SLOVENSKI STANDARD
SIST EN 71-1:2015/oprA2:2016

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Varnost igrač - 1. del: Mehanske in fizikalne lastnosti - Dopolnilo A2

Safety of toys - Part 1: Mechanical and physical properties

Sicherheit von Spielzeug - Teil 1: Mechanische und physikalische Eigenschaften

Sécurité des jouets - Partie 1 : Propriétés mécaniques et physiques

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97.200.50 Igrače Toys

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EUROPEAN STANDARD

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English Version

Safety of toys - Part 1: Mechanical and physical properties

Sécurité des jouets - Partie 1 : Propriétés mécaniques et physiques

Sicherheit von Spielzeug - Teil 1: Mechanische und physikalische Eigenschaften

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 52.

This draft amendment A2, if approved, will modify the European Standard EN 71-1:2014. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN 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-CENELEC Management Centre has the same status as the official versions.

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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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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN 71-1:2014/prA2:2016) has been prepared by Technical Committee CEN/TC 52 “Safety of toys”, the secretariat of which is held by DS.

This document is currently submitted to the CEN Enquiry.

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).

1 Modifications to Clause 1, Scope (see A.2)

In the 6th paragraph, replace the 5th dash with the following:

"

— toy slings and toy catapults, supplied without *projectiles.*

Toy slings and toy catapults supplied with *projectiles* are covered by this standard.".

Delete the 7th paragraph (that begins with "Items that are propelled into free flight…"*).*

2 Modifications to Clause 3, Terms and definitions

Replace Definitions 3.46 to 3.48 with the following ones:

"

3.46
projectile
object intended to be launched into *free flight* or trajectory in the air

Note 1 to entry: This includes objects where the travel is ultimately constrained by means of a tether (e.g. pop-gun).

3.47
projectile toy with stored energy
toy with a *projectile* launched by means of a *discharge mechanism* capable of storing energy independent of the user and incorporating a release mechanism

3.48
projectile toy without stored energy
toy with a *projectile* launched by energy imparted by the user or by means of a *discharge mechanism* incapable of storing energy independent of the user".

Add the following definitions:

"

3.X1
free flight
unconstrained travel through the air

Note 1 to entry: This will include portions of unconstrained travel that may ultimately be constrained by means of a tether.

3.X2
discharge mechanism
component(s) of the toy which releases or propels the *projectile* into *free flight*

3.X3
arrow
projectile in the form of a shaft with a total length of 150 mm or more, intended to be discharged from a bow held by a user

3.X4
dart
projectile in the form of a shaft with a total length less than 150 mm that is intended to be blown by the mouth or thrown

3.X5
leading part
area(s) of the *projectile* or *flying toy* (e.g. tips, *edges* or protrusions) which would be expected to make contact with the eyeball in the event of launching towards the eye

Note 1 to entry: This includes all areas on *projectiles* that travel in unpredictable orientations (e.g. tumbling) that could reasonably be expected to strike the eyeball.

3.X6
remote controlled flying toy
flying toy, capable of being controlled by a wireless transmitter, incorporating rotor blade(s) which are capable of spinning approximately horizontally, each blade being less than or equal to 175 mm in length, measured from the centre of rotation to the blade tip, with an overall mass of the flying toy not greater than 50 g

Note 1 to entry: Wireless transmitters are typically hand-held devices and include smart devices such as telephones, tablets, etc.

3.X7
flying toy
toy or part of a toy intended to be launched into *free flight* with an on-board energy source (e.g. compressed gas, springs, electricity or inertial energy) that continues to propel the object after the initial release, for part or all of the flight

3.X8
toy sling with projectiles
hand held *projectile* toy, supplied with *projectiles*, with non-elastic *cord* that is capable of holding a *projectile*, which is energized by swinging the whole toy and intended to launch a *projectile* into *free flight* by releasing one end of the *cord*

3.X9
toy catapult with projectiles
hand held *projectile* toy, supplied with *projectiles*, with forked stick with an elastic band that is capable of holding a *projectile*, and is fastened to the two fork-ends and is intended to launch a *projectile* into *free flight* by stretching and releasing it".

