SLOVENSKI STANDARD
SIST EN 16948:2017

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Izdelki za zaščito otrok - Zapirala za omare in predale, ki jih potrošniki namestijo za varnost otrok - Varnostne zahteve in preskusne metode

Child protective products - Consumer fitted child resistant locking devices for cupboards and drawers - Safety requirements and test methods

Kindersicherheitsprodukte - Vom Verbraucher angebrachte kindergesicherte Sperrvorrichtungen für Schränke und Schubladen - Sicherheitsanforderungen und Prüfverfahren

Articles pour la sécurité des enfants - Dispositifs de fermeture à monter soi-même résistants aux enfants pour les armoires et les tiroirs - Exigences de sécurité et méthodes d'essai

Ta slovenski standard je istoveten z: **EN 16948:2017**

ICS:

97.140	Pohištvo	Furniture
97.190	Otroška oprema	Equipment for children

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EUROPEAN STANDARD

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EN 16948

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English Version

Child protective products - Consumer fitted child resistant locking devices for cupboards and drawers - Safety requirements and test methods

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COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Page

European foreword

This document (EN 16948:2017) has been prepared by Technical Committee CEN/TC 398 “Child protective products”, the secretariat of which is held by ASI.

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of an identical text or by endorsement, at the latest by January 2018, and conflicting national standards shall be withdrawn at the latest by January 2018.

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

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1 Scope

This European Standard specifies requirements and test methods for locking devices fitted by consumers in a domestic environment for cupboards and drawers for restricting access by young children.

Child resistant locking devices only intended to be installed by professionals or that are an integral part of the cupboard and drawer system are beyond the scope of this standard.

2 Normative references

Not applicable.

3 Terms and Definitions

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

3.1
child protective locking device for cupboards and drawers
locking device
device mounted on cupboards and drawers intended to make it difficult for young children to access the contents of the cupboard/drawer

Note 1 to entry: In the remainder of the document the short expression "locking device" is used for "child protective locking device for cupboards and drawers".

3.2
locking mechanism
part of the locking device which prevents opening of the cupboard or drawer

3.3
child appealing locking device
locking device that resembles by any means another object commonly recognized as appealing to or intended for use by young children, or has entertaining audio effects or animated effects

Note 1 to entry: This includes, but is not limited to locking devices the shape of which resembles cartoon characters, toys, guns, watches, telephones, musical instruments, vehicles, human body or parts of the human body, animals, food or beverages, or that play musical notes, or have flashing lights or moving objects or other entertaining features.

4 Requirements

4.1 Child appeal

The locking device shall not be child appealing.

4.2 Child protective function

4.2.1 General

The locking mechanism shall be resistant to operation by young children. It shall either:

a) require one action and not release the locking mechanism when tested in accordance with 5.5.2; or

b) require at least two consecutive actions to release the locking mechanism, the operation of the second action being dependent on the first action having been carried out and maintained and not release the locking mechanism when tested in accordance with 5.5.3; or

c) require at least two separate but simultaneous actions to release the locking mechanism operating on different principles and not release the locking mechanism when tested in accordance with 5.5.3; or

d) require the use of a specifically designed removable device or removable tool (e.g. a key or a magnet); or

e) comply with the child panel test requirements in 4.2.2.

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

In b) maintaining or removing the first action cannot mean that the locking mechanism remains in the partially unlocked position without continued intervention of the user.

4.2.2 Requirements concerning the child panel test

4.2.2.1 General

The locking mechanism shall comply with either 4.2.2.2 or 4.2.2.3.

The child panel test is required only in case option 4.2.1 e) is chosen.

The minimum number of children required in the sequential test depends on how many children can open the locking mechanism. The number to pass a locking device can be as low as 30.

4.2.2.2 Test panel of 200 children

If the full test panel of 200 children is used when testing in accordance with 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 mechanism 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 mechanism within another 5 min after a demonstration has been given to those children unable to disengage the locking mechanism in the first 5 min.

4.2.2.3 Sequential test – less than 200 children

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

a) the result of the test is a failure if the child succeeds in disengaging the locking mechanism;

b) as each result is obtained, it shall be plotted on the appropriate chart by filling in a square as follows:

   1) fill in a square immediately to the right of the previous result on Figure 1 if the child failed to disengage the locking mechanism in the first 5 min, and on Figure 2 if the child failed to disengage the locking mechanism in the second 5 min, i.e. if the result is a success;

   2) fill in a square immediately above the previous result on Figure 1 and Figure 2 if the child succeeded in disengaging the locking mechanism in the first 5 min, or only on Figure 2 if the child succeeded in disengaging the locking mechanism in the second 5 min, i.e. if the result is a failure.

