



**SLOVENSKI STANDARD**  
**oSIST prEN 16732:2024**  
**01-april-2024**

---

**Patentne zadrge - Specifikacija**

Slide fasteners (zips) - Specification

Reißverschlüsse - Spezifikation

Fermetures à glissière - Spécifications

**Ta slovenski standard je istoveten z: prEN 16732**

---

**ICS:**

61.040 Pokrivala. Dodatki k oblačilom. Spenjanje oblačil  
Headgear. Clothing accessories. Fastening of clothing

**oSIST prEN 16732:2024**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 16732**

January 2024

ICS

Will supersede EN 16732:2015

English Version

## Slide fasteners (zips) - Specification

Fermetures à glissière - Spécifications

Reißverschlüsse - Spezifikation

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 248.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

**Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

[oSIST prEN 16732:2024](https://standards.iteh.ai/catalog/standards/sist/97083823-72d8-4c7c-8cab-7df174130f98/osist-pren-16732-2024)

<https://standards.iteh.ai/catalog/standards/sist/97083823-72d8-4c7c-8cab-7df174130f98/osist-pren-16732-2024>



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

<b>Contents</b>	<b>Page</b>
European foreword .....	5
Introduction .....	6
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions.....	7
4 Requirements.....	10
5 Conditioning and testing .....	13
5.1 Conditioning of test samples.....	13
5.2 Slide fasteners measurements.....	13
5.3 Strength of puller attachment.....	14
5.4 Strength of closed-end .....	14
5.5 Strength of top stop.....	14
5.6 Strength of open-end slide fastener box.....	14
5.7 Resistance to reciprocation.....	14
5.8 Lateral strength of slide fastener.....	15
5.9 Lateral strength of open-end attachment.....	15
5.10 Strength of slider locking device.....	15
5.11 Open-end slide fastener single stringer slider retention.....	15
5.12 Torque strength.....	15
6 Washing and dry cleaning test.....	15
7 Test report.....	15
8 Marking .....	16
Annex A (informative) Guidance on factors to be taken into consideration when specifying slide fasteners .....	20
A.1 General.....	20
Annex B (normative) Test for strength of puller attachment.....	21
B.1 Principle.....	21
B.2 Apparatus .....	21
B.3 Procedure .....	21
Annex C (normative) Test for strength of closed-end.....	22
C.1 Principle.....	22
C.2 Apparatus .....	22
C.3 Procedure .....	23
Annex D (normative) Test for strength of top stop.....	24
D.1 Principle.....	24
D.2 Apparatus .....	24

D.3	Procedure.....	26
<b>Annex E (normative) Test for strength of open-end slide fastener box.....</b>		<b>27</b>
E.1	Principle.....	27
E.2	Apparatus.....	27
E.3	Procedure.....	28
<b>Annex F (normative) Test for resistance to reciprocation .....</b>		<b>29</b>
F.1	Principle.....	29
F.2	Apparatus.....	29
F.3	Procedure.....	30
<b>Annex G (normative) Test for lateral strength of slide fastener.....</b>		<b>32</b>
G.1	Principle.....	32
G.2	Apparatus.....	32
G.3	Procedure.....	32
<b>Annex H (normative) Test for lateral strength of open-end attachment .....</b>		<b>33</b>
H.1	Principle.....	33
H.2	Apparatus.....	33
H.3	Procedure.....	33
<b>Annex I (normative) Test for strength of slider locking device .....</b>		<b>34</b>
I.1	Principle.....	34
I.2	Apparatus.....	34
I.3	Procedure.....	34
<b>Annex J (normative) Test for open-end slide fastener single stringer slider retention .....</b>		<b>35</b>
J.1	Principle.....	35
J.2	Apparatus.....	35
J.3	Procedure.....	35
<b>Annex K (normative) Torque test.....</b>		<b>36</b>
K.1	Principle.....	36
K.2	Apparatus.....	36
K.3	Procedure.....	37
K.4	Test to failure method for quality control.....	37
<b>Annex L (informative) Sampling procedures for bulk quantities of slide fasteners .....</b>		<b>39</b>
L.1	General .....	39
L.2	Guidance on interpretation of results for acceptance purposes.....	39
L.3	Guide to changing from normal to tightened test procedures.....	39
<b>Annex M (informative) End-uses and performance codes for labelling purposes.....</b>		<b>40</b>
<b>Annex N (Informative) Test for resistance to reciprocation for slide fasteners with length from 75 mm to 200 mm .....</b>		<b>41</b>