2 Modification to 4.17, Projectiles (see A.22)

Replace the whole Subclause 4.17 with the following one:

"

4.17 Projectile toys (see A.22)

4.17.1 General

The requirements of 4.17.2, 4.17.3 and 4.17.4 do not apply to:

— components that function as *projectiles* which are permanently enclosed within a toy unless they become accessible when the outer container is tested according to 8.3 (torque test), 8.4.2.1 (tension test, general), 8.7 (impact test), 8.8 (compression test) and, the component is still capable of being launched;

— ground based toys, or components of toys, intended to be propelled along a track, gameboard, tabletop, floor or onto another surface even if they include an element of motion in *free flight*, for example leaps between tracks or surfaces.

The requirements of 4.17.2.1, 4.17.3 and 4.17.4 do not apply to projectiles that have a maximum range of 300 mm or less when measured in accordance with 8.X1 (determination of projectile range).

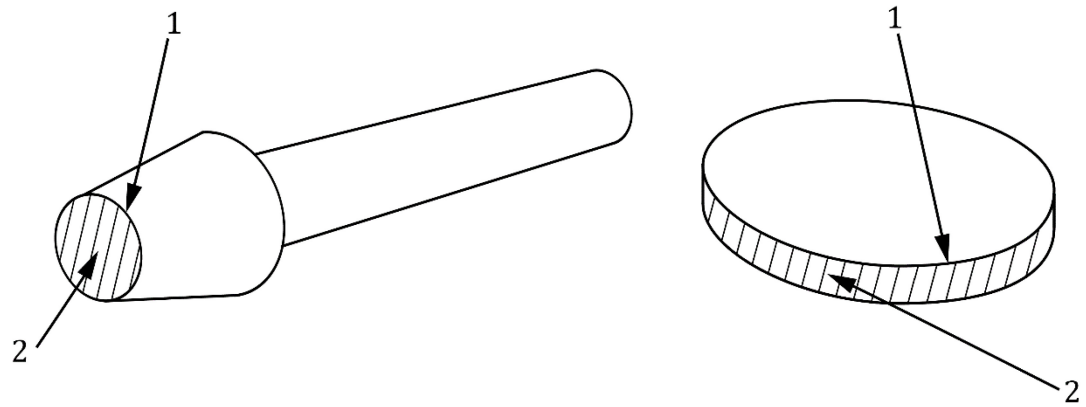
The requirements in 4.17.4.4 do not apply to *projectile* toys covered by 4.17.4.2 and 4.17.4.3.

4.17.2 All Projectiles

4.17.2.1 Leading parts

Leading parts on rigid *projectiles* shall not protrude beyond the depth of the gauge shown in Figure X.8 when tested according to 8.X2 (Assessment of leading parts of rigid projectiles and flying toys).

The *leading parts* of a *projectile* as well as edges that are adjacent to the *leading part* (s) shall be smooth and free of points, flash or similar projections. See Figure X.1 for examples of *edges* adjacent to *leading parts.*



Key

1 edges adjacent to leading parts

2 *leading parts* (with hatching)

Figure X.1 — Examples of edges adjacent to leading parts on missile and disc-type projectiles

