BS EN 16654:2015

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

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee B/538/4, Building hardware.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Published by BSI Standards Limited 2015

ISBN 978 0 580 83540 7

ICS 91.060.50; 97.190

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2015.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16654

November 2015

ICS 91.060.50; 97.190

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

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

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Contents

Page

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of an identical text or by endorsement, at the latest by May 2016, and conflicting national standards shall be withdrawn at the latest by May 2016.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

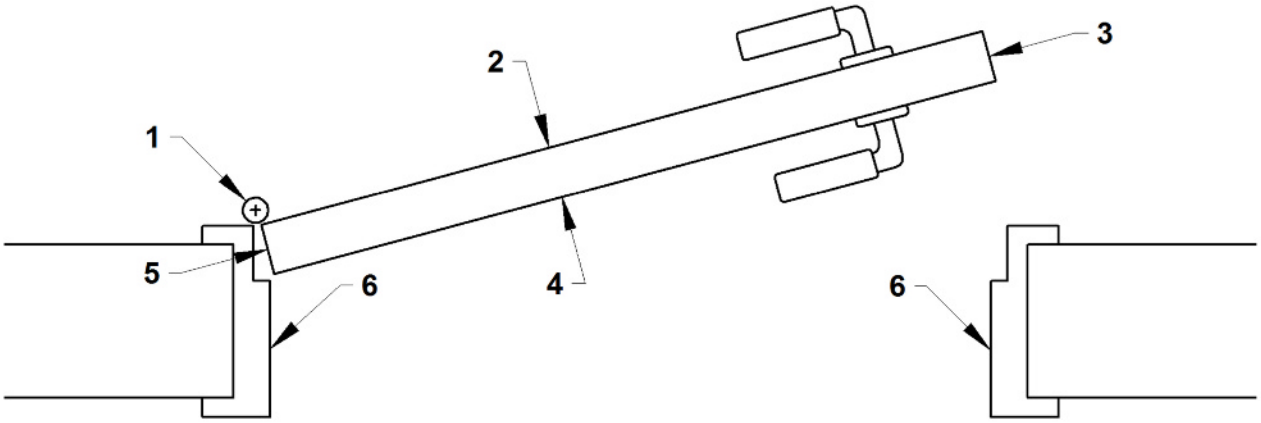
Note 1 to entry: This includes, but is not limited to finger protection devices the shape of which resembles cartoon characters, toys, guns, watches, telephones, musical instruments, vehicles, human body or parts of the human body, animals, food or beverages, or that play musical notes, or have flashing 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

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.

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;

— 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”;

— information on which types, sizes and thicknesses of doors and door materials and hinge type the product is intended for, etc.;

— precise and understandable instructions including appropriate diagrams and/or photographs on how and where to mount the device to ensure the intended child protective function;

— advice on surface preparation for devices fixed using adhesives;

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

— instruction to check the device regularly;

— WARNING - ”Replace the device if any part is broken, torn or missing”;

— any other information for safe usage.

For hazard shielding devices, these instructions shall include at least the following:

— advice that the device should be mounted to the bottom of the door leaf, and that the protection should be provided to a minimum height of 1 800 mm;

— the advice: “Use protection for both sides of the hinge end of the door if there is a gap into which a child could put its finger. A different type of device is needed to provide protection at the handle end of the door”;

— advice on which face of the door the finger protection device is appropriate for including a diagram;

— advice to use the hazard shielding device only up to a specified opening angle of the door.

For shut prevention devices, these instructions shall include at least the following:

— instructions on how to activate/deactivate the device, if applicable;

— advice to regularly check the automatic reactivation function, if applicable;

— instructions on how to close the door with the protection still mounted, if applicable;

— advice to remove the device at night to allow the door to be closed to reduce the risk of fire and smoke spread;

— the information: “A different type of device is needed to provide protection at the hinge side of the door”.

For shut controlling devices, these instructions shall include at least the following:

— the advice: “A different type of device is needed to provide protection at the hinge side of the door”.

4.9 Marking of the product

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

5 Test methods

5.1 General test conditions

The tests shall be conducted in indoor conditions with a temperature of 23 °C ± 5 °C. The test sample shall be mounted in accordance with the manufacturer's instructions using a test door in accordance with 5.2.1. The friction at the hinges of the door shall be negligible.

