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Varnost igrač - Mehanske in fizikalne lastnosti - Navodilo za razvrstitev igrač z izstrelki po EN 71-1

Safety of toys - Mechanical and physical properties - Guidance on categorisation of projectile toys within EN 71-1

Sicherheit von Spielzeug - Mechanische und physikalische Eigenschaften - Leitlinien zur Einstufung von Geschossspielzeug nach EN 71-1

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97.200.50 Igrače Toys

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English Version

Safety of toys - Mechanical and physical properties - Guidance on categorisation of projectile toys within EN 71-1

Einstufung von Geschossspielzeug nach EN 71-1, Sicherheit von Spielzeug - Teil 1: Mechanische und physikalische Eigenschaften

This Technical Report was approved by CEN on 24 October 2021. It has been drawn up by the Technical Committee CEN/TC 52.

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European foreword

This document (CEN/TR 17695:2021) has been prepared by Technical Committee CEN/TC 52 “Safety of toys”, the secretariat of which is held by DS.

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Introduction

The purpose of this document is to assist users of EN 71-1 with the categorization of *projectile* toys under Clause 4.17 of that standard. This document looks at various types of toys, commonly available in the market and indicates under which part of 4.17 they should be assessed.

Various types of *projectile* launching products will not be considered toys (for example, a catapult used for angling), further guidance on the categorization of toy products can be found in EU commission Explanatory guidance document. This document makes no comment on whether a product or type of product is defined as a toy or since this remains a decision of whether a product is covered by the legal scope of the Toy Safety Directive.

1 Scope

This document gives guidelines for the categorization of projectile toys to assist users of the EN 71-1 standard.

This document is applicable to *projectiles* and *discharge mechanisms* addressed by EN 71-1. This document does not apply to other toys.

2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 71-1:2014+A1:2018, *Safety of toys - Part 1: Mechanical and physical properties*

3 Terms and definitions

For the purposes of this document, the following terms and definitions given in EN 71-1:2014+A1:2018 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1
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

[SOURCE: EN 71-1:2014+A1:2018, 3.2]

3.2
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

[SOURCE: EN 71-1:2014+A1:2018, 3.17]

3.3
discharge mechanism
component(s) of the toy which releases or propels the *projectile* into *free flight*

[SOURCE: EN 71-1:2014+A1:2018, 3.18]

3.4
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.

[SOURCE: EN 71-1:2014+A1:2018, 3.30]

3.5
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.

[SOURCE: EN 71-1: 2014+A1:2018, 3.40]

3.6
projectile
object intended to be launched, thrown or released 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. popgun).

[SOURCE: EN 71-1:2014+A1:2018, 3.53]

3.7
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

[SOURCE: EN 71-1:2014+A1:2018, 3.54]

3.8
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

[SOURCE: EN 71-1:2014+A1:2018, 3.55]

3.9
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

[SOURCE: EN 71-1:2014+A1:2018, 3.76]

4 Classifications

4.1 Background information

There are many different *projectile* toys on the market, with all kinds of *discharge mechanism*. The ways each toy is assessed in EN 71-1:2014+A1:2018 Clause 4.17, depends largely on the type of *discharge mechanism*. Additionally, terms such as “sling”, “sling-shot” and “catapult” are used interchangeably in many languages making it desirable to use images to assist with the classification into different categories. More information is given in Clause 4.

The requirements of EN 71-1:2014+A1:2018 Clause 4.17 suggest a few distinct categories of *projectile* toy addressed by a particular clause or subclause:

1. *Projectile* toys with stored energy (addressed by 4.17.3)

2. *Projectile* toys without stored energy; of which there are now several subsets:

   a) *Darts* (addressed by 4.17.4.1)

   b) Bow and *arrow* sets (addressed by 4.17.4.2)

   c) *Toy catapults with projectiles* (addressed by 4.17.4.3)

   d) Toys with *projectiles* launched into *free flight* by an elastic band that is capable of holding a *projectile* (also addressed by 4.17.4.3)

   e) Toys where the *discharge mechanism* can store energy, only when held in place by the user (addressed by Clause 4.17.4.4)

3. Others, that do not fit into any of these categories (addressed by the general requirements of 4.17.2)

This document categorizes toy examples according to this list.