4.17.2.2 Foam shaft projectiles with a suction cup as a leading part

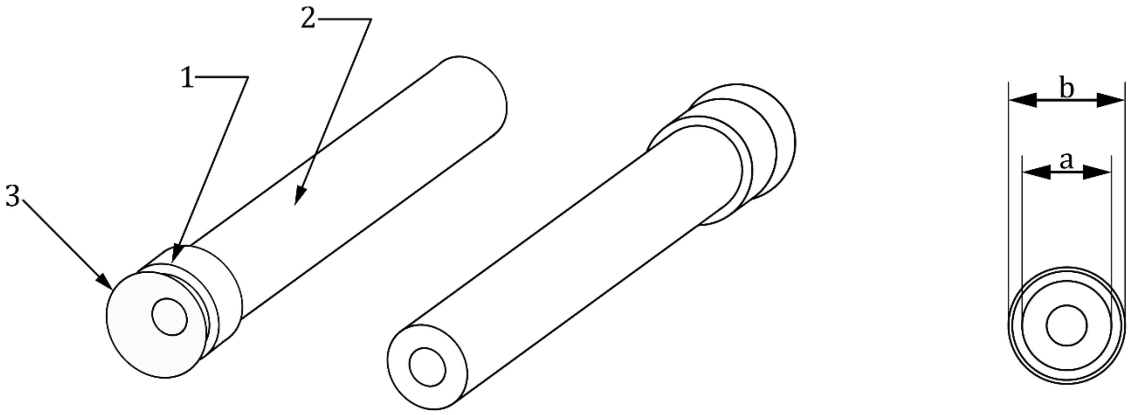
Projectiles with a foam shaft with a *suction cup* as a *leading part* where that *suction cup* has a diameter that is less than or equal to the maximum diameter of the collar or foam shaft, when measured in the relaxed state (see Figure X.2) shall:

a) not pass entirely through template E when tested according to 8.32.1 (small balls test and suction cups), or

b) have a length of 57 mm or more when measured according to 8.43 (length of suction cup projectiles) in the as received state; and

c) not detach after testing in accordance with 8.4.2.4.2 (Tension test for a foam shaft projectile with a suction cup that has a diameter the same as or less than the maximum diameter of the shaft/collar) or shall detach in such a way that the diameter of the suction cup remains less than or equal to the maximum diameter of any remaining collar or shaft.

The *projectile* shall comply with either a) or both b) and c).



Key

1 plastic collar
2 foam
3 suction cup
a *suction cup* diameter
b shaft/collar diameter

Figure X.2 — Foam projectile with suction diameter less than or equal to the maximum diameter of foam shaft

4.17.2.3 Other types of projectile with a suction cup as a leading part

Projectiles with a *suction cup* as a *leading part* shall:

a) not pass entirely through template E when tested according to 8.32.1 (small balls test and suction cups), or

b) have a length of 57 mm or more when measured according to 8.43 (length of suction cup projectiles) before and after testing according to 8.3 (torque test) and 8.4.2.4.1 (Tension test for a non-foam shaft projectile), and

c) not detach when tested according to 8.3 (torque test), 8.4.2.4.1 (Tension test for a non-foam shaft projectile), 8.7 (impact test), 8.8 compression test).

The *projectile* shall comply with either a) or both b) and c).

4.17.3 Projectile toys with stored energy

4.17.3.1 Energy limitation

Projectiles discharged from a *projectile toy with stored energy* with a kinetic energy greater than 0,08 J when tested according to 8.24 (kinetic energy of *projectiles*) shall:

a) have a *leading part(s)* made of a resilient material.

b) be accompanied by a warning about the potential hazard of aiming at the eyes or face (see 7.7). This requirement does not apply to *projectile* toys where it would be considered unreasonable to aim at the eyes or face of the user or a third party.

c) have a kinetic energy per unit area not greater than 2 500 J/m^2 when tested according to 8.24.3.3. (determination of kinetic energy per area of contact).

4.17.3.2 Edges

Edges on projectiles discharged from a *projectile toy with stored energy* that are adjacent to the *leading part(s),* see Figure X.1, shall have visibly rounded *edges*. This requirement does not apply to *projectiles* with resilient *leading part(s)* or *leading part(s)* made of *paper* or *paperboard*.

NOTE There may be multiple *leading parts* that require evaluation, especially in situations where the *projectile* may travel in irregular or unpredictable orientations (e.g. tumbling).

4.17.3.3 Projectiles with a protective cap or cover

Projectiles with a resilient *leading part* that is a protective cap, cover or tip, covering a rigid shaft or other rigid part, shall meet one of the following conditions:

a) the protective projective cap, cover or tip shall not become detached from the *projectile* when tested in accordance with 8.3 (torque test) and 8.4.2.3 (tension test for protective components), or

b) any detached component(s) shall not be capable of being discharged by the *discharge mechanism* further than 300 mm when measured in accordance with 8.X1 (determination of projectile range), or

c) any detached component(s) shall continue to comply with the other requirements of 4.17.3 (projectile toys with stored energy).