If nothing else is stated, forces shall be applied in the most onerous place and direction. If not obvious, pre-tests shall be performed in order to determine this.

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 Test door and frame

The test door leaf shall be 2 100 mm (±100 mm) high and 900 mm (±100 mm) wide and shall have a mass of 60 kg (±1 kg).

The door leaf thickness shall be 40 mm (±2 mm).

Two single axis hinges, conforming to hinge grade 12 of EN 1935, with a maximum size of 89 mm x 89 mm x 3 mm and a knuckle size of maximum Ø 12 mm shall be used. The centre of the hinges shall be mounted at 250 mm (±5 mm) and 1 850 mm (±5 mm) from the top of the door.

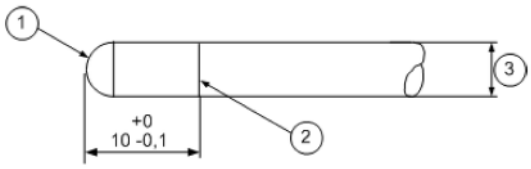
Finger protection devices only for use on doors with specific types of hinges may be tested mounting these hinges on the test door with the mass and dimensions specified above.

The test door and frame shall be made of unpainted and untreated wood and shall be of sufficient rigidity such that no visible distortion takes place during the test sequence.

5.2.2 Finger probe

Probe made from plastics or other hard, smooth material of a diameter of 12 mm (+ 0,1 mm) with a full hemispherical end that can be mounted on a force-measuring device (see Figure 2).

Dimensions in millimetres



Key

1 R6

2 line scribed around circumference showing depth of penetration

3 $Ø\ (12\ ^{+0,1}_{0})$

Figure 2 — Finger probe

5.2.3 Small parts cylinder

Dimensions in millimetres

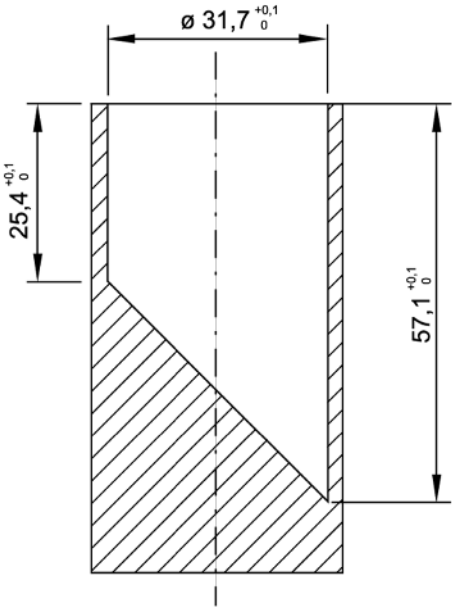


Figure 3 — Small parts cylinder

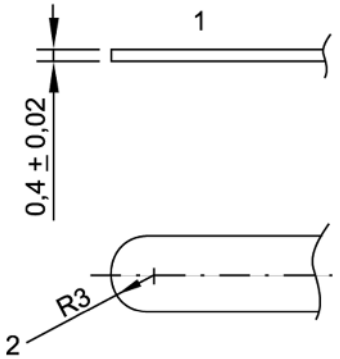
5.2.4 Tension test equipment

5.2.4.1 Tensile testing machine or dead-weight arrangement with means of applying forces up to at least 90 N with an accuracy of 2 N.

5.2.4.2 Clamps and straps.

5.2.4.3 Feeler gauge with a thickness of (0,4 ± 0,02) mm and an insertion edge radius of approximately 3 mm in accordance with Figure 4.

Dimensions in millimetres



Key

1 edges broken

2 insertion edge radius

Figure 4 — Feeler gauge

5.3 Extent and order of testing

Samples shall be tested as follows (see Annex A).

One finger protection device shall be subjected to the small parts test in accordance with 5.4.3.

For hazard shielding devices, a further finger protection device shall be subjected to:

— a durability test for hazard shielding devices in accordance with 5.4.1.1; and

— a test of accessibility/implosion for hazard shielding devices in accordance with 5.4.2.1; and

— a deformation test for hazard shielding devices in accordance with 5.4.2.2.

