



SLOVENSKI STANDARD

SIST EN 16654:2016

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Izdelki za zaščito otrok - Izdelki, ki jih potrošniki namestijo na vrata za zaščito prstov - Varnostne zahteve in preskusne metode

Child protective products - Consumer fitted finger protection devices for doors - Safety requirements and test methods

Kinderschutzprodukte - Vom Verbraucher anzubringende Fingerschutzprodukte für Türen - Sicherheitstechnische Anforderungen und Prüfverfahren

Articles pour la sécurité des enfants - Dispositifs de protection des doigts à monter soi-même et destinés à être installés sur des portes - Exigences de sécurité et méthodes d'essai

<https://standards.iteh.ai/catalog/standards/sist/b3ef2934-0288-4b57-8ff9-544eb26709a9/sist-en-16654-2016>

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ICS:

97.190 Otroška oprema Equipment for children

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EUROPEAN STANDARD

EN 16654

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

Child protective products - Consumer fitted finger protection devices for doors - Safety requirements and test methods

Articles pour la sécurité des enfants - Dispositifs de protection des doigts à monter soi-même et destinés à être installés sur des portes - Exigences de sécurité et méthodes d'essai

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European foreword

This document (EN 16654:2015) has been prepared by Technical Committee CEN/TC 398 “Project Committee - 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of an identical text or by endorsement, at the latest by May 2016, and conflicting national standards shall be withdrawn at the latest by May 2016.

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1 Scope

This European Standard specifies requirements and test methods for consumer fitted finger protection devices intended to be mounted on hinged doors in the domestic environment inside buildings in order to prevent crushing injuries to children as a result of the door closing.

A finger protection product is based on at least one of three protection methods: hazard shielding, shut prevention or shut controlling.

NOTE 1 Products intended to maintain the door in a fixed position and friction hinges are not covered by this European Standard.

NOTE 2 Finger protection devices intended to be installed by professionals or that are an integral part of the door system are beyond the scope of this European Standard.

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 1935, *Building hardware — Single-axis hinges — Requirements and test methods*

3 Terms and definitions

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

3.1
finger protection device
device intended to minimize the risk of crushing injuries to fingers between (part of) door leaf/leaves and the door frame when the door leaf is moving

3.2
hazard shielding device
finger protection device intended to minimize the risk of crushing injuries to fingers in the gap between the hinge edge of the door leaf and the door frame

3.3
child appealing finger protection device
finger protection 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 finger protection 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.

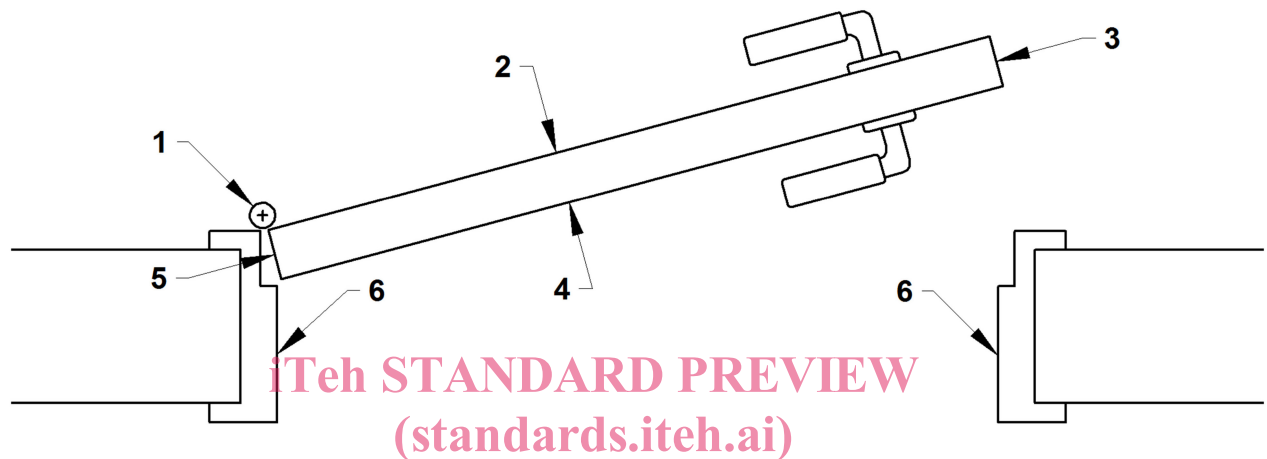
3.4
shut controlling device
finger protection device intended to minimize the risk of crushing injuries to fingers at the handle edge of the door by controlling the deceleration of the door leaf or preventing the door from shutting suddenly

3.5 shut prevention device

finger protection device intended to minimize the risk of crushing injuries to fingers at the handle edge of the door by preventing the door from shutting completely, maintaining a gap between door leaf and door frame

Note 1 to entry: Shutting may still be possible without removing or by deactivating the device, e.g. by turning the door handle.

