Australian/New Zealand Standard™

Safety of toys

Part 1: Safety aspects related to mechanical and physical properties

AS/NZS ISO 8124.1:2019

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee CS-018, Safety Of Childrens Toys. It was approved on behalf of the Council of Standards Australia on 23 April 2019 and by the New Zealand Standards Approval Board on 7 May 2019.

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The following are represented on Committee CS-018:

Australian Chamber of Commerce and Industry
Australian Toy Association
CHOICE
Consumer Affairs Victoria
Consumers' Federation of Australia
Kidsafe Australia
Ministry of Business, Innovation and Employment (New Zealand)
National Acoustic Laboratories (Australia)
National Retail Association Australia
New Zealand Toy Distributors Association
NSW Fair Trading
Office of Fair Trading (Qld)
Queensland Health
Safekids Aotearoa New Zealand
Sydney Children's Hospitals Network

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Jointly revised and redesignated as AS/NZS ISO 8124.1:2019.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CS-018, Safety of Children's Toys, to supersede AS/NZS 8124.1:2016, *Safety of toys, Part 1: Safety aspects related to mechanical and physical properties (ISO 8124-1:2014, MOD)*.

The objective of this Standard is to specify safety aspects related to the mechanical and physical properties that are generally applicable to toys for children up to the age of 14 years, taking into account normal use and reasonably foreseeable abuse.

Other Standards in this series provide specifications for additional mechanical and physical properties that apply to specific categories of toys (e.g. domestic activity toys) and for other properties of toys (e.g. flammability and migration of certain elements). Specifications for the electrical properties of toys are provided in AS/NZS 62115.

There are regulated requirements for toys in Australia and New Zealand. Users of this Standard are reminded that regulations may refer to specific versions of the Standard and may also make variations to the requirements stated in the referenced edition. Therefore, conformance with this Standard cannot be relied on to ensure compliance with all legal requirements for the sale of toys. Users of this Standard should familiarize themselves with the regulated requirements for toys. For example, in Australia, Commonwealth product safety laws can be found at www.productsafety.gov.au.

This Standard is identical with, and has been reproduced from, ISO 8124-1:2018, *Safety of toys — Part 1: Safety aspects related to mechanical and physical properties*.

As this document has been reproduced from an International Standard, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms "normative" and "informative" are used in Standards to define the application of the appendices or annexes to which they apply. A "normative" appendix or annex is an integral part of a Standard, whereas an "informative" appendix or annex is only for information and guidance.

Contents

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 181, *Safety of toys*.

This fifth edition cancels and replaces the fourth edition (ISO 8124-1:2014). A list of the main technical changes made to the previous edition is given in Annex G.

A list of all parts in the ISO 8124 series can be found on the ISO website.

Introduction

This document is largely based upon existing standards in the European Union (EN 71-1) and in the United States of America (ASTM F963).

Compliance with the requirements of this document will minimize potential hazards associated with toys resulting from their use in their intended play modes (normal use) as well as unintended play modes (reasonably foreseeable abuse).

This document will not, nor is it intended to, eliminate parental responsibility in the appropriate selection of toys. In addition, this document will not eliminate the need for parental supervision in situations where children of various ages may have access to the same toy(s).

Although Annexes A, B, C, D, E and F are for information purposes only, they are crucial for the correct interpretation of this document.

The safety of electric toys is described in IEC 62115.

When age indications are required for safety labelling purposes, they may be given in either months or years.

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1 Scope

The requirements in this document apply to all toys, i.e. any product or material designed or clearly intended for use in play by children under 14 years of age. They are applicable to a toy as it is initially received by the consumer and, in addition, they apply after a toy is subjected to reasonably foreseeable conditions of normal use and abuse unless specifically noted otherwise.

The requirements of this document specify acceptable criteria for structural characteristics of toys, such as shape, size, contour, spacing (e.g. rattles, small parts, sharp points and edges, and hinge-line clearances) as well as acceptable criteria for properties peculiar to certain categories of toy (e.g. maximum kinetic energy values for non-resilient-tipped projectiles and minimum tip angles for certain ride-on toys).

This document specifies requirements and test methods for toys intended for use by children in various age groups from birth to 14 years. The requirements vary according to the age group for which a particular toy is intended. The requirements for a particular age group reflect the nature of the hazards and the expected mental and/or physical abilities of a child to cope with them.

This document also requires that appropriate warnings and/or instructions for use be given on certain toys or their packaging. Due to linguistic problems which may occur in different countries, the wording of these warnings and instructions is not specified but given as general information in Annex B. It should be noted that different legal requirements exist in many countries with regard to such marking.

This document does not purport to cover or include every conceivable potential hazard of a particular toy or toy category. Except for labelling requirements indicating the functional hazards and the age range for which the toy is intended, this document has no requirements for those characteristics of toys which represent an inherent and recognized hazard which is integral to the function of the toy.

EXAMPLE 1 An example of such a hazard is the sharp point necessary for the proper function of a needle. The needle is a hazard which is well understood by the purchaser of a toy sewing kit, and the functional sharp-point hazard is communicated to the user as part of the normal educational process of learning to sew as well as at the point of purchase by means of cautionary labelling on the product's packaging.

EXAMPLE 2 As a further example, a two-wheeled toy scooter has inherent and recognized hazards associated with its use (e.g. instability during use, especially while learning). The potential hazards associated with its structural characteristics (sharp edges, pinch hazards, etc.) will be minimized by compliance with the requirements of this document.

Products not included within the scope of this document are:

a) bicycles, except for those considered to be toys, i.e. those having a maximum saddle height of 435 mm (see E.1, general);

b) slingshots;

NOTE "Slingshots" are also known as "catapults" and are usually held in the hand; examples are given in Figure 1. Toy versions of medieval catapults and trebuchets are not exempt from this document; an example is given in Figure 2.