**prEN 16732:2024 (E)**

<b>N.1</b>	<b>Principle</b> .....	<b>41</b>
<b>N.2</b>	<b>Apparatus</b> .....	<b>41</b>
<b>N.3</b>	<b>Preparation of test specimens</b> .....	<b>42</b>
<b>N.4</b>	<b>Procedure</b> .....	<b>43</b>
	<b>Bibliography</b> .....	<b>45</b>

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[oSIST prEN 16732:2024](https://standards.iteh.ai/catalog/standards/sist/97083823-72d8-4c7c-8cab-7df174130f98/osist-pren-16732-2024)

<https://standards.iteh.ai/catalog/standards/sist/97083823-72d8-4c7c-8cab-7df174130f98/osist-pren-16732-2024>

## European foreword

This document (prEN 16732:2024) has been prepared by Technical Committee CEN/TC 248 “Textiles and textile products”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 16732:2015.

prEN 16732 includes the following significant technical changes with respect to EN 16732:2015:

- New definitions (3.21, 3.22 and 3.23))and relevant requirements have been added;
- Table 1, Annex C, performance code B and C have been updated;
- Table 2 title has been updated;
- 5.2.2 has been added;
- Test report (7) has been increased;
- Annex M has been updated;
- New Annex N has been added.

iTech Standards  
(<https://standards.iteh.ai>)  
Document Preview

[oSIST prEN 16732:2024](https://standards.iteh.ai/catalog/standards/sist/97083823-72d8-4c7c-8cab-7df174130f98/osist-pren-16732-2024)

<https://standards.iteh.ai/catalog/standards/sist/97083823-72d8-4c7c-8cab-7df174130f98/osist-pren-16732-2024>

**prEN 16732:2024 (E)****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.

Typical slide fastener chain types are shown in Figure 3.

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[oSIST prEN 16732:2024](https://standards.iteh.ai/catalog/standards/sist/97083823-72d8-4c7c-8cab-7df174130f98/osist-pren-16732-2024)

<https://standards.iteh.ai/catalog/standards/sist/97083823-72d8-4c7c-8cab-7df174130f98/osist-pren-16732-2024>



## 1 Scope

This document 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 document is applicable to all different types of 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 are referred to in the text in such a way that some or all of their content constitutes requirements 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.

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

EN ISO 105-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)

CEN/TR 16792:2014, *Safety of children's clothing — Recommendations for the design and manufacture of children's clothing — Mechanical safety*

## 3 Terms and definitions

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

**prEN 16732:2024 (E)**

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

**3.1****slide fastener (zip)**

fastening device consisting of two flexible, interlocking stringers, with or without end stops, and one or more sliders so arranged that by moving the slider along the stringers in one direction an opening is formed, and by moving it in the other direction the opening is closed

**3.2****stringer**

tape with an attached row of elements designed to interlock with a row similarly attached to another tape

**3.3****tape**

narrow fabric to which elements are fitted

**3.4****element (tooth)**

engaging component fixed to the edge of the tape (see Figure 4)

**3.5****slider**

moving component consisting essentially of a slider body and, normally, a puller which opens or closes the slide fastener by separating or engaging the single elements of the stringer

Note 1 to entry: The slider might incorporate a locking device. Alternative slider types are available with a flip-over puller or double pullers, to facilitate operation from both front and back sides.

