



NSAI
Standards

Irish Standard
I.S. EN 16434:2014

Internal blinds - Protection from strangulation hazards - Requirements and test methods for safety devices

I.S. EN 16434:2014

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

I.S. 386:2012 - Withdrawal date = 2014-08-31

I.S. 387:2012 - Withdrawal date = 2014-08-31

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 16434:2014

Published:

2014-02-19

This document was published under the authority of the NSAI and comes into effect on:

2014-03-01

ICS number:

91.060.50

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

EN 16434

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2014

ICS 91.060.50

English Version

Internal blinds - Protection from strangulation hazards - Requirements and test methods for safety devices

Stores intérieurs - Protection contre les risques de
strangulation - Exigences et méthodes d'essai pour les
dispositifs de sécurité

Innere Abschlüsse - Schutz vor Strangulationsgefahren -
Anforderungen und Prüfverfahren für
Sicherheitseinrichtungen

This European Standard was approved by CEN on 26 October 2013.

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

EN 16434:2014 (E)

Contents	Page
Foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 General	4
5 Artificial ageing	5
5.1 Exposure to UV.....	5
5.2 Mechanical endurance.....	5
5.3 Effect of temperature	5
6 Tensioning device	5
6.1 General	5
6.2 Test methods	7
6.3 Requirements.....	8
7 Breakaway device	8
7.1 General	8
7.2 Test method	8
7.3 Requirements.....	11
8 Accumulation device	11
8.1 General	11
8.2 Test method	11
8.3 Requirements.....	11
9 Non tangling device	11
9.1 General	11
9.2 Test method	12
9.3 Requirements.....	12
10 Inner cord stop	12
10.1 General	12
10.2 Test method	12
10.3 Requirements.....	13
11 Additional requirements	13
11.1 General	13
11.2 Release of small components.....	13
11.3 Impact resistance.....	14
12 Information and instruction for installation, use and maintenance	14
12.1 General	14
12.2 Information	14
12.3 Instructions (for retrofitting purpose only)	15
12.4 Marking	16
13 Factory Production Control (FPC)	16
Annex A (informative) Tests to be carried out on safety devices	17
Bibliography	18

Foreword

This document (EN 16434:2014) has been prepared by Technical Committee CEN/TC 33 "Doors, windows, shutters, building hardware and curtain walling", the secretariat of which is held by AFNOR.

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 August 2014, and conflicting national standards shall be withdrawn at the latest by August 2014.

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.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document is part of a series of standards dealing with blinds and shutters for buildings as defined in EN 12216.

It is the intention that safety devices used in EN 13120 conform to EN 16434 for component testing and EN 16433 for functionality.

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 16434:2014 (E)

1 Scope

This European Standard specifies requirements and test methods for safety devices to be used for protection from strangulation in internal blinds as specified in EN 13120 and insect screens as specified in EN 13561.

These devices might be fitted to internal blinds and insect screens at the time of manufacture or for retrofitting.

This European Standard applies to any design of device including the following:

- tensioning devices;
- breakaway devices;
- accumulation devices;
- non tangling devices;
- inner cord stops.

Although at the time this standard has been published, no product standard exists for draperies, requirements and test methods specified in the present standard may be applied to safety devices used in such products.

For clarification purpose, the term “internal blinds” used in the present standard should mean “internal blinds and insect screens”.

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 12216, *Shutters, external blinds, internal blinds - Terminology, glossary and definitions*

EN 13120, *Internal blinds - Performance requirements including safety*

EN 13561, *External blinds - Performance requirements including safety*

EN 14201, *Blinds and shutters - Resistance to repeated operations (mechanical endurance) - Methods of testing*

EN 71-1, *Safety of toys - Part 1: Mechanical and physical properties*

EN ISO 4892-2, *Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps (ISO 4892-2)*

EN ISO 4892-3, *Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps (ISO 4892-3)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12216, EN 13561 and EN 13120 apply.

4 General

In the testing of safety devices, all related parts associated with the protection from strangulation shall be included.

For example, a breakaway device for an operating ball-chain should cover the ball-chain and the connector if the connector is dependent on the ball diameter. If an inner cord breakaway device is dependent on the type of fabric used in the internal blind then the fabric should also be considered as a part of the safety device.

The number of samples tested shall be representative of the production run. Testing shall be repeated during the production to ensure that performances of devices are maintained. Testing shall be repeated whenever a change occurs in the design, in the composition, in the raw material or in the supplier of the raw material, or in the method of production.

