INTERNATIONAL STANDARD

ISO 10748

First edition
2011-03-01

Footwear — Test method for slide fasteners — Slider locking strength

Chaussures — Méthode d'essai pour les fermetures à glissière — Résistance de blocage du curseur

Reference number
ISO 10748:2011(E)

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Published in Switzerland

Foreword

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ISO 10748 was prepared by prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 309, *Footwear*, in collaboration with ISO Technical Committee ISO/TC 216, *Footwear*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Footwear — Test method for slide fasteners — Slider locking strength

1 Scope

This International Standard specifies a test method to determine the locking strength of a slide fastener slider for footwear. The method is applicable to all types of slide fastener that have a slider locking device.

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

ISO 19952, *Footwear — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 19952 and the following apply.

3.1
slide fastener
means of securing two flexible materials consisting of interlockable elements, each attached to one of the opposing edges of two tapes, and movable slider that spans the interlocking elements, which, when moved in one direction, causes the elements of one tape to interlock with the elements of the other tape and, when moved in the opposite direction, causes the elements to disengage

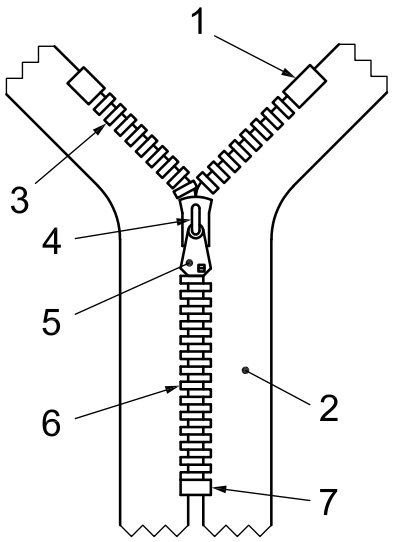
See Figure 1.

3.2
tape
fabric panel to support the other elements of the slide fastener

3.3
slider
means of drawing the two interlocking elements together or apart as it traverses the length of the chain

3.4
puller
piece of plastic or metal attached to the slider as a means of manual grip for the user to operate

3.5
teeth
individual element of the slide fastener which interlocks with an opposing element



Key

1	top stop	5	puller
2	tape	6	chain
3	elements (teeth)	7	bottom stop
4	slider		

Figure 1 — Slider fastener

3.6
end stop
top stop

terminal component of the chains to prevent the slider from disengaging from the teeth and tape

3.7
locking device
any component that prevent unintended movement of the slider during use or wear

4 Principle

The slider is locked on to the chain of the slide fastener and the locking device subjected to a tensile force applied at 180° to the locking device via the chain stringers. The force is increased until failure occurs.

5 Apparatus and materials

5.1 Tensile testing machine, with:

a) a jaw separation rate of (100 ± 10) mm/min;

b) the capability of measuring forces up to 2 kN to an accuracy of better than 2 %, as specified by class 2 in ISO 7500-1;

c) the facility to record the maximum force applied during the test.

6 Preparation of test specimens

6.1 A minimum of three slide fasteners shall be tested.

6.2 Condition the test specimens at 23 °C and 50 % relative humidity (RH) for 24 h before testing, and carry out the test in this environment.

6.3 Set each test specimen in the open position with the locking device locked into the chain about 30 mm from the top stops.

7 Procedure

7.1 Set the jaws of the tensile testing machine (5.1) (50 ± 5) mm apart and secure the test specimen centrally in the jaws, such that the top of each stringer is clamped adjacent to the top stop (see Figure 2).

7.2 Ensure that the locking mechanism remains in place throughout the test, operate the tensile testing machine to increase the force on the test specimen until the locking mechanism slips or the test specimen fails. Record the force at failure, F, in newtons, to the nearest 1 N.

7.3 Record the type of failure as:

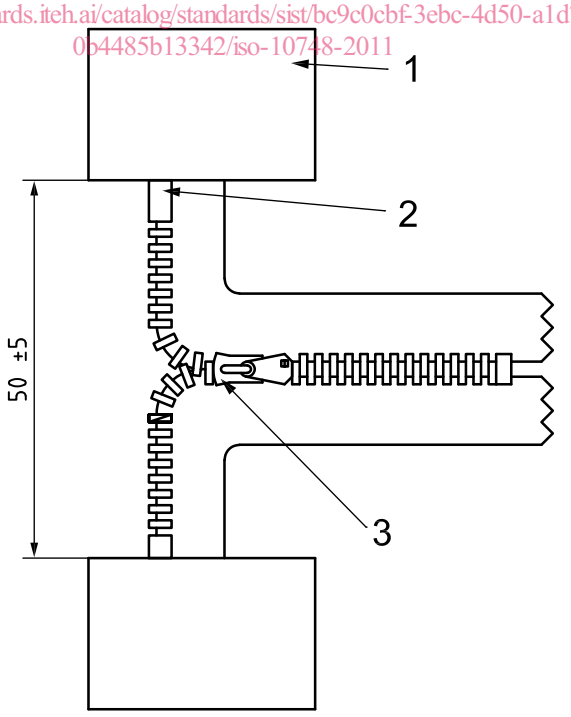
— slipping of locking mechanism;

— failure of test specimen.

7.4 Repeat the procedure in 7.1 to 7.3 for the remaining test specimens.

7.5 For each type of failure, record the number of test specimens exhibiting that type of failure and calculate the arithmetic mean of the corresponding values of F, recorded in 7.3, as the slider locking strength.

Dimensions in millimetres



Key

1 jaw
2 top stop
3 slider

Figure 2 — Slider locking test

8 Test report

The test report shall include at least the following information:

a) reference to this International Standard, i.e. ISO 10748:2010;

b) full description of the sample (slide fastener) tested;

c) date of testing;

d) for each type of failure:

   1) the number of test specimens exhibiting the type of failure, as recorded in 7.5;

   2) the slider locking strength, as recorded in 7.5;

e) any deviation(s) from this test method.

Bibliography

[1] ISO 17709, *Footwear — Sampling location, preparation and duration of conditioning of samples and test pieces*

[2] ISO 18454, *Footwear — Standard atmospheres for conditioning and testing of footwear and components for footwear*