Slide fasteners (zips) - Specification



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

	This Estonian standard EVS-EN 16732:2015 consists of the English text of the European standard EN 16732:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 16.12.2015.	Date of Availability of the European standard is 16.12.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile <u>standardiosakond@evs.ee</u>.

ICS 61.040

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega: Aru 10, 10317 Tallinn, Eesti; koduleht <u>www.evs.ee</u>; telefon 605 5050; e-post <u>info@evs.ee</u>

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Aru 10, 10317 Tallinn, Estonia; homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD

NORME EUROPÉENNE

EN 16732

EUROPÄISCHE NORM

December 2015

ICS 61.040

English Version

Slide fasteners (zips) - Specification

Fermetures à glissière - Spécifications

Reißverschlüsse - Spezifikation

This European Standard was approved by CEN on 7 November 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Cont	ents	Page
Furon	ean foreword	-
_	luction	
1	Scope	
2	Normative references	
3	Terms and definitions	
4	Requirements	
_	Conditioning and testing	
5 5.1	Conditioning and testing	
5.2	Slide fastener length measurement	
5.3	Strength of puller attachment	12
5.4	Strength of closed-end	
5.5	Strength of top stop	
5.6 5.7	Strength of open-end slide fastener boxResistance to reciprocation	
5. <i>7</i> 5.8	Lateral strength of slide fastener	
5.9	Lateral strength of open-end attachment	
5.10	Strength of slider locking device	
5.11	Open-end slide fastener single stringer slider retention	
5.12	Torque strength	
6	Washing and dry cleaning test	13
7	Test report	1 4
8	Marking	1 4
	A (informative) Guidance on factors to be taken into consideration when specifying slide fasteners	18
Annex	B (normative) Test for strength of puller attachment	19
B.1	Principle	
B.2	Apparatus	19
B.2.1	Constant rate of extension tensile testing machine	19
B.2.2	Fixture to retain the slider body rigidly	19
B.3	Procedure	19
Annex	C (normative) Test for strength of closed-end	21
C.1	Principle	21
C.2	Apparatus	
C.2.1	Constant rate of extension tensile testing machine	21
C.2.2	Clamping device	21
C.3	Procedure	22
Annex	D (normative) Test for strength of top stop	2 3

D.1	Principle	23
D.2	Apparatus	23
D.3	Procedure	24
Annex	E (normative) Test for strength of open-end slide fastener box	25
E.1	Principle	25
E.2	Apparatus	25
E.2.1	Constant rate of extension tensile testing machine	25
E.2.2	Slotted plate	25
E.3	Procedure	26
Annex	F (normative) Test for resistance to reciprocation	27
F.1	Principle	27
F.2	Apparatus	27
F.3	Procedure	28
F.3.1	Preparation of the specimens	28
F.3.2	Method	29
Annex	G (normative) Test for lateral strength of slide fastener	31
G.1	Principle	31
G.2	Apparatus	31
G.2.1	Constant rate of extension tensile testing machine	31
G.2.2	Jaws	31
G.3	Procedure	31
Annex	H (normative) Test for lateral strength of open-end attachment	32
H.1	Principle	
H.2	Apparatus	32
H.2.1	Constant rate of extension tensile testing machine	32
H.2.2	Jaws	32
Н.3	Procedure	
Annex	I (normative) Test for strength of slider locking device	33
I.1	Principle	33
I.2	Apparatus	
I.2.1	Constant rate of extension tensile testing machine	33
I.2.2	Jaws	33
I.3	Procedure	
Annex	z J (normative) Test for open-end slide fastener single stringer slider retention	34
J.1	Principle	34
J.2	Apparatus	34

J.2.1	Constant rate of tension tensile testing machine	34
J.2.2	Jaws	34
J.3	Procedure	34
Annex	K (normative) Torque test	35
K.1	Principle	35
K.2	Apparatus	35
K.3	Procedure	
K.3.1	Preparation of the specimens	
K.3.2	Method	
K.4	Test to failure method for quality control	
	L (informative) Sampling procedures for bulk quantities of slide fasteners	
L.1	General	
L.2	Guidance on interpretation of results for acceptance purposes	
L.3	Guide to changing from normal to tightened test procedures	38
Annex	M (informative) End-uses and recommended performance codes for labelling purposes	39
Biblio		
	graphy	5
4		

European foreword

This document (EN 16732:2015) has been prepared by Technical Committee CEN/TC 248 "Textiles and textile products", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Je. A Dietako a Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The different types of slide fasteners are defined by the material of the elements (teeth), which form their slide fastener chains. They can be of metallic, moulded plastic or monofilament plastic construction.

Metallic elements can be produced from flat or profiled wire and are usually clamped around the edge of a beaded tape. An alternative approach is to cast metallic elements directly onto such a tape. Similarly, plastic elements can be moulded onto a beaded tape. Such cast or moulded elements might have projections on which the slider operates to reduce abrasion of the tape.

Plastic coil slide fasteners have polyamide or polyester monofilaments that are wound into coils to form engaging elements. The coils can be attached to the face of flat tapes by sewing. Alternatively, the coils can be woven or knitted into the tapes as they are constructed. Monofilament plastic elements can also be of the meander type, which straddle the tape edge. Ca, white the state of the stat

Typical slide fastener chain types are shown in Figure 1.

1 Scope

This European Standard specifies performance levels and test methods for the following characteristics of slide fasteners made from interlocking components mounted on tapes: strengths of puller attachment, closed-end, top stop, open-end slide fastener box, reciprocating mechanism, closed slide fastener when extended laterally, open-end attachment when extended laterally, slider locking device, and open-end slide fastener single stringer slider retention and slider resistance to torque.

NOTE The tests specified in Annexes B to K have been specifically devised to permit their direct application to finished slide fasteners with a view to giving the user reasonable assurance that a slide fastener conforming to the requirements of this standard can satisfactorily fulfil its intended purpose. Annex L gives information about sampling procedures for bulk quantities of slide fasteners.

In addition, performance levels are also specified for colour fastness to washing, dry cleaning and water, and for dimensional stability to washing and dry cleaning.

This European Standard is applicable to slide fasteners for general use and is not applicable to slide fasteners for specialist purposes (for example: pressure sealed slide fasteners for diving suits).

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.

EN 20105-A02, Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour (ISO 105-A02)

EN 20105-A03, Textiles - Tests for colour fastness - Part A03: Grey scale for assessing staining (ISO 105-A03)

EN ISO 105-C06, Textiles - Tests for colour fastness - Part C06: Colour fastness to domestic and commercial laundering (ISO 105-C06)

EN ISO 105-D01, Textiles - Tests for colour fastness - Part D01: Colour fastness to dry cleaning using perchloroethylene solvent (ISO 105-D01)

EN ISO 105-E01, Textiles - Tests for colour fastness - Part E01: Colour fastness to water (ISO 105-E01)

EN ISO 139, Textiles - Standard atmospheres for conditioning and testing (ISO 139)

EN ISO 3175-2, Textiles - Professional care, drycleaning and wetcleaning of fabrics and garments - Part 2: Procedure for testing performance when cleaning and finishing using tetrachloroethene (ISO 3175-2)

EN ISO 5077, Textiles - Determination of dimensional change in washing and drying (ISO 5077)

EN ISO 6330, Textiles - Domestic washing and drying procedures for textile testing (ISO 6330)