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Safety of toys - Part 8: Swings, slides and similar activity toys for indoor and outdoor family domestic use

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Sicherheit von Spielzeug - Teil 8: Schaukeln, Rutschen und ähnliches Aktivitätsspielzeug für den häuslichen Gebrauch (Innen- und Außenbereich)

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Sécurité des jouets - Partie 8: Balançoires, toboggans et jouets d'activité similaires à usage familial en extérieur et en intérieur

Ta slovenski standard je istoveten z: EN 71-8:2003+A4:2009

ICS:

97.200.50 Q|æ^ Toys

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EUROPEAN STANDARD

EN 71-8:2003+A4

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Safety of toys - Part 8: Swings, slides and similar activity toys for indoor and outdoor family domestic use

Sécurité des jouets - Partie 8: Balançoires, toboggans et jouets d'activité similaires à usage familial en extérieur et en intérieur

Sicherheit von Spielzeug - Teil 8: Schaukeln, Rutschen und ähnliches Aktivitätsspielzeug für den häuslichen Gebrauch (Innen- und Außenbereich)

This European Standard was approved by CEN on 5 March 2003 and includes Amendment 1 approved by CEN on 20 March 2006, Amendment 2 approved by CEN on 27 October 2005, Amendment 3 approved by CEN on 27 May 2009 and Amendment 4 approved by CEN on 13 July 2009.

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 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 Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 71-8:2003+A4:2009) has been prepared by Technical Committee CEN/TC 52 "Safety of toys", the secretariat of which is held by DS.

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 February 2010, and conflicting national standards shall be withdrawn at the latest by February 2010.

This document includes Amendment 1, approved by CEN on 2006-03-20, Amendment 2, approved by CEN on 2005-10-27, Amendment 3, approved by CEN on 2009-05-27 and Amendment 4, approved by CEN on 2009-07-13.

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 supersedes EN 71-8:2003.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1**, **A1**, **A2**, **A2**, **A3**, **A3** and **A4**, **A4**.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

This standard is part 8 of the European Standard for Safety of toys. It should be read in conjunction with Part 1.

The European Standard EN 71 "Safety of toys" consists of the following parts:

- Part 1: Mechanical and physical properties;
- Part 2: Flammability;
- Part 3: Migration of certain elements;
- Part 4: Experimental sets for chemistry and related activities;
- Part 5: Chemical toys (sets) other than experimental sets;

A4 *deleted text* **A4**

- Part 7: Finger paints;
- Part 8: Swings, slides and similar activity toys for indoor and outdoor family domestic use.

This part of EN 71 includes clauses that have been moved from EN 71-1:1998 Part 1 *Mechanical and physical properties*.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia,

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Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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1 Scope (see A1)

A4 This part of EN 71 specifies requirements and test methods for *activity toys* for domestic family use often attached to or incorporating a *crossbeam*, and similar toys intended for children under 14 years of age to play on or in and often intended to bear the mass of one or more children.

This part of EN 71 also specifies requirements for:

- separately sold accessories for, and components of *activity toys*;
- separately sold swing elements that are ready for use on or in combination with an *activity toy*;
- construction packages for *activity toys* including components used to build *activity toys* according to a scheduled building instruction.

The scope excludes equipment intended for use in schools, kindergartens, public playgrounds, restaurants, shopping centres and similar public places dealt with in EN 1176 parts 1 to 6 and 10 to 11. **A4**

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 71-1:1998

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Safety of toys – Mechanical and physical properties

A4 EN 71-1:2005

Safety of toys – Part 1: Mechanical and physical properties **A4**

3 Definitions

3.1

activity toy

toy intended for family domestic use, intended to bear the mass of one or more children, often attached to or incorporating a *crossbeam* and intended for children to play on or in. Examples of such toys are *swings*, *slides*, *carousels* and *climbing frames*

3.2

anchor

device used to fix the toy to the standing surface

3.3

barrier

guardrail to prevent a user passing beneath and through

3.4

crossbeam

bar or beam which forms a main load bearing part of the toy (see Figure 2)

EN 71-8:2003+A4:2009 (E)**3.5****entrapment**

hazard presented by a situation in which a body, part of a body, or clothing is entrapped

A3 3.6**exposed edge**

edge intended to be touched and/or gripped by a child during the use of an *activity toy*

NOTE *Exposed edges* are commonly found on doors, windows, shutters, ladders, steps, *handrails*, retaining sides for *slides* and seats. **A3**

