
**Footwear — Test method for slide
fasteners — Burst strength**

*Chaussures — Méthode d'essai pour les fermetures éclair —
Résistance à l'éclatement*

STANDARDSISO.COM : Click to view the full PDF of ISO 10717:2010



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

STANDARDSISO.COM : Click to view the full PDF of ISO 10717:2010



COPYRIGHT PROTECTED DOCUMENT

© ISO 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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 10717 was prepared by Technical Committee CEN/TC 309 *Footwear*, of the European Committee for Standardization (CEN) in collaboration with ISO Technical Committee ISO/TC 216 *Footwear*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

STANDARDSISO.COM : Click to view the full PDF of ISO 10717:2010

Footwear — Test method for slide fasteners — Burst strength

1 Scope

This International Standard specifies a test method intended to assess the burst strength of a closed slide fastener for footwear. The method is applicable to all types of slide fastener.

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 17693, *Footwear — Test methods for uppers — Resistance to damage on lasting*

ISO 19952, *Footwear — Vocabulary*

3 Terms and definitions

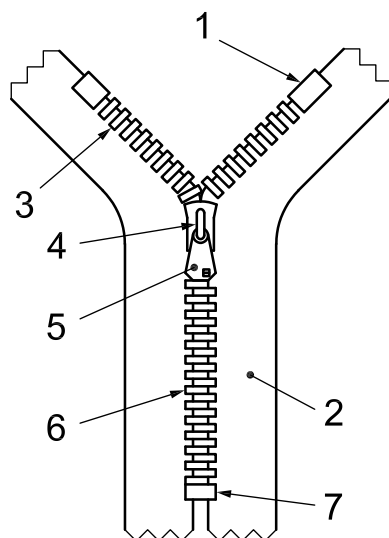
For the purposes of this document, the terms and definitions given in ISO 19952 and the following apply.

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 a 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.



Key

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

Figure 1 — Slider fastener

3.2

tape

fabric panels to support 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 component of the slide fastener which interlocks with an opposing element

3.6

end stop

top stop

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

4 Principle

A portion of a closed slide fastener is clamped, leaving an exposed circular area which is gradually stretched by forcing a small metal ball attached to a plunger through the centre. The force on the plunger at failure of the fastener is recorded.

5 Apparatus and materials

5.1 A test machine with the following components.

5.1.1 A means of clamping the test fastener, leaving a central circular free area of diameter (25 ± 1) mm. The design of the clamping system should ensure that the fastener does not slip during the test. An example of such a mechanism is illustrated in Figure 2.

