INTERNATIONAL STANDARD

ISO 24345

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Resilient floor coverings — Determination of peel resistance

Revêtements de sol résilients — Détermination de la résistance au pelage

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Foreword

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ISO 24345 was prepared by Technical Committee ISO/TC 219, *Floor coverings*.

Resilient floor coverings — Determination of peel resistance

1 Scope

This International Standard describes a method for determining the resistance against separation of two layers of a resilient floor covering by peeling.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
peel resistance
force applied to the width of one layer of a resilient floor covering which separates it from the adjacent layer

3 Principle

The force required to separate layers of a test piece by peeling is measured.

4 Apparatus

4.1 Tensile testing machine, with suitable load cell and a recording device.

The machine shall be capable of maintaining the testing speed required (see 7.2).

5 Sampling and selection of specimens

Take a representative sample from the available material. Take six test pieces at regular distances from the sample, the distance between the outer edge of the sample and the nearest edge of the test piece being at least 100 mm, of minimum length 150 mm and width (50 ± 1) mm, three cut in the machine direction and three cut in the transverse direction (see Figure 1).

Dimensions in millimetres

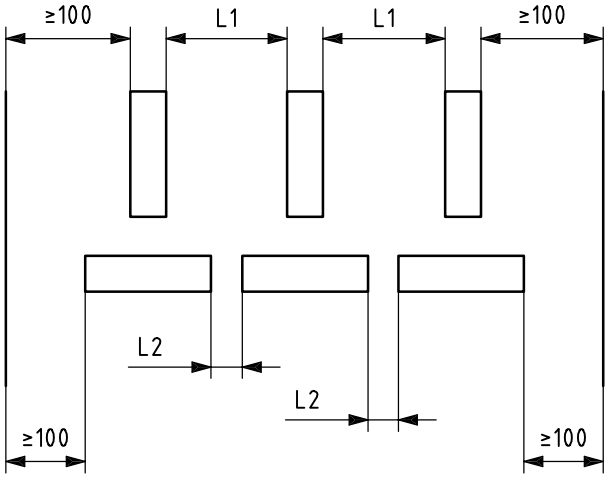


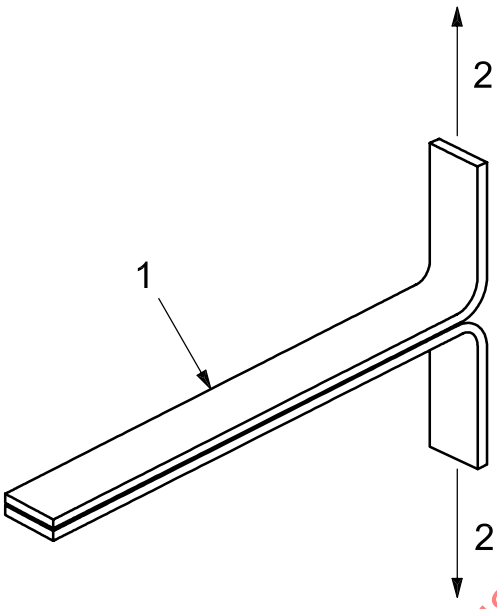
Figure 1 — Sampling and selection of specimens

6 Atmosphere for conditioning and testing

Condition the test piece(s) at a temperature of (23 ± 2) °C and relative humidity of (50 ± 5) % for a minimum of 24 h. Maintain these conditions when conducting the test. Take notice of 7.1.

7 Test procedure

7.1 Effect the initial separation of the two layers over a sufficient length to permit the test piece to be fixed in the jaws of the tensile testing machine (Figure 2). If a solvent is used for initial separation, remove it by storing the test piece in a ventilated oven at 60 °C for two hours, followed by normal conditioning as described in Clause 6.



Key

1 test piece
2 direction of pull

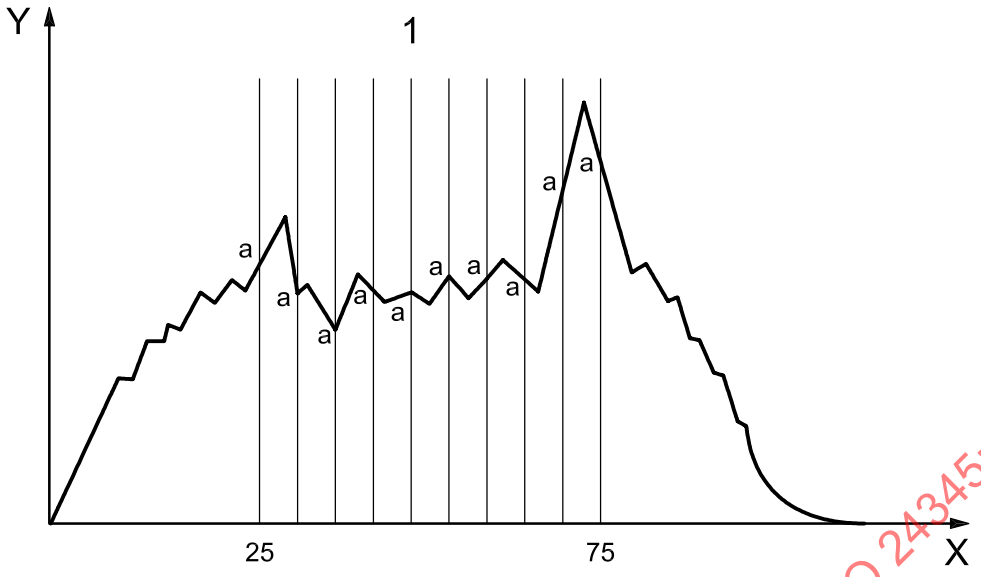
Figure 2 — Specimen fixing

7.2 Place the test piece in the jaws (which are approximately 50 mm apart) of the tensile testing machine so that the tension will be applied evenly over the width of the test piece. Set the machine and its recording device in operation such that the speed of separation is (100 ± 5) mm/min. Record the separation force which continues beyond the initial separation.

7.3 Repeat the test on the remaining test pieces.

8 Calculation and expression of results

Ignore the first and last quarter of the full length of the graph for each test piece. Spread a screen as shown in Figure 3 over the graph, and record the forces at the cross points in newtons. Calculate the mean value of the peel resistance (2.1) for each test piece rounded to the nearest 5 N. Also calculate the mean value of the peel resistance for each direction from the measurements taken and express the result rounded to the nearest 5 N in newtons per 50 mm.



Key

X Trace length, %
Y Force, newtons
1 screen
a crosspoints

Figure 3 — Schematic diagram of a typical trace

9 Precision statement

An interlaboratory test will be conducted to determine the precision of this method.

10 Test report

The test report shall include the following information:

a) a statement that the tests were performed in accordance with this International Standard (ISO 24345:2006);

b) the date(s) at which the tests were carried out;

c) complete identification of the product tested, including type, source, colour, and manufacturer's reference number(s);

d) the previous history of the sample;

e) any deviation from this International Standard which may have effected the results;

f) if normal delamination occurred:

   1) the mean value of the peel resistance for each direction;

   2) the minimum values for each direction;

g) if normal delamination did not occur, the manner in which the test pieces failed to delaminate.