3.7**forced movement**

movement where the direction and the extent of the child's movement is determined by the operation of the equipment, for example swinging, sliding, rocking and revolving

3.8**free height of fall**

the greatest vertical distance from the clearly intended body support to the impact area below

3.9**free space**

space in, on or around the *activity toy* that can be occupied by a user undergoing a *forced movement* by the equipment (e.g., swinging, sliding, rocking, revolving). The definition of *free space* does **not** include the three-dimensional area in which a falling movement takes place

3.10**handrail**

rail intended to assist the user to balance or climb

3.11**platform**

raised level surface

3.12**slide**

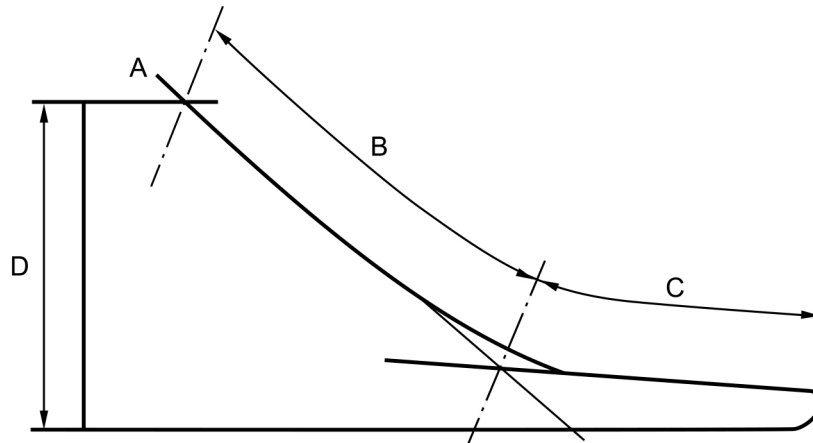
structure with inclined surface(s) on which the user slides in a defined track (see Figure 1)

NOTE Inclined planes, designed primarily for other purposes, such as roofs, do not constitute *slides*.

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**Key:**

- A Starting section
- B Sliding section
- C Run-out section
- D Height of slide
- B + C Slide length

NOTE The dimensions A, B, and C shall be taken at the centreline of the sliding surface. Each of these sizes represents one of the zones of the sliding surface. Each zone of the sliding surface is determined by the intersection of the curve of the sliding surface (taken at the bottom of the sliding surface) and the bisecting line of the angle formed by the zones of the sliding surfaces between themselves.

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 Figure 1 — Diagrammatic representation of a slide

3.13**suspension connector**

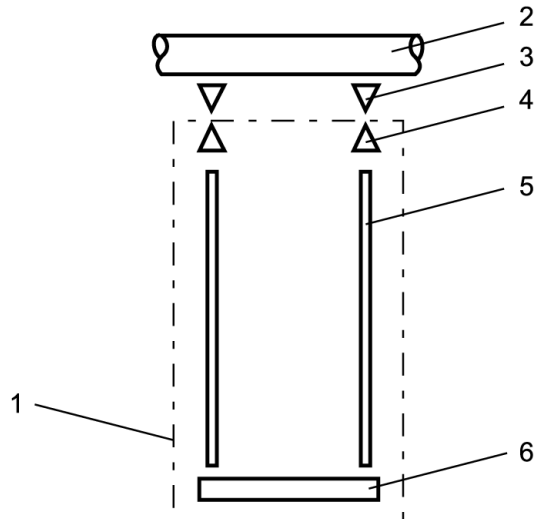
device which forms the direct contact between a *crossbeam* and the means of suspension (see Figure 2)

3.14**swing**

structure incorporating a *crossbeam*, *suspension connectors* and a swing device with swing element, suspension coupling and means of suspension

NOTE A *swing* is shown in Figure 2.

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**Key**

- 1 Swing device
- 2 *Crossbeam*
- 3 *Suspension connector*
- 4 Suspension coupling
- 5 Means of suspension
- 6 Swing element (e.g. seat, rings, bar, gondola)

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Figure 2 — Diagrammatic representation of an example of swing ^{A3}

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4 Requirements

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NOTE Words in *italics* are defined in clause 3 of this part of the standard or in ^{A4} EN 71-1 ^{A4}.

4.1 General (see A.2)**4.1.1 Static strength**

Activity toys, when tested according to 6.2.1 (strength of toys other than swings) shall not *collapse* such that they do not continue to comply with the relevant requirements of EN 71.