The Toy Safety Directive (2009/48/EC) lists Toy slings and Toy catapults as "toys not in scope of the Toy Safety Directive". Such products are therefore not addressed by EN 71-1. The *projectiles* supplied with such products, however, may possibly be toys and may therefore be covered by the scope of EN 71-1.

The EN 71-1 standard addresses the hazards posed by some *projectiles* launched by toy catapults, where supplied with *projectiles*. The standard does not include requirements for *projectiles* launched by toy slings since experts felt unable to develop requirements that would sufficiently minimize the hazards associated with their use. Therefore, no examples of toy slings are provided in this report. EN 71-1:2014 A.22 contains more information on this specific issue.

4.2 Examples

The tables below give examples of different types of *projectile* toy and which clause in 4.17 in EN 71-1:2014+A1:2018 they are covered by.

- Table 1 gives examples of *projectile toys with stored energy* (addressed by 4.17.3)

- Table 2 gives examples of *Toy Catapults with projectiles* (addressed by 4.17.4.3)

- Table 3 gives examples of Toys with *projectiles* launched into *free flight* by an elastic band that is capable of holding a *projectile* (also addressed by 4.17.4.3)

- Table 4 gives examples of Toys where the *discharge mechanism* can store energy, only when held in place by the user (4.17.4.4)

- Table 5 gives examples of toys not fitting into any of the other categories

Unless specifically exempted, all *projectile* toys will need to comply with Clause 4.17.2, All projectiles, including those mentioned in Table 5.

5 Clarification of the term catapult

Catapults are generally defined in the term "*toy catapult with projectiles*" in EN 71-1:2014+A1:2018, 3.76. However, because of language differences catapults are often known by other names. For the purposes of this document and the EN 71 series of standards, the UK English understanding of the term is used. The following aims to clarify exactly what that is.

NOTE The images are used to illustrate the meaning of the terms. No inference is given as to whether or not, the products are in scope of EN 71 series of standard, i.e. whether they are a toy or not.