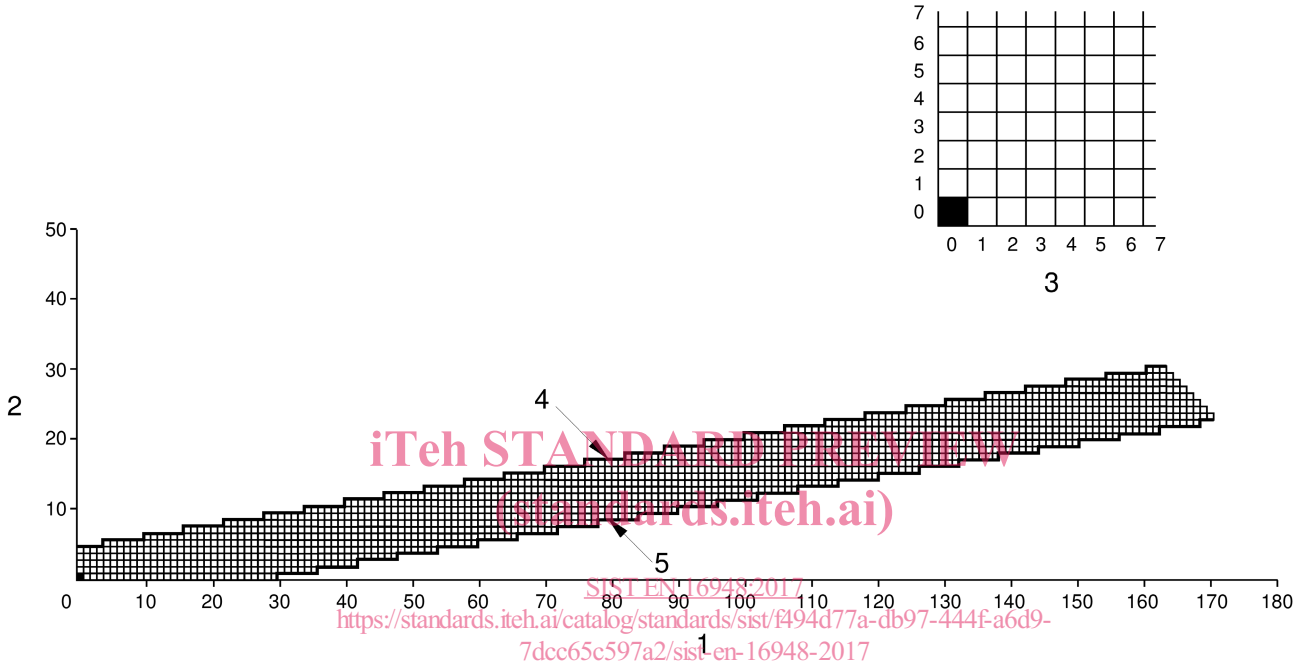
In the case of the first result to be plotted, the blanked out square is regarded as the “previous result”.

The 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 4.2.2.2.

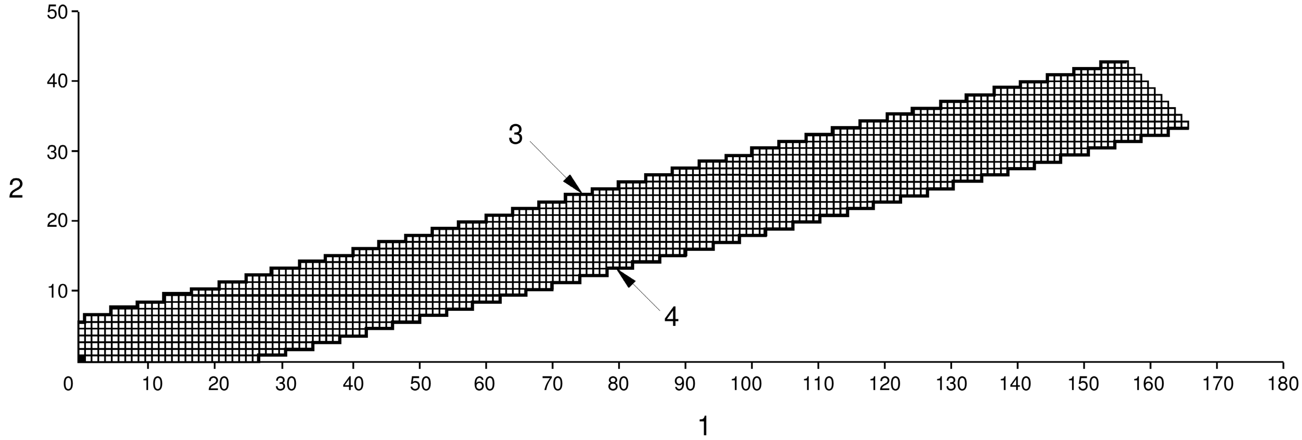


Key

1	number of locking mechanism not disengaged	4	limit line 2
2	number of locking mechanism 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 mechanism



Key

1 number of locking mechanism not disengaged
2 number of locking mechanism disengaged
3 limit line 2
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 mechanism

4.2.2.4 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 4.2.2.2.