NOTE Additional requirements for *swings* are given in 4.6.2.

^{A3}

4.1.2 Maximum height (see A.9) ^{A3}

When measured from the ground, there shall be no part of the *activity toy* where the child is able to climb, sit or stand over a height of 2500 mm.

^{A3}

4.1.3 Corners and edges (see A.8)

Exposed edges shall be rounded.

Corners and *exposed edges* on moving parts shall have a minimum radius of 3 mm. This does not apply to swing elements with a mass of 1 000 g or less, the corners and *edges* of which shall be rounded. A_3

4.1.4 Protruding parts

Protruding parts such as bolt ends, threaded bolt ends and other protrusions shall be recessed or be protected in such a way that they do not constitute a hazard to users of the equipment. This requirement is applicable when protrusions are situated in places where the user is running, sliding, climbing, sitting, laying down or on *accessible* moving parts.

Protective caps shall comply with relevant requirements in EN 71-1, clause 4.9 (protruding parts).

Spring washers, self-locking nuts, or other locking means shall be provided for all bolts.

A_3

4.1.5 Diameter of climbing and swinging ropes

When measured according to 6.6 (diameter of ropes and chains), ropes used for climbing and swinging shall have the following diameters:

Ropes fixed at both ends	diameter between 16 mm and 45 mm
Ropes used in climbing nets	diameter between 10 mm and 45 mm
Free-hanging ropes fixed at upper end	diameter between 25 mm and 45 mm. A_3

4.2 Barriers, ladders etc (see A.3)

4.2.1 Barriers and handrails preventing the child from falling down

Any *platform* intended for sitting or standing 1000 mm or more from the ground shall be equipped with a *barrier* on all sides that face outwards from the toy.

Openings in the *barriers* to give access to *slides*, climbing structures and ladders are allowed.

The height of the *barrier* shall be 600 mm minimum.

For *barriers* with an uneven top design, a ruler of 200 mm \pm 5mm shall be used for measuring minimum height. Place the ruler horizontally on top of the *barrier*. Measure the vertical distance between the *platform* and the bottom of the ruler. The distance shall in no place be less than 600 mm.

NOTE Special requirements apply for *slides* (see 4.5.2 and 4.5.3).

After testing according to 6.3 (dynamic strength of *barriers* and *handrails*), no part of the *barrier* or *handrail* shall *collapse*, so that the toy does not comply with the relevant requirements of EN 71.

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4.2.2 Ladders and similar means of access to activity toys (see A.10)

These requirements do not apply to *activity toys* with a *platform* height of 600 mm or less.

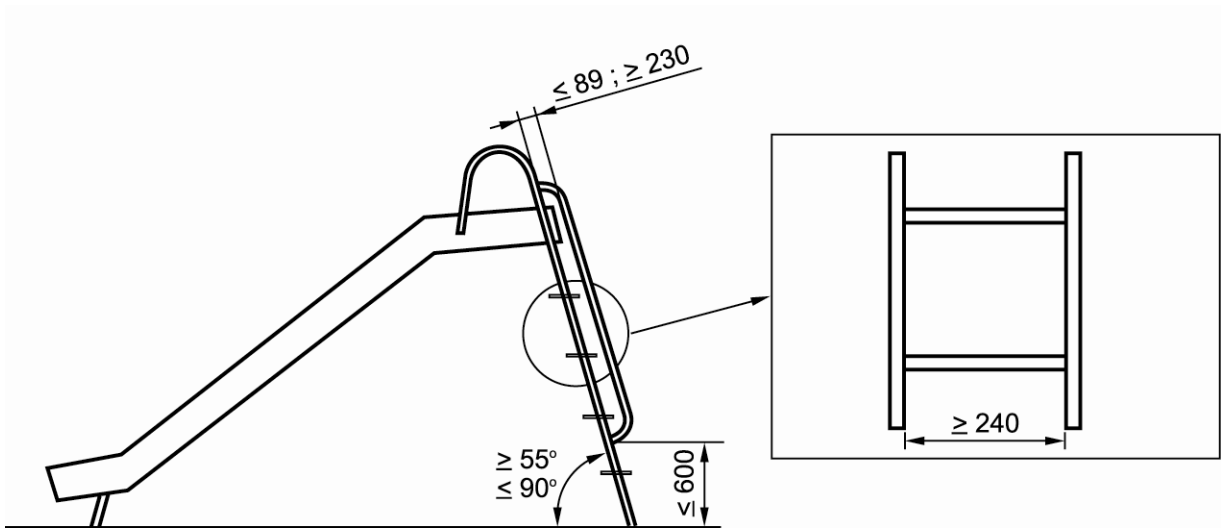
Ladders and similar means of access to *activity toys* shall comply with the following requirements:

