

INTERNATIONAL
STANDARD

ISO
10764

First edition
2016-05-01

**Footwear — Test methods for slide
fasteners — Lateral strength**

*Chaussures — Méthodes d'essai des fermetures à glissières —
Résistance latérale*

STANDARDSISO.COM : Click to view the full PDF of ISO 10764:2016



Reference number
ISO 10764:2016(E)

© ISO 2016

STANDARDSISO.COM : Click to view the full PDF of ISO 10764:2016



COPYRIGHT PROTECTED DOCUMENT

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Apparatus and materials	3
5 Preparation of test specimens	3
6 Procedure	3
7 Test report	4

STANDARDSISO.COM : Click to view the full PDF of ISO 10764:2016

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

ISO 10764 was prepared by the European Committee Standardization (CEN) Technical Committee CEN/TC 309, *Footwear*, in collaboration with ISO Technical Committee TC 216, *Footwear*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Footwear — Test methods for slide fasteners — Lateral strength

1 Scope

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

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 18454, *Footwear — Standard atmospheres for conditioning and testing of footwear and components of footwear*

ISO 19952, *Footwear — Vocabulary*

3 Terms and definitions

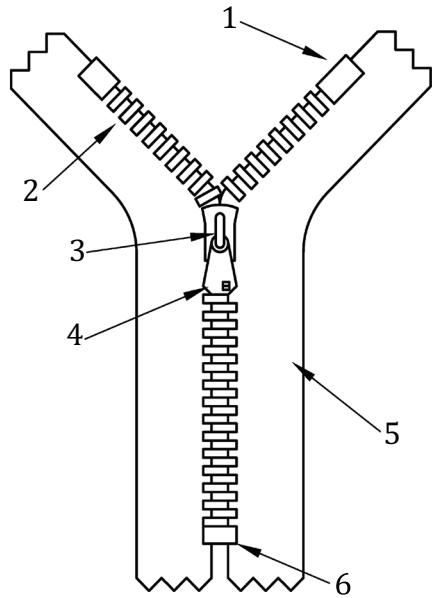
For the purposes of this document, the terms and definitions given in ISO 19952 and the following apply.

3.1

slide fastener

means of securing two flexible materials consisting of interlockable teeth each attached to one of the opposing edges of two tapes and movable slider that spans the interlocking teeth which when moved in one direction causes the teeth (3.5) of one tape (3.2) to interlock with the teeth of the other tape

Note 1 to entry: When the slider (3.3) is moved in the opposite direction, it causes the teeth to disengage (see [Figure 1](#)).

**Key**

1 top stop	4 puller
2 teeth	5 tape
3 slider	6 bottom stop

Figure 1 — Slide fastener**3.2****tape**

fabric panels to support other *teeth* (3.5) of the *slide fastener* (3.1)

3.3**slider**

means of drawing the two interlocking teeth together or apart as it traverses the length of the *teeth* (3.5)

3.4**puller**

piece of plastic or metal attached to the *slider* (3.3) as a means of manual grip for the user to operate

3.5**teeth**

individual component of the *slide fastener* (3.1) or continuous plastic spiral which interlocks with an opposing element

3.6**end stop****top stop**

terminal components of the *teeth* (3.5) to prevent the *slider* (3.3) from disengaging from the teeth and *tape* (3.2)

3.7**stringer**

textile tape with an attached row of *teeth* (3.5) designed to interact with a row attached to another *tape* (3.2)

4 Apparatus and materials

4.1 A tensile testing machine with the following.

4.1.1 A jaw separation rate of (100 ± 10) millimetres per minute (mm/min).

4.1.2 A means of recording the maximum force during the test to an accuracy of 2 % as specified by Class 2 in ISO 7500-1, up to a value of 2,0 kN.

4.1.3 Two clamps which

- have square ends of width $(25,5 \pm 0,5)$ mm,
- have clamping surfaces; either corrugated, or flat and coated with abrasive paper, and
- do not apply localised pressure at the clamping edge.

4.2 A locating jig to hold the two clamps (4.1.3) with their clamping edges parallel and their centres aligned may be helpful. A metal block of minimum dimensions 200 mm \times 30 mm \times 10 mm with a shallow trough of minimum length 200 mm and width less than 26 mm, but large enough to enable the clamps (4.1.3) to move freely is suitable.

4.3 For heavy duty slide fasteners, solvent based polychloroprene adhesive to aid gripping of the stringer by the clamp (4.1.3).