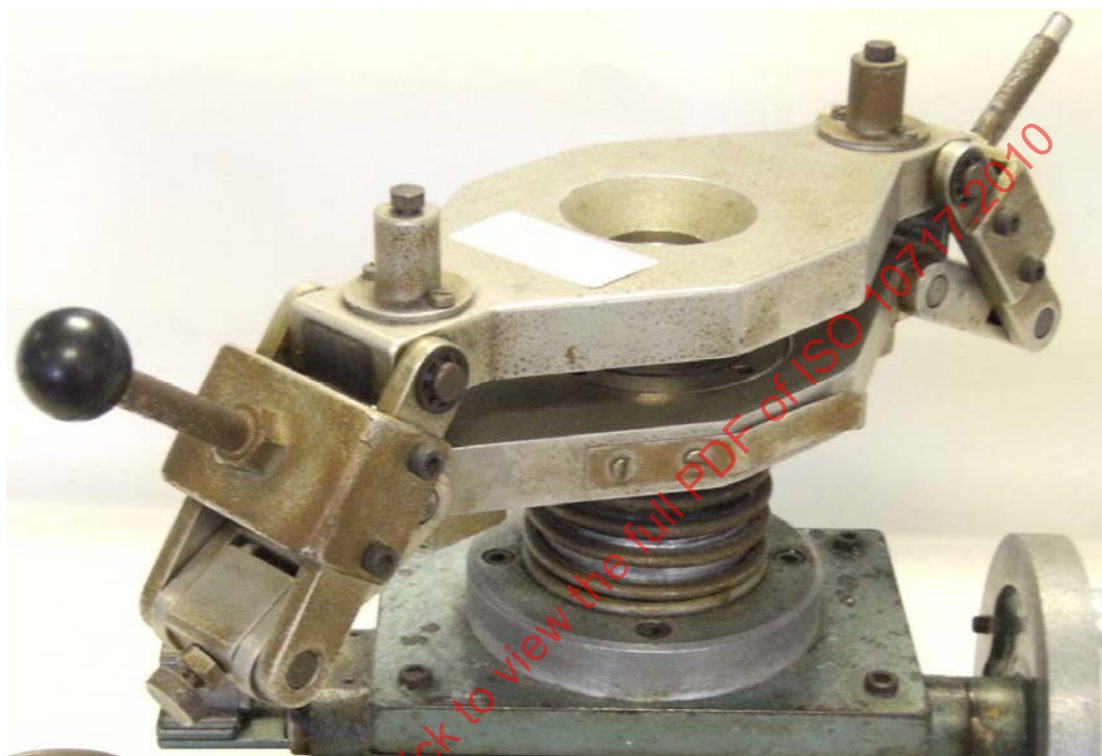


Figure 2 — Example of a clamping device

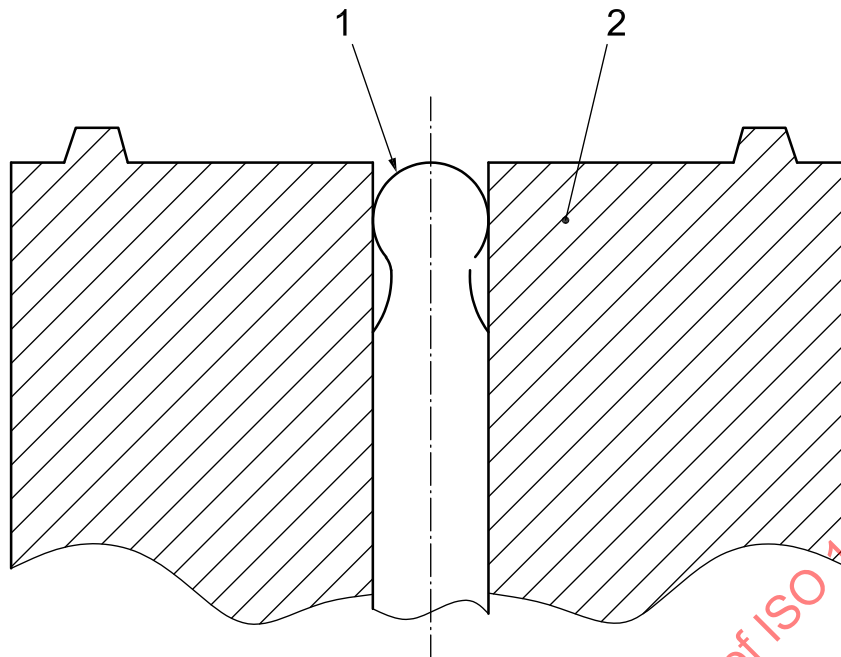
5.1.2 A central plunger with a spherical ball of diameter $(6,25 \pm 0,05)$ mm on the end and mounted in the centre of the circular free area of the clamp (5.1.1).

5.1.3 A means of moving the plunger (5.1.2) relative to the clamp (5.1.1) at a speed of $(0,20 \pm 0,05)$ mm/s.

5.1.4 A device for monitoring the force on the plunger within the range 0 to 800 N to an accuracy of 10 N.

A suitable device is described in ISO 17693.

See Figure 3.



Key

- 1 rod with ball end
- 2 lastometer head

Figure 3 — Diagram of suitable apparatus

6 Test specimens

6.1 Three test positions are required. If three slide fasteners are available then each fastener should be tested at the centre of its length. If only one slide fastener is available then it should be tested at three points, one close to each end and one at the centre of its length. It is recommended, that where multiple tests are carried out on the same length, there should be a minimum of 15 cm between the testing points or a minimum length of 15 cm for single tests.

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

7 Procedure

7.1 Close the test fasteners.

7.2 Ensure that the test machine is reset, with the central plunger (5.1.2) retracted to zero or minimum distension. If it has a maximum force indicator, turn it to zero.

7.3 Tightly clamp one of the test fasteners into the test machine (5.1) so that the centre of the chain is aligned with the centre of the ball (see 5.1.2). For heavy-duty slide fasteners, a very high clamping force will be necessary, whereas with light-duty fasteners, care is required to avoid excessively damaging the fastener.

7.4 Start the test by forcing the central plunger (5.1.2) into the test fastener at a rate of 0,2 mm/s. For the lastometer described in ISO 17693, this involves turning the handwheel clockwise at a steady rate of about one revolution per second.

7.5 Continually observe the upper surface of the test fastener, at the centre where the maximum distortion is taking place. Record the force, in newtons, to the nearest 10 N, on the spherical ball when the fastener fails, this will usually be the maximum force recorded during the test.

7.6 Examine the fastener and record the type of failure such as: chain or teeth separated, chain or teeth pulled off the stringer, chain or teeth broken.

7.7 Retract the plunger and remove the test specimen.

7.8 Repeat the procedure in 7.2 to 7.7 for the other two test positions.

7.9 Calculate the arithmetic mean of the three maximum forces.

8 Test report

The test report shall include at least the following information:

- a) a reference to this International Standard, i.e. ISO 10717:2010;
- b) a full description of the samples tested;
- c) the date of testing;
- d) the arithmetic mean of the maximum forces, as calculated in 7.9;
- e) the types of failure and the number of tests associated with each type;
- f) any deviations from this test method.