

SLOVENSKI STANDARD
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Izdelki za zaščito otrok - Zapirala za varnost otrok, ki jih potrošniki namestijo na okna in balkonska vrata - Varnostne zahteve in preskusne metode

Child protective products - Consumer fitted child resistant locking devices for windows and balcony doors - Safety requirements and test methods

Kinderschutzprodukte - Von Verbrauchern anzubringende kindergesicherte Verriegelungsvorrichtungen für Fenster und Balkontüren - Sicherheitstechnische Anforderungen und Prüfverfahren

Articles pour la sécurité des enfants - Dispositifs de blocage des fenêtres et des portes de balcon à l'épreuve des enfants et à monter soi-même - Exigences de sécurité et méthodes d'essai

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**Child protective products - Consumer fitted child resistant
locking devices for windows and balcony doors - Safety
requirements and test methods**

Articles pour la sécurité des enfants - Dispositifs de
blocage des fenêtres et des portes de balcon à l'épreuve
des enfants et à monter soi-même - Exigences de sécurité
et méthodes d'essai

Kinderschutzprodukte - Vom Verbraucher anzubringende
kindersichernde Verriegelungsvorrichtungen für Fenster
und Balkontüren - Sicherheitstechnische Anforderungen
und Prüfverfahren

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 398.

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.

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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.

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Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Definitions	4
4 Requirements	5
4.1 Child protective functions	5
4.1.1 Requirements concerning the child panel test.....	5
4.1.2 Recommendations concerning the operation by adults including elderly or disabled people	7
4.2 Mechanical functions and structural integrity	7
4.3 Small parts.....	7
4.4 Small balls	7
4.5 Sharp edges	7
4.6 Product information and user instructions.....	8
4.7 Marking of the product.....	8
5 Test methods.....	9
5.1 General test conditions	9
5.2 Test equipment	9
5.2.1 A test rig for the child panel test for devices for hinged windows.....	9
5.2.2 A test rig for the child panel test for devices for sliding windows.....	9
5.2.3 Small parts cylinder.....	9
5.2.4 Tension test equipment	10
5.2.5 Small ball template	10
5.2.6 Edge test apparatus	11
5.2.7 Equipment for mechanical tests	11
5.3 Extent and order of testing	13
5.4 Test procedures - child protective function.....	14
5.4.1 Test supervision	14
5.4.2 Test samples	14
5.4.3 Preliminary checking and preparation	14
5.4.4 Child test.....	14
5.5 Test procedures – mechanical tests.....	15
5.5.1 Ageing.....	15
5.5.2 Wear of opening restriction test.....	15
5.5.3 Wear of locking mechanism test.....	15
5.5.4 Mechanical protective function test (opening test).....	16
5.5.5 Structural integrity test	16
5.5.6 Percussion test	16
5.5.7 Cutting test.....	16
5.5.8 Small parts test	16
5.5.9 Small balls test.....	17
5.5.10 Sharp edges test.....	17
5.6 Test report	18

Foreword

This document (prEN 16281:2011) has been prepared by Technical Committee CEN/TC 398 “Child protective products”, the secretariat of which is held by ASI.

This document is currently submitted to the CEN Enquiry.

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1 Scope

This standard specifies requirements and test methods for locking devices for restricting the opening of windows and balcony doors fitted by consumers and intended to prevent the passage of young children.

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.

EN 4892-2, Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc sources.

EN ISO 8317, Child resistant packaging - Requirements and test procedures for reclosable packages

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

3 Definitions

3.1

ball

spherical, ovoid, or ellipsoidal object, usually but not always, designed or intended to be thrown, hit, kicked, rolled, dropped or bounced

The term ball also includes any multisided object formed by at least 48 connecting planes into a generally spherical, ovoid or ellipsoidal shape

3.2

burr

roughness, caused by not cleanly severing or finishing the material

3.3

child resistant device

a device which is difficult to be disengaged by children younger than 51 months of age

3.4

cord style locking device

a locking device made of a slender flexible material such as woven or knitted string or plastic textile tape

3.5

locking device

a device that either blocks or limits to a predetermined position the opening of a window or balcony door

