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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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European foreword

This document (EN 71-1:2014+A1:2018) 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of an identical text or by endorsement, at the latest by November 2018, and conflicting national standards shall be withdrawn at the latest by November 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document includes Amendments 1, 2 and 3 approved by CEN on 22 January 2018.

This document supersedes EN 71-1:2014.

The start and finish of text introduced or altered by amendment is indicated in the text by tags .

This European Standard 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 2009/48/EC.

For relationship with EU Directive 2009/48/EC, see informative Annex ZA, which is an integral part of this European Standard.

This European Standard constitutes the first part of the European Standard on safety of toys.

This European Standard, Safety of toys, consists of the following parts:

— Part 1: Mechanical and physical properties [the present document];
— 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;
— Part 7: Finger paints — Requirements and test methods;
— Part 8: Activity toys for domestic use;
— Part 9: Organic chemical compounds — Requirements;
— Part 10: Organic chemical compounds — Sample preparation and extraction;
— Part 11: Organic chemical compounds — Methods of analysis;
— Part 12: N-Nitrosamines and N-nitrosatable substances;
— Part 13: Olfactory board games, cosmetic kits and gustative games;
— Part 14: Trampolines for domestic use.
NOTE 1 In addition to the above parts of EN 71, the following documents have been published:


NOTE 2 Different legal requirements may exist in non-EU countries.

The following significant editorial and technical changes have been implemented in this new edition:

<table>
<thead>
<tr>
<th>Clause/Paragraph/Table/Figure</th>
<th>Change</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>The scope has been expanded to include certain flying toys and toy slings and toy catapults supplied with projectiles</td>
</tr>
<tr>
<td>2</td>
<td>Addition of reference to EN 14682, Safety of children's clothing — Cords and drawstrings on children's clothing — Specifications</td>
</tr>
<tr>
<td>3</td>
<td>Changes to existing definitions and inclusion of new definitions</td>
</tr>
<tr>
<td>4.17</td>
<td>Complete revision of the requirements</td>
</tr>
<tr>
<td>4.17.2</td>
<td>New requirements for leading parts including suction cups</td>
</tr>
<tr>
<td>4.17.3</td>
<td>Introduction of the principle of using kinetic energy density in assessing projectiles with stored energy. New requirements for impact resistance. New requirements for improvised projectiles</td>
</tr>
<tr>
<td>4.17.4</td>
<td>New requirements for toy catapults and projectiles propelled by an elastic band. New requirement for certain projectiles without stored energy</td>
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<tr>
<td>4.26</td>
<td>New requirements for toys in disguise costumes</td>
</tr>
<tr>
<td>4.27</td>
<td>New requirements for flying toys, including requirements for rotors and propellers and certain remote controlled flying toys</td>
</tr>
<tr>
<td>5.4</td>
<td>Complete revision of the requirements for cords</td>
</tr>
<tr>
<td>5.4.2</td>
<td>This clause addresses toys for children under 18 months. Separation and clarification of requirements for cord or chains with the potential to tangle, and other cords. Addition of requirements for two cords or chains with the potential to tangle</td>
</tr>
<tr>
<td>5.4.3</td>
<td>This clause addresses toys for children 18 months and over. Separation and clarification of requirements for cord or chains with the potential to tangle, and other cords. Addition of requirements for two cords or chains with the potential to tangle</td>
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<tr>
<td>5.4.6</td>
<td>Clarification of requirements for electrical cables</td>
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<tr>
<td>5.4.9</td>
<td>Includes new requirements for toys intended to be attached to a cradle, cot or perambulator</td>
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<tr>
<td>5.15</td>
<td>Inclusion of new requirements for sledges with cords for pulling</td>
</tr>
<tr>
<td>7</td>
<td>Changes to the requirements for warnings</td>
</tr>
<tr>
<td>7.23</td>
<td>A requirement for a warning for toys intended to be attached to a cradle, cot or perambulator</td>
</tr>
</tbody>
</table>
8 Updates to test methods related to projectile toys, flying toys, cords and toy scooters

8.4.2.4 A new tension test for projectiles with suction cups

8.4.2.5 A new wall impact test for projectiles

8.22, 8.23, 8.27 Changes to the test methods and the test loads for toy scooters

8.40 Clarification of the methods to measure the length of cords and chains

8.41 New method for the assessment of the tangle potential of two cords or chains

8.42 A new test for the determination of projectile range

A.58 New rational for flying toys and propellers

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.
Introduction

This European Standard aims at reducing as far as possible those hazards which are not evident to users; it does not cover inherent hazards (e.g. instability of two-wheeled scooters, sharp needles in a sewing kit, etc.) that are obvious to children or the persons in charge of them. Assuming that the toys are used in the intended manner they should not present any further hazard to children for whom they are intended (according to Directive 2009/48/EC “intended for use by” means that a parent or supervisor shall reasonably be able to assume by virtue of the functions, dimensions and characteristics of a toy that it is intended for use by children of the stated age group”). Allowance should also be made for foreseeable use, bearing in mind the behaviour of children who do not generally share the same degree of care as the average adult user.

As a general rule, toys are designed and manufactured for particular ages of children. Their characteristics are related to the age and stage of development of the children, and their use presupposes certain aptitudes.

Accidents are frequently due to a toy either being given to a child for whom it is not intended, or being used for a purpose other than that for which it was designed. Great care should therefore be taken when choosing a toy or game; account should be taken of the mental and physical development of the child who will be using it.

The requirements of this European Standard do not release parents or carers from their responsibility of watching over the child while he or she is playing.