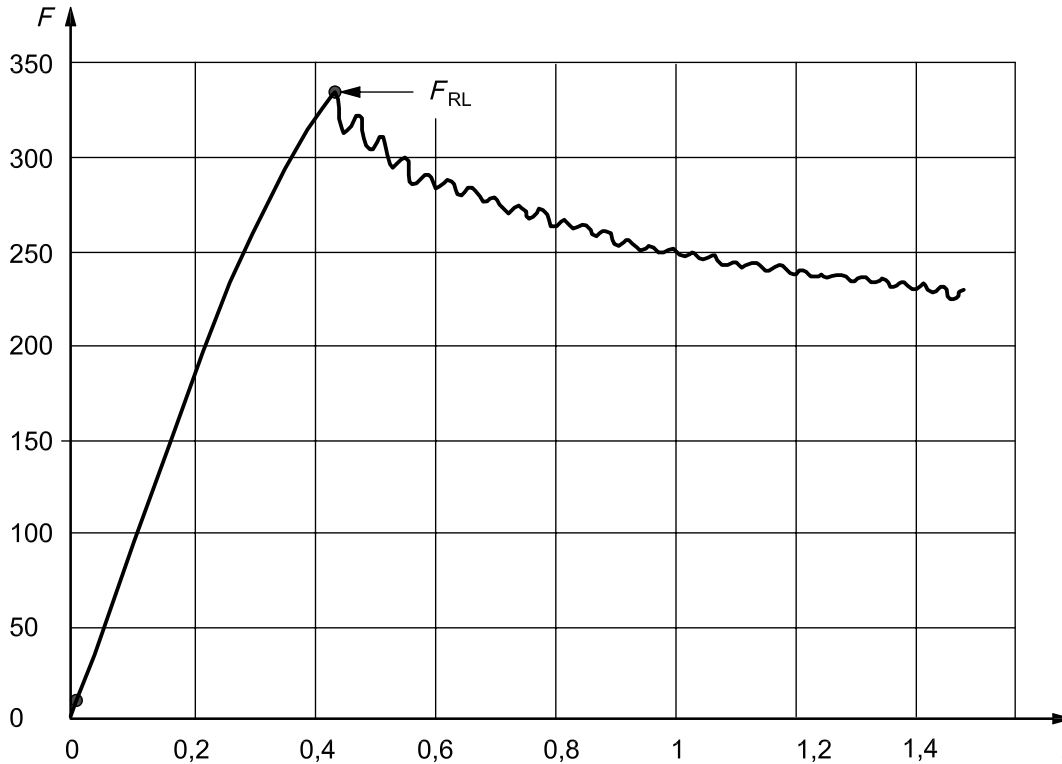
The tensile speed shall be at 0,5 mm/min.

Using the tensile testing machine, carry out the test over a traversing distance of about 3 mm.

7 Expression of results

The maximum force necessary to slide the panels within the assembly (adhesion sliding) to overcome friction is considered to be the long-side friction, F_{RL} . (See Figure 3.)

The standard deviation and the coefficient of variation of F_{RL} shall be mentioned.



Key

l traversing distance, in millimetres (mm)

F force, in newtons (N)

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Figure 3 — Determination of the parameter long-side friction, F_{RL} , by tensile test

8 Test report

The test report shall include the following information:

- a) a reference to this International Standard (ISO 25620);
- b) any deviations from this International Standard;
- c) the name and address of the laboratory that performed the test;
- d) the name and address of the company requesting the test;
- e) the name and the type of laminate floor covering tested;
- f) the date of delivery of the test specimens;
- g) the test results according to Clause 7.

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