4.17.3.4 Impact resistance

When tested in accordance with 8.4.2.5 (wall impact test for projectiles), *projectile*s shall not produce a hazardous sharp *edge* (see 8.11, sharpness of edges) or a hazardous sharp point (see 8.12, sharpness of points) and shall continue to comply with the other requirements of 4.17.3 (projectile toys with stored energy).

4.17.3.5 Improvised projectiles

The *discharge mechanism* shall be designed so that it is unable to launch the improvised *projectiles* specified in Figure X.3 and Table X, in a manner determined to be hazardous. The *discharge mechanism* shall be assessed in the form in which it is supplied in the toy, i.e. there shall be no user modifications.

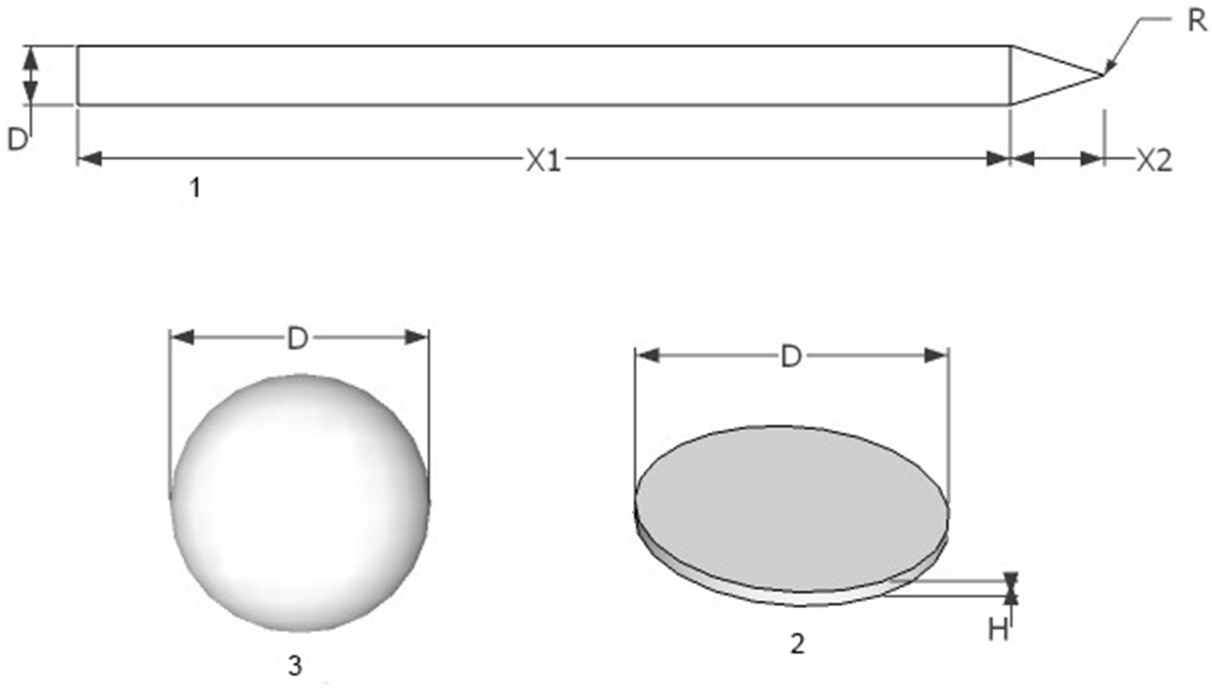
When evaluating the ability of a *discharge mechanism* to launch improvised *projectiles* in a hazardous manner, consideration should be given to the following factors:

— the repeatability and ease of loading and then launching the improvised *projectile*;

— the orientation of the *discharge mechanism*;

— the speed and/or distance travelled by the improvised *projectile*;

— other factors considered to be relevant such as the ability to aim the improvised *projectile*.



Key

1 cylindrical shaft
2 disc
3 sphere

Figure X.3 — Improvised projectiles