NOTE Guidance on sampling procedures can be found in ISO 2859-1.

Although weights are used in the figures illustrating test methods, any other mechanical, hydraulic or pneumatic equipment may be used. All weights and forces shall be applied with a tolerance of $\pm 1\%$.

Unless specified otherwise, all tests defined in this standard shall be performed at $23\text{ °C} \pm 5\text{ °C}$.

Annex A presents a summary of the tests to be carried out on safety devices.

In the context of this standard, the term “cord(s)” used shall mean “cord(s), chain(s), ball-chain(s), tape(s) and similar”.

5 Artificial ageing

5.1 Exposure to UV

Before testing the safety devices, they shall be subjected to the cycle N°6 according to EN ISO 4892-2 or the cycle N°5 according to EN ISO 4892-3 for 500 h.

5.2 Mechanical endurance

The mechanical endurance test is intended to reproduce the operating cycles of internal blinds.

Before testing the safety devices, they shall be submitted to the following endurance test: a mechanical endurance test shall be carried out either according to EN 14201 on a representative internal blind or using a mechanical test equipment reproducing the load conditions of the representative internal blind. 5 000 cycles of extension/retraction shall be considered. The internal blind considered for the test shall be the maximum size for which the safety device is intended.

5.3 Effect of temperature

Before testing the safety devices, they shall be submitted to the following temperature conditions:

- Low temperature: the safety devices shall be submitted to conditioning at an air temperature of $5\text{ °C} \pm 3\text{ °C}$ for a minimum of 4 h.
- High temperature: the safety devices shall be submitted to conditioning at an air temperature of $60\text{ °C} \pm 3\text{ °C}$ for a minimum of 4 h.

The relevant tests of Clauses 6 to 11 shall then start at $23\text{ °C} \pm 5\text{ °C}$ within 15 min.

6 Tensioning device

6.1 General

This clause applies to safety devices intended to maintain continuous cord(s) forming a loop under tension and secured to a fixed surface (e.g. window frame, wall).

EN 16434:2014 (E)

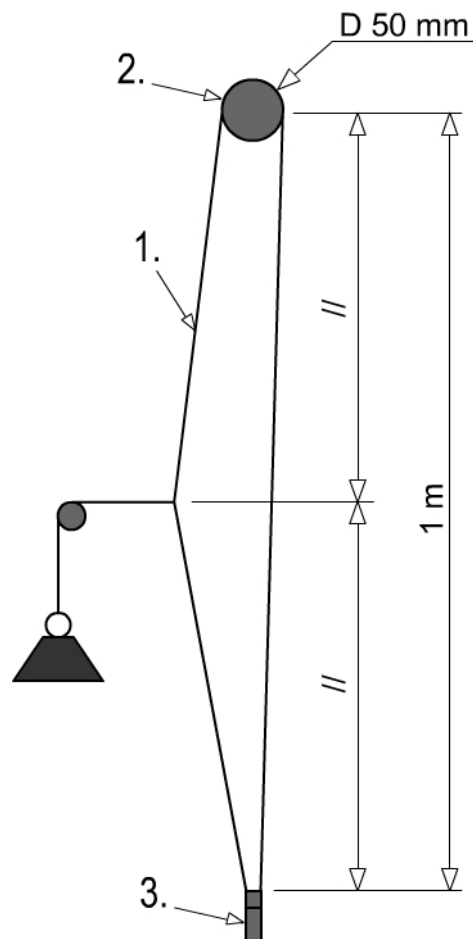
The test shall be carried out on the smallest and the largest diameter of cord(s) for which the tensioning device is designed.

The test shall be carried out on sample(s) as defined in Clause 4:

- in their original condition,
- that have been exposed to UV as specified in 5.1,
- that have been subjected to the mechanical endurance test as specified in 5.2,
- that have been subjected to the effect of temperature as specified in 5.3 (at low temperature and at high temperature).

Where a tensioning device is designed to accept more than one cord, each cord shall be tested separately.

It shall be verified that the fixed retaining device maintaining the cord(s) under tension shall not crack or fracture under the application of a horizontal load applied in the middle of the cord. In addition, it shall be verified that the cord is retained within the device when the device is fixed 10 mm higher than its intended position. The control mechanism shall be made of a pulley of 50 mm diameter. The length of the pull cord shall be 1 m (see Figure 1).

**Key**

- 1 pull cord(s)
- 2 pulley
- 3 retaining device

Figure 1 — Principle of the test of tensioning device

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-