3.6

suction cup

means of temporarily attaching a toy to a smooth surface made of soft, flexible, polymeric material, normally having a circular base which adheres to the surface when pressed against it, and in this way creating a vacuum

4 Requirements

4.1 Child protective functions

The release mechanism of the locking device shall be protected against unintentional opening by young children. It shall either:

- a) require the use of a specifically designed removal device or tool (e.g. key) or
- b) comply with the child panel test requirements in 4.1.1

4.1.1 Requirements concerning the child panel test

4.1.1.1 Test panel of 200 children

If the full test panel of 200 children is used when testing in accordance with clause 5.4 the following requirements shall be met:

- a) at least 85 % of the children in the test panel shall be unable to disengage the locking device within the first 5 min without a demonstration, and
- b) at least 80 % of the children in the test panel shall be unable to disengage the locking device within another 5 min after a demonstration has been given to those children unable to disengage the device in the first 5 min.

4.1.1.2 Sequential test – less than 200 children

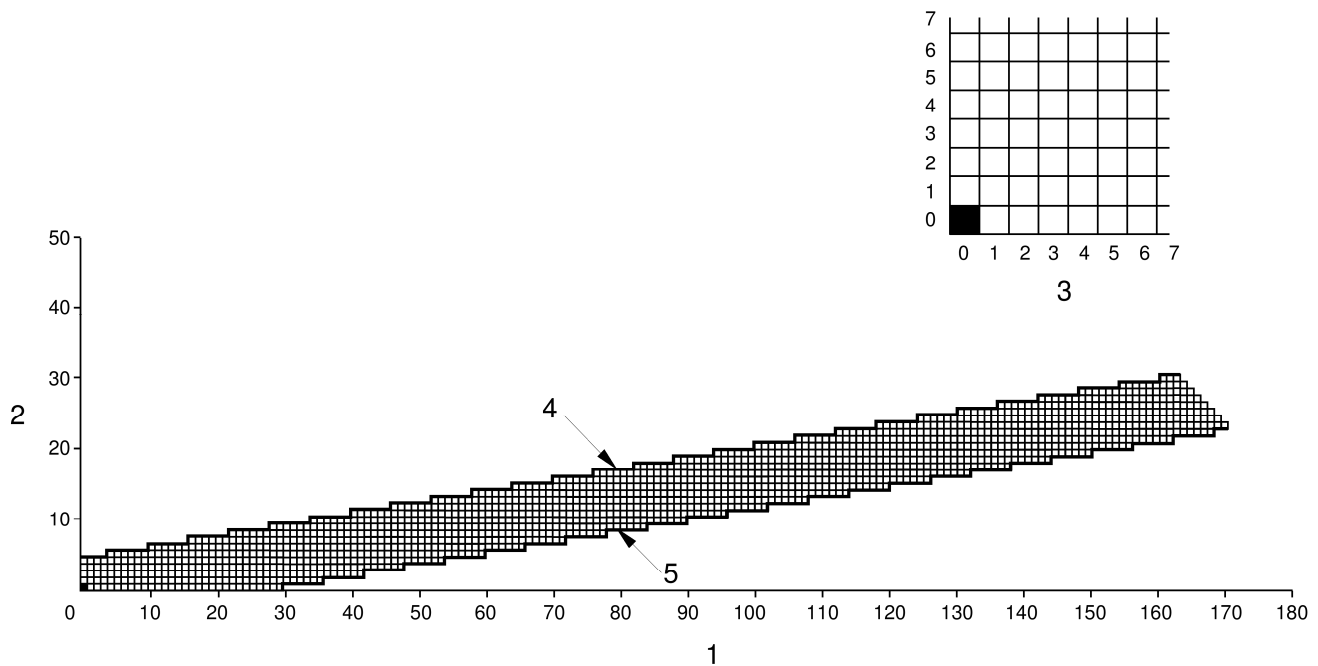
If the full test panel is not used when testing in accordance with clause 5.4 the result is obtained from completing figure 1 and 2 as follows:

- a) The result of the test is a failure if the child succeeds in disengaging the windows locking device.
- b) As each result is obtained, it shall be plotted on the appropriate chart by filling in a square as follows:
 - fill in a square immediately to the right of the previous result on figure 1 if the child failed to disengage the device in the first 5 min, and on figure 2 if the child failed to disengage the device in the second 5 min, i.e. if the result is a success.
 - fill in a square immediately above the previous result on figure 1 and 2 if the child succeeded in disengaging the device in the first 5 min, or only on figure 2 if the child succeeded in disengaging the device in the second 5 min, i.e. if the result is a failure.