**3.6****slider body**

component that joins or separates the elements when sliding along the two stringers of slide fastener

**3.7****puller**

fitting attached to the slider body to facilitate manipulation

**3.8****locking device**

device incorporated in the slider unit restricting its free movement along the slide fastener length in an opening direction

Note 1 to entry: The locking device might operate either automatically on release of the puller or by manual pressure on the puller.

**3.9****slide fastener length**

distance from the top of the slider to the bottom of the bottom stop, or box in the case of an open-end slide fastener, measured with the slider in the top position and with the puller in the downward position (see Figure 4)

Note 1 to entry: Some suppliers measure the effective length of slide fasteners from the top of the slider to the bottom edge of the tape, especially in the case of two-way open-end slide fasteners.

### 3.10

#### **bottom stop**

stop at the bottom end of the chain that checks the opening movement of the slider

Note 1 to entry: See Figure 4a), (Key n. 5).

### 3.11

#### **top stop**

stop(s) at the top end of the chain that check(s) the closing movement of the slider

### 3.12

#### **chain**

continuous closure formed by two interlocking compatible stringers

Note 1 to entry: See Figure 4a), (Key n.8).

### 3.13

#### **chain width**

width across the interlocked elements or shoulder on which the slider runs, whichever is the greater

Note 1 to entry: See Figure 4b), (Key n.6).

### 3.14

#### **bottom end**

end which is adjacent to the slider when the device is fully open

### 3.15

#### **top end**

end which is adjacent to the slider when the device is fully closed

### 3.16

#### **open-end slide fastener**

slide fastener having a special fitment at the bottom end of each stringer in place of the bottom stop, so as to permit the two stringers to be completely separated and re-assembled at will when the slider is in the fully open position

Note 1 to entry: The special fitment normally consists of a pin permanently fixed to the bottom end of one stringer, which fits into a box permanently fixed to the bottom end of the other stringer.

Note 2 to entry: See Figure 5c) and 6a).

**prEN 16732:2024 (E)****3.17****closed-end slide fastener**

slide fastener which does not permit the complete separation of the two stringers

Note 1 to entry: Normally the top end of the slide fastener separates as the slider is lowered, although there is one type whose top ends are permanently joined together by means of a bridge stop [see Figure 5a) and Figure 5b), 6b), 6c), 6d)].

**3.18****concealed slide fastener**

slide fastener with the tapes folded so that on closure neither the slider body nor the slide fastener are visible from the outside of the article

Note 1 to entry: See Figure 3g).

**3.19****two-way slide fastener**

slide fastener fitted with two sliders that operate with equal facility in either direction

Note 1 to entry: This type is available in a variety of forms, as illustrated in Figure 6.

**3.20****batch**

quantity of slide fasteners having a specific design, performance code and chain size

**3.21****baby**

child from birth up to age 12 months, that is all children of height up to and including 80 cm

[SOURCE: CEN/TR 16792:2014]

**3.22****infant**

child from age 12 months to and including 36 months, that is all children over 80 cm and up to and including 98 cm in height

[SOURCE: CEN/TR 16792:2014]

**3.23****child and young person**

person aged over 36 months and up to 14 years (that is up to and including 13 years and 11 months), that is all children over 98 cm in height and for girls up to 176 cm and for boys 182 cm in height

[SOURCE: CEN/TR 16792:2014]

**4 Requirements**

When subjected to the tests specified in Clause 5 (as applicable to the features of the slide fastener design to be tested), other than the slide fastener length measurements (see 5.2), samples of new slide fasteners shall conform to Table 1 and to Table 2 if applicable (children's items, 3.21, 3.22 and 3.23).

For children's items (3.21, 3.22 and 3.23), no sharp point and no sharp edges shall be noted on the original state and after testing according to Table 1, 2 and 3 (as applicable). Sharp point and sharp edges shall be verified by visual and tactile inspection [5].