For shut prevention devices, a further finger protection device shall be subjected to:

— a durability test of shut prevention function in accordance with 5.4.1.2.1; and

— a durability test of automatic reactivation function in accordance with 5.4.1.2.2, if applicable; and

— a static strength test for shut prevention devices in accordance with 5.4.2.3.

For shut controlling devices, a further finger protection device shall be subjected to:

— a durability test for shut controlling devices in accordance with 5.4.1.3; and

— a dynamic strength test for shut controlling devices in accordance with 5.4.2.4.

The tests shall be carried out in the given order.

5.4 Test procedures

5.4.1 Mechanical function and structural integrity tests

5.4.1.1 Durability test for hazard shielding devices

The door shall be opened and closed 50 000 (+ 500) times with the finger protection device mounted on the test door in accordance with the manufacturer's instructions.

The door shall open to the maximum specified angle of the device during each cycle.

The motion of the door leaf shall be smooth and at a speed of 5 to 10 cycles per minute.

The rest time shall be at least 1 s and shall not exceed 4 s.

5.4.1.2 Durability tests for shut prevention devices

5.4.1.2.1 Durability test of shut prevention function

The door shall be opened and closed 5 000 (+ 50) times with the shut prevention device mounted and activated.

Start with the door open, at least to an angle that the device is in contact with only one part of the door, i.e. the door frame or the door leaf/handle. Close the door gently as far as possible with the device active. Apply a force of 150 N in the direction of closing within 10 cm from the handle edge of the door leaf and within 10 cm from the centre of the door measured vertically. Open the door to the starting position and repeat the cycle. The motion of the door leaf shall be smooth and at a speed of 5 to 10 cycles per minute.

The rest time shall be at least 1 s and shall not exceed 4 s.

5.4.1.2.2 Durability test of automatic reactivation function

Start with the door closed (the device is not in its blocking position). Open the door and release the handle, Attempt to close the door and check whether the device is blocking the closure. Deactivate the device and close the door.

Perform this cycle 5 000 (+ 50) times.

5.4.1.3 Durability test for shut controlling devices

The door shall be opened and closed 50 000 (+ 500) times with the protection device mounted and activated.

Start with the door open at an angle of 90°. Close the door with a smooth motion. Apply an increasing force at the handle up to a maximum of 150 N in the direction of closing.

Open the door to the starting point and repeat the cycle at 5 to 10 cycles per minute. The motion of the door leaf shall be smooth throughout the cycle. The rest time shall be at least 1 s and shall not exceed 4 s.

5.4.2 Effectiveness tests

5.4.2.1 Accessibility test for hazard shielding devices

Open the door at an angle of approximately 35°. Use the finger probe (Figure 2) to gradually apply a force of 25 N at the centre of the surface of the hazard shielding device at a position of 300 (±10) mm from the bottom of the device and within 50 mm of the midpoint of the device. Let the door leaf move freely when the force is applied. If the probe enters into a volume which may cause crushing injuries, close the door while maintaining the force. Check whether the probe is crushed between the door leaf and door frame.

NOTE 1 The force of 25 N is based on mean index finger push data of children aged 2 to 5 years.

NOTE 2 If it is not clear whether the probe is crushed rather than simply contacted, this can be checked by using pressure sensitive paper or equivalent.

5.4.2.2 Deformation for hazard shielding devices

Fix the door at an angle of approximately 45°. Use the finger probe (Figure 2) to gradually apply a force of 70 N at the centre of the surface of the hazard shielding device at a position of 300 (±10) mm from the bottom of the device and within 50 mm of the midpoint of the device.

Repeat the procedure at an opening angle of approximately 90° and at the maximum angle specified by the manufacturer.

Perform the test 2 500 times at each angle and position.

5.4.2.3 Static strength test for shut prevention devices

Open the door at an angle of approximately 30°. Keep the shut prevention device activated. Place the finger probe (Figure 2) against the door frame at the most onerous place of the intended effective location of the protection device at a height of between 300 mm and 1 800 mm from the ground. If the location of the most onerous place is not obvious, several tests at different locations shall be performed.