NOTE: In the case of the first result to be plotted, the blanked out square is regarded as the “previous result”.

The windows locking device shall be deemed to have:

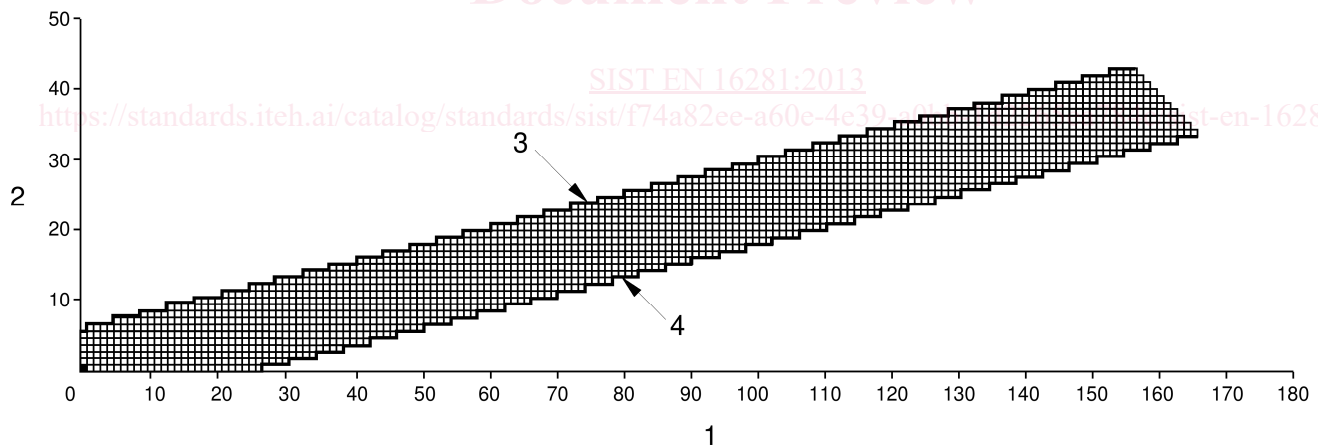
- passed the test as soon as the trail of filled squares passes below limit line 1 on both figure 1 and figure 2;
- failed the test as soon as the trail of filled squares passes above limit line 2 on either figure 1 or figure 2;
- if neither occurs, the results shall be assessed in accordance with the requirements laid down in 5.1.1.1.



- Key**
- | | | | |
|---|----------------------------------|---|--------------|
| 1 | number of devices not disengaged | 4 | limit line 2 |
| 2 | number of devices disengaged | 5 | limit line 1 |
| 3 | enlargement of chart scale | | |

Acceptable quality limit (AQL) = 5 %; limiting quality (LQ): 20 %; $\alpha = \beta = 5$ %, where α is the producer's risk; β is the consumer's risk.

Figure 1 – Chart of a sequential child test procedure (before demonstration) for locking devices



- Key**
- | | | | |
|---|----------------------------------|---|--------------|
| 1 | number of devices not disengaged | 3 | limit line 2 |
| 2 | number of devices disengaged | 4 | limit line 1 |

Acceptable quality limit (AQL) = 5 %; limiting quality (LQ): 20 %; $\alpha = \beta = 5$ %, where α is the producer's risk; β is the consumer's risk.

NOTE: For an enlargement of the chart scale, see figure 1.

Figure 2 – Chart of a sequential child test procedure (after demonstration) for locking devices

4.1.1.3 Full test

If a sequential procedure is not used and the full number of children is tested, the results shall be assessed in accordance with the requirements laid down in 4.1.1.1.