4.2.2.5 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 locking mechanism and, where appropriate, to engage it properly, the method used by children to disengage it, etc. shall be recorded.

4.3 Mechanical function and structural integrity

The locking device shall maintain its mechanical properties throughout its expected lifetime.

The manufacturer shall indicate the type(s) of cupboards and drawers including the materials (e.g. glass, aluminium, PVC, wood) for which the locking device is or is not suitable. In particular, if fixings (e.g. screws) are provided with the locking device, the manufacturer shall ensure that they are suitable for the recommended material(s). If fixings are not provided, there shall be clear guidance on the type of fixings to be used with the device (see 4.6).

When tested according to 5.5.1 and 5.5.4, none of the tested items or any part of the items shall be broken or have any visible cracks or permanent deformation or disengage. All devices shall be fully functional during and after the tests. For devices that are intended to re-engage automatically the automatic re-engagement function shall still operate after completion of the tests.

For all locking devices when the product is mounted in accordance with the manufacturer's instructions, the maximum gap into which a child could insert its fingers shall not exceed 30 mm for a depth of more than 10 mm when tested in accordance with 5.5.5.

4.4 Small parts

When tested according to 5.5.6, any small part or component which becomes detached from the locking device shall not fit wholly within the small parts cylinder described in 5.2.5.

Any removable tool shall not fit wholly within the small parts cylinder described in 5.2.5.

4.5 Sharp edges

Edges and protruding parts accessible during normal use shall be rounded or chamfered and free of burr and sharp edges.

4.6 Purchase information

The following information shall be visible at the point of sale:

— information on which types, sizes and materials of cupboards and drawers which the locking device is intended for or is not intended for;

— information that the locking device is only intended to be used indoors in a domestic environment;

— whether the means of fixing this device to the drawer/cupboard are provided.

4.7 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 locking device shall be provided. These instructions shall include at least the following:

— the 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 reference”;

— a WARNING – “Warning - This locking device restricts access by young children to the contents of a cupboard or drawer but cannot ensure absolute child safety” as some children may be able to open the locking device;

— a WARNING – "Warning - Replace the device if any part is broken, torn or missing";

— information on which types, sizes and materials of cupboards and drawers which the locking device is intended for or is not intended for;

— detailed information on the types of fixings (e.g. type and length of screws) required to attach the locking device to the drawer/cupboard, if not supplied;

— precise and understandable instructions including as a minimum appropriate diagrams and/or photographs on how and where to install the locking device to ensure the intended child protective function and how to remove it when it is no longer needed;

— where applicable, the instructions shall indicate that the maximum gap into which a child could insert its fingers shall not exceed 30 mm when the drawer or cupboard door(s) is (are) open with the locking mechanism engaged;

— advice on surface preparation for devices fixed using adhesives;

— a statement on whether the product is suitable to reuse after dismounting;

— a statement on whether the locking mechanism re-engages automatically or manually;

— instruction to check the device regularly;

— If applicable, advice that the specifically designed removable device or removable tool should not be accessible to young children;

— any other information for safe usage;

— name or trade mark of the manufacturer, importer or organization responsible for its sale and contact details including postal address, web and email addresses;

4.8 Marking of the product

Product shall be marked with the number and the date of the standard. The marking may be placed on the packaging.

5 Test methods

5.1 General test conditions

The locking device shall be mounted according to the manufacturer's instructions.

Except where otherwise stated, forces in the tests shall be applied in the most onerous place and direction. If not obvious, pre-tests shall be performed in order to determine this. The tests shall be carried out at indoor conditions with a temperature 23 ± 5 °C.

Except where otherwise stated, the tolerance in force measurements shall not exceed ± 2,0 % and the tolerance in linear measurements shall not exceed ± 1,0 mm.

5.2 Test equipment

5.2.1 A test rig for the child panel test

Test rig simulating the function of a cupboard or drawer, appropriate for the type of locking device, and of a size that does not negatively compromise the normal operation of the locking device, without glazing; the material of the test rig does not matter as long as the device can be securely attached.

5.2.2 Test rig for mechanical tests

5.2.2.1 General

The construction of the test rigs for the mechanical tests (5.5) on which the locking devices can be fitted in accordance with the manufacturer's instructions shall consist of a moving part (a door or drawer) and a fixed part (a frame). The test rigs described in 5.2.2.2, 5.2.2.5 and 5.2.2.8 may be fitted with knobs or handles.

The test rigs shall not be fitted with devices intended to control or assist the normal closure (self-closing devices) of the drawer or door.

If the locking device becomes detached during the mechanical tests as a result of the failure of the test rig, the tests shall be repeated using a test rig constructed from different materials.