INTERNATIONAL STANDARD

ISO 8124-4

Second edition
2014-10-01

AMENDMENT 2
2019-03

Safety of toys —

Part 4: **Swings, slides and similar activity toys for indoor and outdoor family domestic use**

AMENDMENT 2

Sécurité des jouets —

Partie 4: Balançoires, glissoires et jouets à activité similaire à usage domestique familial intérieur et extérieur

AMENDEMENT 2

Reference number
ISO 8124-4:2014/Amd.2:2019(E)

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Foreword

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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).

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

The main changes are as follows:

— Requirements for minimum clearance and lateral stability have been adjusted to provide for swing elements with a single point of suspension.

— The minimum clearance between footrests on swing elements and the ground has been adjusted to align with ASTM F1148.

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

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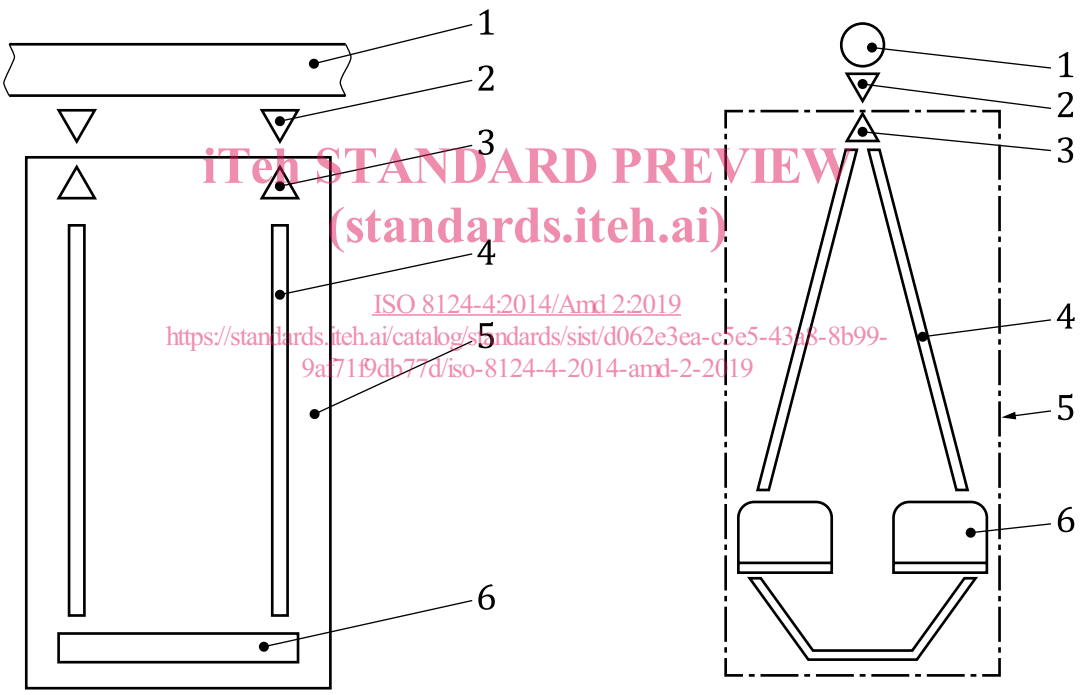
Safety of toys —

Part 4:
Swings, slides and similar activity toys for indoor and outdoor family domestic use

AMENDMENT 2

Figure 4

Replace as follows.



a) Example of a flat seat **b) Example of a gondola**

Key

1 crossbeam/support member
2 suspension connector
3 suspension coupling
4 means of suspension
5 swing device
6 swing element (e.g. seat, rings, bar, gondola)

NOTE A swing device can include one or more footrests. Footrests are considered as parts of the swing elements

Figure 4 — Diagrammatic representation of examples of swings

4.7.5

Replace as follows.

4.7.5 Minimum clearance between adjacent swing elements and adjacent structures

The requirements in this subclause do not apply to single swing elements in swings with a crossbeam height of 1 200 mm or less above the ground.

The minimum clearances between adjacent swing elements and between swing elements and adjacent structures shall be as given in Table 1.

Table 1 — Minimum clearances between adjacent swing elements and adjacent structures

Dimensions in millimetres

Clearances between	Free-swinging elements[a]	Semi-flexible elements[b]	Elements with rigid means of suspension	Adjacent structure of swing device
Free-swinging elements[a]	450	450	450	300
Semi-flexible elements[b]	450	300	300	300
Elements with rigid means of suspension	450	300	300	300

[a] Free-swinging elements are usually fixed by one flexible means of suspension, allowing the user to swing in various directions. Examples of free-swinging elements are ropes for climbing and monkey swings.

[b] Semi-flexible elements are usually fixed by more than one flexible means of suspension. Examples of semi-flexible elements are traditional swing seats and trapeze bars.

For adjustable means of suspension, the measurement shall be taken with the swing element adjusted to the most onerous height, unless the manufacturer specifies a maximum height in the instructions.

For a flexible swing element, the fixture shown in Figure 14 shall be used to simulate a typical load.

4.7.6

Replace the first paragraph as follows.

4.7.6 Lateral stability of swing elements

This requirement does not apply to swing elements with rigid means of suspension or to swing elements with a single suspension point.

Table 2

Replace as follows.

4.7.7 Minimum clearance between swing elements and the ground

Table 2 — Minimum clearances between swing elements and the ground

Dimensions in millimetres

Swing element	Clearance from the ground surface
Any part of a swing element where the crossbeam height is 1 200 mm or less	200
Seating surface of a swing element where the crossbeam height is greater than 1 200 mm	350
Footrests of a swing element where the crossbeam height is greater than 1 200 mm	250

6.4.1

Replace as follows.

6.4.1 Principle

Swing elements are raised and allowed to swing to strike a test mass. The signal emitted by an accelerometer during each impact is processed (cut-off frequency of 10 kHz) to determine the peak value of acceleration. The impact area between the swing element and the test mass is measured and the surface compression is calculated.

Annex A

Add a new subclause as follows.

A.4.7.7 Minimum clearance between swing elements and the ground

For swings with a crossbeam height of 1 200 mm or less, a lower ground clearance is allowed because:

— the swing is intended to be used by young children who are not able to swing by themselves and are not likely to fall out because of the construction of the swing seat;

— the forces involved are very low;

— a higher ground clearance would make the swing element too short to provide sufficient swinging.

The ground clearance of 250 mm for footrests of a swing element where the crossbeam height is greater than 1 200 mm provides clearance for a prone child up to 14 years of age. According to a study of physical characteristics of children[4], the chest depth of a 95th percentile 13-year-old is 221 mm and the head length of a 95th percentile 13-year-old is 198 mm.

This clearance is different to the 200 mm provided in ASTM F1148 due to the different age ranges of children to which the standards apply. ASTM F1148 applies to children aged 18 months to 10 years, while this document applies to equipment intended for children up to 14 years of age.

Bibliography

Add a new reference as follows.

[4] *Physical Characteristics of Children As Related to Death and Injury for Consumer Product Design and Use.* UM-HSRI-BI-75-5 Final Report Contract FDA-72-70 May 1975

ICS 97.200.50

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