Note 2 to entry: Figure 1 illustrates the relevant parts of a door leaf and a door frame.



Key

- 1 hinge
- 2 hinge face of the door leaf
- 3 handle edge of the door leaf
- 4 frame face of the door leaf
- 5 hinge edge of the door leaf
- 6 door frame

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Figure 1 — Illustration of terms describing parts of a door and a frame

4 Requirements

4.1 General requirements

The finger protection device shall maintain its mechanical properties throughout its expected lifetime taking into account the relevant climatic conditions.

The manufacturer shall indicate the type(s) of doors including the thickness and the materials (e.g. aluminium, PVC, wood) for which the finger protection device is suitable. If appropriate, the manufacturer shall ensure that fixings provided with the finger protection device intended to attach it to the door leaf and/or the door frame (e.g. adhesive tape, screws) are suitable for the recommended material(s).

The manufacturer shall specify the maximum opening angle of the door leaf for which the hazard shielding device is suitable.

EN 16654:2015 (E)**4.2 Child appeal**

The finger protection device shall not be child appealing.

4.3 Mechanical function and structural integrity**4.3.1 Hazard shielding devices**

When tested according to 5.4.1.1, the sample shall not break, have any visible cracks or permanent deformation, nor disengage. The sample shall be fully functional after the test. If any part becomes detached during testing it shall not fit wholly in the small parts cylinder described in 5.2.3.

4.3.2 Shut prevention devices

When tested according to 5.4.1.2.1, the sample shall not break, have any visible cracks or permanent deformation, nor disengage. The sample shall be fully functional after the test. If any part becomes detached during testing it shall not fit wholly in the small parts cylinder described in 5.2.3.

When tested according to 5.4.1.2.2, shut prevention devices with automatic reactivation shall reactivate automatically each time without being adjusted.

4.3.3 Shut controlling devices

When tested according to 5.4.1.3, the sample shall not break, have any visible cracks or permanent deformation, nor disengage. The sample shall be fully functional after the test. If any part becomes detached during testing, it shall not fit wholly in the small parts cylinder described in 5.2.3.

4.4 Effectiveness**4.4.1 General requirements**

The finger protection device shall provide protection in the hazardous area(s) (lock side/hinge side, etc.) for which it is intended according to the product information. The finger protection device shall be effective from the bottom of the door leaf to a height of at least 1 800 mm. The finger protection device shall be effective at all permissible opening angles for a door of maximum permissible door leaf thickness according to the manufacturer's instructions. The finger protection device shall be capable of being correctly mounted on doors with a door leaf thickness of at least 40 mm which open (virtually) 180°, unless otherwise specified.

4.4.2 Accessibility for hazard shielding devices

When tested in accordance with 5.4.2.1, the finger probe shall not be crushed between the door leaf and door frame. When the finger probe is removed the normal operation of the door shall not be impaired, and the finger protection device shall not be broken or have any visible cracks or permanent deformation, or disengage.

4.4.3 Deformation for hazard shielding devices

When tested in accordance with 5.4.2.2, when the finger probe is removed the normal operation of the door shall not be impaired, and the finger protection device shall not be broken or have any visible cracks or permanent deformation, or disengage.

4.4.4 Static strength for shut prevention devices

When tested in accordance with 5.4.2.3, the finger probe shall not be subjected to any force during the entire closing procedure.

NOTE The test simulates the door being pushed (or pulled) shut, e.g. by a child leaning against the door leaf.

4.4.5 Dynamic strength for shut controlling devices

When tested in accordance with 5.4.2.4, the finger probe shall not be subjected to any force during the entire closing procedure.

NOTE The test simulates the door being slammed shut.

4.5 Small parts

When tested according to 5.4.3, any small part or component which becomes detached from a height of 1 500 mm or less of the finger protection device shall not fit wholly within the small parts cylinder described in 5.2.3.

4.6 Sharp edges

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

4.7 Purchase information

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

- information on which types, sizes and thicknesses of doors and door materials and hinge type the product is intended for;
- a recommendation of the need to provide protection at the handle and the hinge end of the door;
- an indication of the maximum opening angle for which the hazard shielding device is suitable;
- for hazard shielding devices a recommendation to use finger protection devices for both sides of the hinge end of the door;
- for hazard shielding devices an indication of which face of the door the finger protection device is suitable or whether it is suitable for both faces of the hinge end of the door, illustrated using a diagram;
- for shut prevention devices with automatic reactivation an indication for which kind of handle the device is suitable.

4.8 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. For all types of finger protection, these instructions shall include at least the following:

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