NOTE 1 The most onerous place excludes the position where the device makes contact with the door frame.

Slowly close the door as much as possible without applying any significant load. Then gradually apply a force of 500 N within 10 cm from the handle edge of the door leaf and within 10 cm from the centre of the door measured vertically. Maintain the load for 5 s (±0,1 s).

NOTE 2 If it is not clear whether the probe is crushed rather than simply contacted, this can be checked by using pressure sensitive paper or equivalent.

5.4.2.4 Dynamic strength test for shut controlling devices

Open the door. Keep the shut controlling device activated. Place the finger probe (Figure 2) against the door frame at the most onerous place of the intended effective location of the protection device at a height of between 300 mm and 1 800 mm from the floor. If the location of the most onerous place is not obvious, several tests at different locations shall be performed.

NOTE 1 The most onerous place excludes the position where the device makes contact with the door frame.

Close the door. At the time of contact between door leaf and protection device, the speed of the door leaf, measured at the handle side, at the midpoint of the door measured vertically, shall be 1,4 m/s (+ 0,1 m/s). At the time of contact between door leaf and protection device, there shall be no external force on the door leaf, i.e. the door leaf shall be free to bounce back. Perform the test 10 times.

NOTE 2 If it is not clear whether the probe is crushed rather than simply contacted, this can be checked by using pressure sensitive paper or equivalent.

5.4.3 Small parts test

5.4.3.1 General

The possibility to detach small parts shall be tested according to 5.4.3.2 (torque test) and 5.4.3.3 (tension test). The tension test shall follow after the torque test and be performed on the same component of the device. The device shall be tested in the engaged mode.

Place any detached component without compressing it and in any orientation in the small parts cylinder (Figure 3).

Determine whether the component fits entirely within the cylinder.

5.4.3.2 Torque test

If a component can be gripped between thumb and forefinger, gradually apply a torque to the component within a period of 5 s (±0,1 s) in a clockwise direction until either:

a) a rotation of 180° from the original position has been attained; or

b) a torque of 0,34 Nm is reached.

Maintain the maximum rotation or required torque for 10 s (±0,5 s). Permit the test component to return to a relaxed condition. Repeat this procedure in a counterclockwise direction.

To prevent rotation, projections, parts, or assemblies that are rigidly mounted on an accessible rod or shaft designed to rotate along with the projections, parts, or assemblies, shall be tested with the rod or shaft clamped.

If a component which is attached by a screw thread becomes loosened during application of the required torque, continue to apply the torque until the required torque is exceeded or the part disassembles, or until it becomes apparent that the part will not disassemble.

Determine whether the component has become detached.

5.4.3.3 Tension test

If the component to be tested cannot be gripped between thumb and forefinger, establish whether it is grippable by inserting the feeler gauge defined in 5.2.4.3 between the component and the underlying layer or body of the finger protection device at an angle between 0° and 10° from the device surface

using a force of (10 ± 1) N. If the gauge can be inserted more than 2 mm, the component shall be considered as grippable.

If the component is grippable, affix a suitable clamp behind the component taking care not to damage the attachment mechanism or the body of the finger protection device. Fasten the device in the test apparatus and apply a tensile force to the component by means of a clamp or by other means.

Apply a force of:

— (50 ± 2) N when the largest accessible dimension is 6 mm or less; or

— (90 ± 2) N when the largest accessible dimension is greater than 6 mm.

Apply the force gradually within a period of 5 s. Maintain the force for 10 s (±1 s).

Determine whether the component has become detached.

5.5 Test report

The test report shall include the information necessary for the interpretation of the results and at least the following information:

— a title and a date;

— the name and address of the laboratory, and the location where the tests were carried out if different from the address of the laboratory;

— the names, functions and signatures or equivalent identification of persons authorizing the test report;

— the name and address of the client;

— unique identification of the test report and on each side an identification in order to ensure that the page is recognized as a part of the test report and a clear identification of the end of the test report;

— identification of the test method(s) used;

— information on specific test conditions, such as environmental conditions;

— a description of, the condition of and an unambiguous identification of the items tested;

— the date of receipt of the test item and the date of performance of the test;

— reference to sampling plan and procedure;

— the test results and units of measurement;

— a statement on the estimated uncertainty of measurement;

— a statement of compliance or non-compliance with requirements of EN 16654.