4.1.1.4 Additional information to be recorded

Any other information deemed to be useful in assessing the interpretation of the result, such as the time required for children to disengage the windows locking device and, where appropriate, to engage it properly, the method used by children to disengage it, etc. shall be recorded.

4.1.2 Recommendations concerning the operation by adults including elderly or disabled people

Locking devices should be capable of easy operation by adults including elderly or disabled people.

4.2 Mechanical functions and structural integrity

The locking device should maintain its mechanical properties throughout its expected lifetime taking into account the relevant climate conditions.

The manufacturer shall indicate the type(s) of window or balcony doors (e.g. hinged or sliding) including the materials (e.g. aluminium, PVC, wood) for which the locking device is suitable. In particular, the manufacturer shall ensure that the fixing (e.g. screws) of the locking device is suitable for the recommended material(s).

Suction cups shall not be used for the fixing of the locking device.

When tested according to 5.5.2 – 5.5.7 none of the tested items or any part of the items shall be broken or have any visible damage such as cracks or permanent deformation and the devices shall be fully functional during and after the tests.

When tested in accordance with 5.5.4 test probe A defined in 5.2.7 shall not be able to pass through the opening between sash and frame.

NOTE Ideally the locking device would automatically re-engage when closing the window after having been completely disengaged. However, at this point in time this is not a requirement. It may become a requirement in future.

4.3 Small parts

Any small component, which is detachable or becomes detached when tested according to 5.5.8 shall not fit wholly within the small parts cylinder described in clause 5.2.3.

Specifically designed removal devices or tools (e.g. keys) are exempted from the requirement.

4.4 Small balls

Any small ball, which is detachable or become detached when tested according to 5.5.9 shall not entirely pass through the template described in clause 5.2.5.

4.5 Sharp edges

There shall be no accessible edges that present an unreasonable risk of injury.

- a) Edges of metal or glass are considered as potentially hazardous sharp edges if they are sharp as determined according to clause 5.5.10. If the edges fail the test, they shall be assessed to determine

prEN 16281:2011 (E)

whether they present an unreasonable risk of injury taking into account the foreseeable use of the device. Regardless of the manner in which the edges are finished they shall be tested according to clause 5.5.10.

NOTE: Edges may be folded, rolled or spiralled in order to make them inaccessible or protected by a coating of plastic or other similar material.

- b) In overlap joints, the edge of the sheet metal shall conform to item a) when the sheet metal has a thickness of 0,5 mm or less and the clearance to the underlying surface is greater than 0,7 mm.
- c) Edges of metal including fastenings (e.g. screw heads) and of rigid polymeric material shall be free from burr capable of causing wounds or abrasion.

Flashings on pliable polymeric materials (e.g. polyolefins) are not considered as burr.

4.6 Product information and user instructions

The product information and user instructions shall be presented in the official language(s) of the country of sale.

Information concerning safe mounting and use of the product shall be provided. These instructions shall include at least the following:

- name or trade mark of the manufacturer, importer or organisation responsible for its sale and contact details including postal address, web and email addresses;
- instruction: “Read this instruction carefully before mounting and using the device. The child protective function of the device may be affected if you do not follow the instructions. Keep the instructions for future references”;
- information on which types of windows and window materials the product is intended for including simple diagram showing eg inward / outward hinged window, vertical / horizontal slider, etc;
- precise and understandable instructions on how and where to mount the locking device to ensure the intended child protective function including appropriate figures;
- instruction to check the locking device prior to use;
- WARNING - “Replace the device if any part is broken, torn or missing”;
- If applicable, a WARNING “This locking device does not automatically lock again after it has been completely released”;
- If applicable (i.e. where a child panel test has been used to ensure the child protective functions), a WARNING “Some children will be able to operate the child resistant mechanism, especially children above 51 months of age”;
- If applicable, a WARNING “Keep the window restrictor key (tool) easily available to adults and older children in case there is a need to open the window in an emergency, such as during a fire. However, the key (tool) should not be accessible to young children”.
- any other information for safe usage.

4.7 Marking of the product

Products shall be labelled as “Child resistant locking device for windows and balcony doors in accordance with EN 16281”. The label may be placed on the packaging.