- a) Any opening shall comply with 4.3.1 (head and neck entrapment).
- b) Where a ladder or a stair is used, the lateral width of the tread or rung shall be 240 mm or more (see Figure 3 a).
- c) The distance between the upper surfaces of the treads or rungs shall not exceed 310 mm when measured vertically in accordance with Figure 3 b).

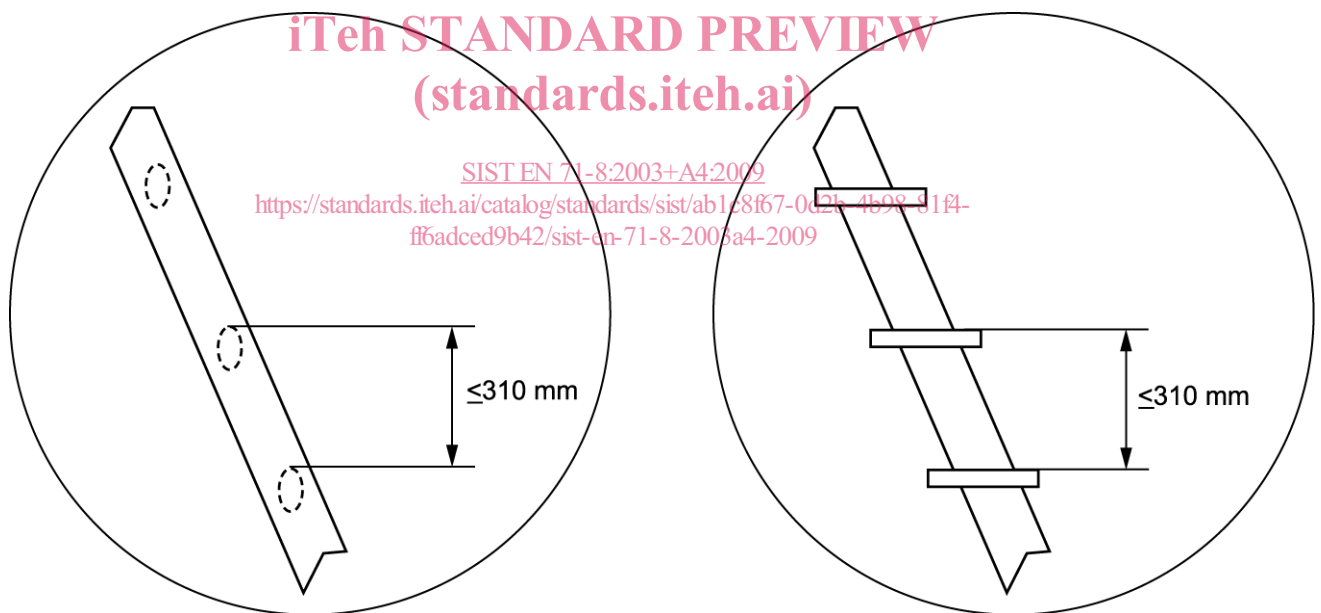
This requirement does not apply to the vertical distance between the ground and the upper surface of the first step.

- d) The surface of the tread shall not be slippery. This can be achieved by corrugation of the steps or by the use of other types of materials.
- e) When ladders are provided with rungs, the cross-sectional dimension of the rungs shall be not less than 16 mm and not more than 45 mm.
- f) The depth of treads on closed step ladders shall be 120 mm or more.
- g) The inclination for ladders that are fixed to a toy shall be between 55° and 90° to the horizontal.
- h) Ladders with a height of 1 200 mm or more shall be provided with *handrails* from a height of not more than 600 mm from the ground to the top of the *platform* (see Figure 3 a). This requirement does not apply to ladders with rungs.

Dimensions in millimetres



a) Dimensions of ladders



b) Details of a step ladder

Figure 3 — Ladders of a slide 

4.3 Entrapment (see A.4)

4.3.1 Head and neck entrapment

Activity toys shall be constructed so that no openings create head and neck *entrapment* hazards either by head first or feet first passage.