Annex A
(normative)

Flowchart of test procedure

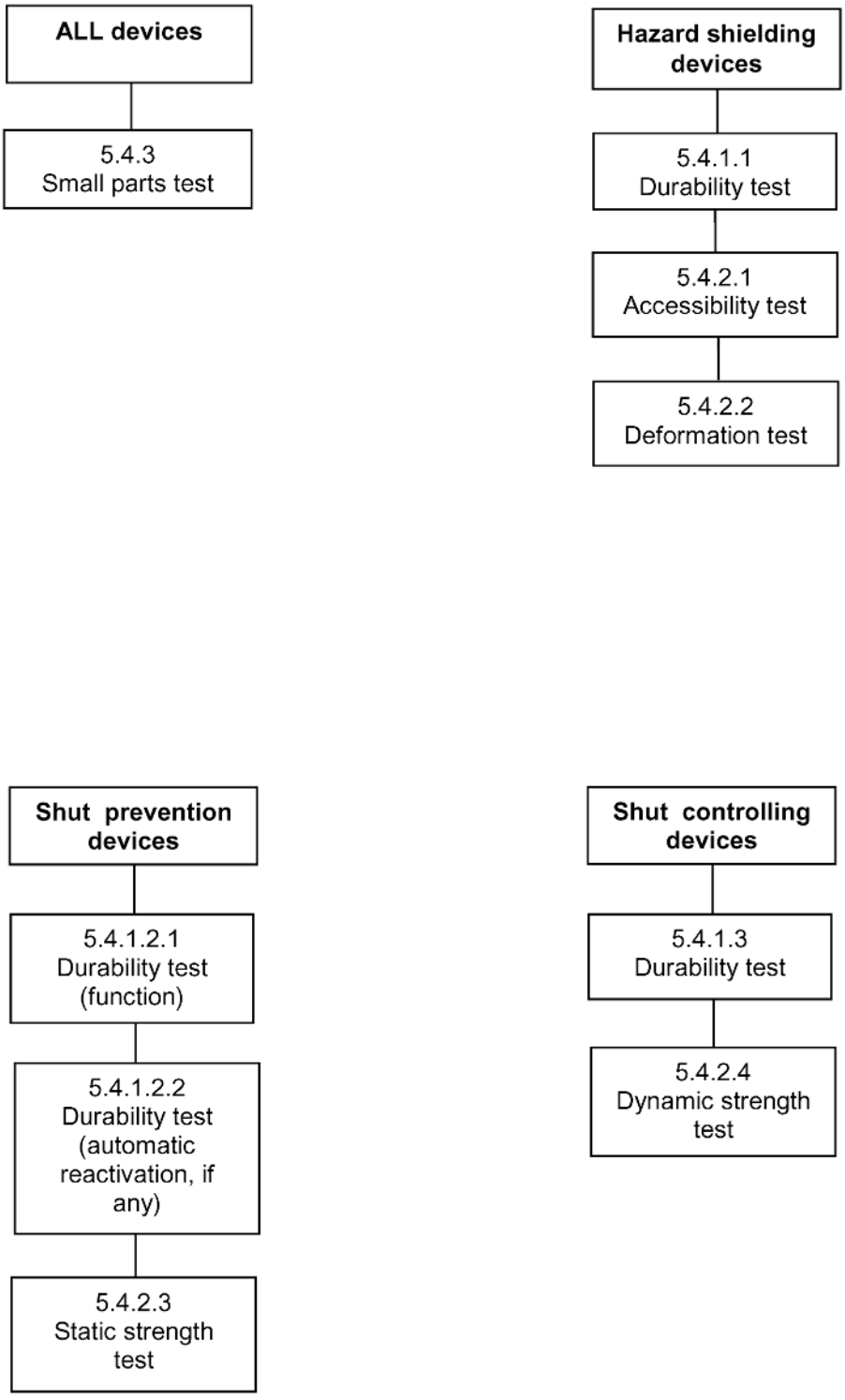


Figure A.1 — Flow chart of test procedure

Bibliography

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

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