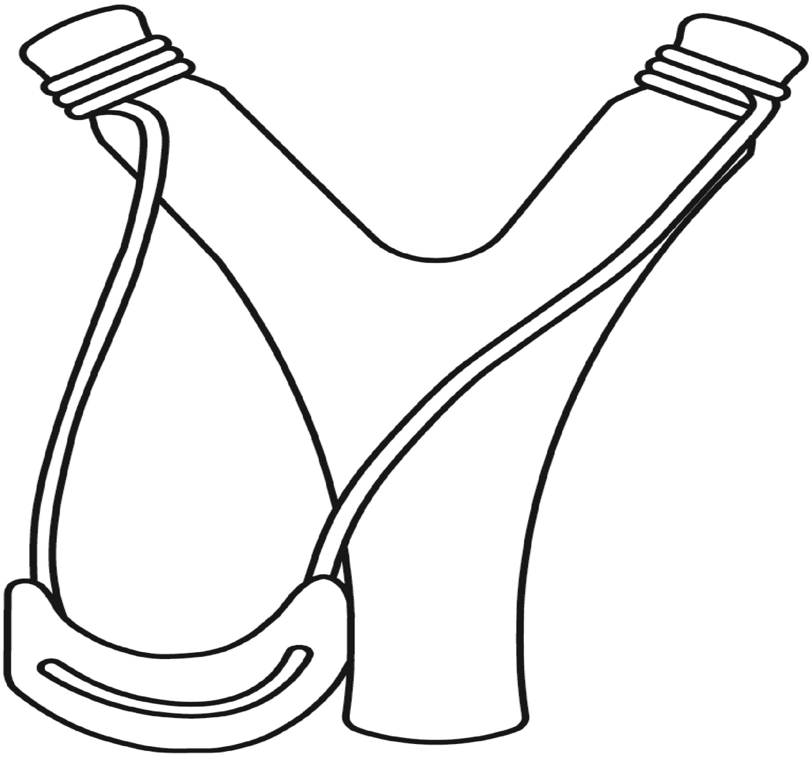

Figure 1 — Catapult

The type of catapult shown above are often known as slingshots

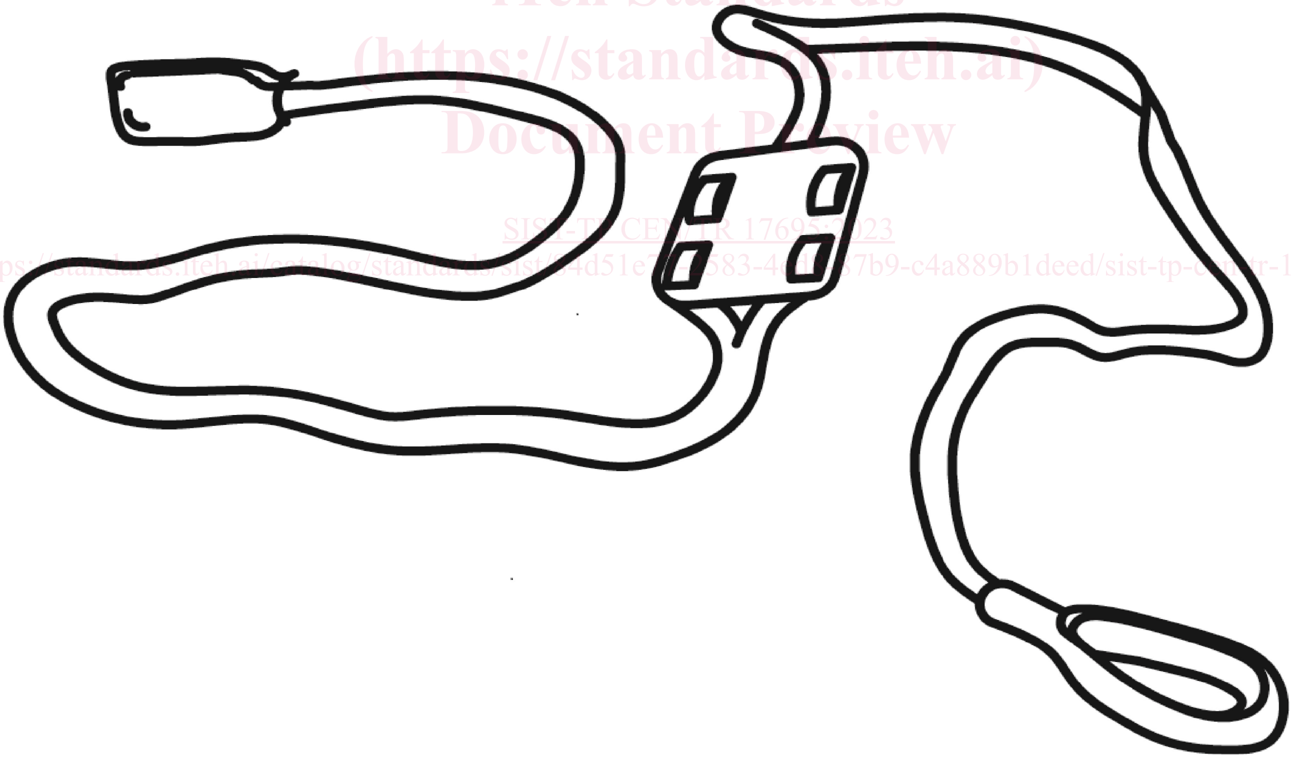

Figure 2 — sling

The type of sling shown above are often called slingshots