5 Preparation of test specimens

5.1 A minimum of three test positions are required, each with a length of at least 50 mm of free closed fastener on either side.

5.2 If three slide fasteners are available, then each fastener should be tested at the centre of its length.

5.3 If only one slide fastener is available, then it should be tested at three positions, one at least 50 mm from each end and one at the centre of its length. The length of free closed fastener on either side of the clamped area during the test should be at least 50 mm, therefore, the overall length of the teeth should be at least 275 mm. Each test may separate a length of the teeth so for teeths of total length close to 275 mm, it will not be possible to identify the adjacent test position exactly until after each individual test.

5.4 At each test point, mark a line of length (25 ± 2) mm on each stringer which is

- parallel to, and $(3,0 \pm 0,5)$ mm from, the edge of the teeth, and
- at least 50 mm from either end of the fastener.

5.5 For heavy duty slide fasteners, apply a coat of the adhesive (6.3) to both surfaces of each stringer over an area, approximately 15 mm on either side of each test point, and allow to dry for at least 2 h.

6 Procedure

6.1 Close the test fastener(s).

6.2 Condition the test specimen according to ISO 18454 for 24 h before the test and carry out the test in this environment.

6.3 At one of the test positions, tightly fit a clamp (4.1.3) to each stringer so that the clamping edge is centrally aligned with the corresponding line (5.4). If a locating jig (4.2) is available, then it should be used. For heavy duty slide fasteners, a very high clamping force is necessary, whereas, with light duty fasteners, care is required to avoid excessively damaging the stringer.

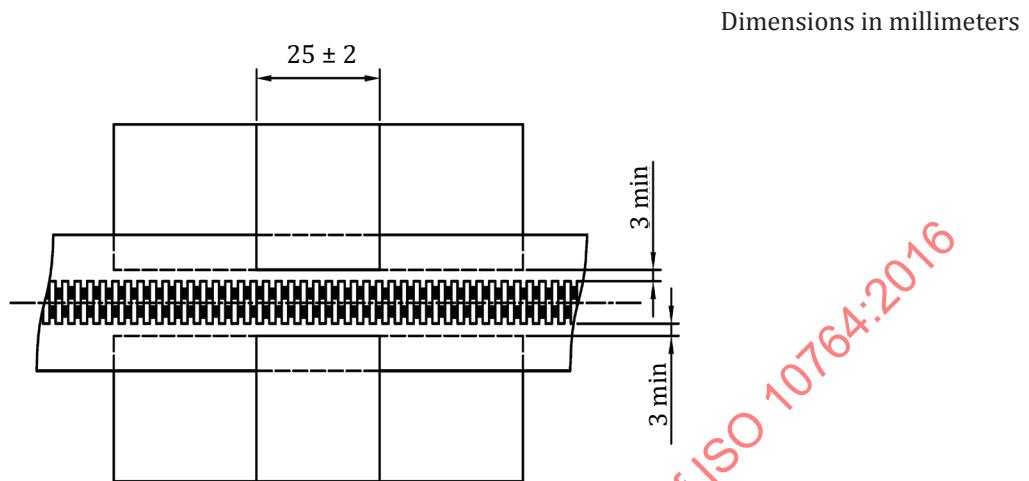


Figure 2 — Clamping arrangement for test specimen

6.4 Insert the clamps (6.3) into the tensile testing machine so that the test point is aligned with, and the teeth of the fastener is, at 90° to the axis of the machine.

6.5 Operate the tensile testing machine with a jaw separation rate of (100 ± 10) millimetres per minute (mm/min) until the fastener fails.

6.6 Record the maximum force obtained in Newtons to the nearest Newton and the type of failure such as the following:

- separation of locked teeth from each other;
- teeth pulled off stringer;
- stringer failure;
- stringer tore at clamping edge;
- clamps slipped off stringer.

6.7 If the stringer tore at the clamping edge, or the clamp slipped off the stringer, then repeat the test at a fresh point using either a higher or lower clamping force as necessary. If it is not possible to select a suitable clamping force to cause the teeth to fail, then record the maximum force from the test conditions which gave the highest result.

6.8 Repeat the procedure in 6.3 to 6.7 at the other test positions.

6.9 For each type of failure that occurred, calculate the arithmetic mean of the maximum forces (6.6).

7 Test report

The test report shall include the following information:

- a) a reference to this International Standard, i.e. ISO 10764;