

केन्द्रीय मुहर विभाग-2

संदर्भ -: केमूवी-2/16:9873 (Part 4)

05 04 2022

विषय: IS 9873 (Part 4):2017 (Safety of Toys Part 4 Swings, Slides and Similar Activity Toys for Indoor and Outdoor Family Domestic Use) के amendment no. 1 के अनुपालन के दिशानिर्देश

यह उपरोक्त विषय के संदर्भ में है।

सक्षम अधिकारी द्वारा अनुमोदित दिशानिर्देश अनुपालन हेतु संलग्न है।

सभी क्षेत्रीय/शाखा कार्यालयों से अनुरोध है की दिशानिर्देशों का तत्काल प्रभाव से अनुपालन सुनिश्चित करें।

**आदित्य दास
वैज्ञानिक D**

प्रमुख (केमूवी 2)

सभीक्षेत्रीय/शाखा कार्यालय/प्रयोगशालाएँ/PCD/LRMD

CENTRAL MARKS DEPARTMENT-2

OurRef:CMD-2/16:9873 (Part 4)

05 04 2022

Subject: Guidelines for implementation of amendment no. 1 to IS 9873 (Part 4):2017 (Safety of Toys Part 4 Swings, Slides and Similar Activity Toys for Indoor and Outdoor Family Domestic Use)

This has reference to the subject mentioned above.

The Competent Authority has approved the enclosed Guidelines for implementation.

All ROs/BOs are requested to ensure the implementation of the above Guidelines with immediate effect.

**(Aditya Das)
Scientist D**

Head (CMD-2)

All ROs/BOs/Labs/PCD/LRMD

CENTRAL MARKS DEPARTMENT-2

Our Ref: CMD-2/16:9873 (Part 4)

Date: 05 04 2022

Subject: Guidelines for implementation of Amendment no. 1 to IS 9873 (Safety of Toys Part 4 Swings, Slides and Similar Activity Toys for Indoor and Outdoor Family Domestic Use)

1. Amendment no.1 to IS 9873 (Part 4):2017 has been published and implemented from 21st March 2022.
2. Through this amendment, the major changes to the standard are as follows

Clause No.	Changes
6.1.5.2, Figure 21	Size of the barbell weight in the Pendulum test apparatus for toddler swing has been changed from approximately 30 mm to maximum 210 mm
3.16, 3. 17, Figure 31	Diagrammatic representation of a swing in Fig 21 has been modified
4.7.5	Requirement for Minimum clearance between adjacent swing elements and adjacent structures has been modified
4.7.6	Clause for Lateral stability of swing elements has been modified to add that it does not apply to swing elements with a single suspension point
4.7.7	Requirement for Minimum clearance between swing elements and the ground has been modified
6.4.1	Principle for the Determination of impact from swing elements has been modified
A 4.7.7	Rationale for the test of Minimum clearance between swing elements and the ground has been added
Bibliography	In the bibliography, a reference to 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 has been added

3. No change is required in the existing product manual for safety of toys due to the above amendment.
4. Since there are only minor changes to the standard on account of this amendment, BOs are requested to inform the concerned applicants and licensees for safety of toys (who have IS 9873 (Part 4) in their scope) regarding the implementation of this amendment and ensure its implementation, as applicable.

Aditya Das
Sc. D

Head (CMD-2)
DDG (Certification)
ROs/BOs

AMENDMENT NO. 1 FEBRUARY 2022

TO

IS 9873 (PART 4) : 2017/ISO 8124-4 : 2014 SAFETY OF TOYS

**PART 4 SWINGS, SLIDES AND SIMILAR ACTIVITY TOYS
FOR INDOOR AND OUTDOOR FAMILY DOMESTIC USE**

This Amendment has been brought out in view of Amendment 1 and 2 to ISO 8124-4 : 2014, issued by the International Organization for Standardization (ISO).

Price Group 3

Safety of toys —

Part 4:

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

AMENDMENT 1

6.1.5.2, Figure 21

Replace item 8 of the key with the following:

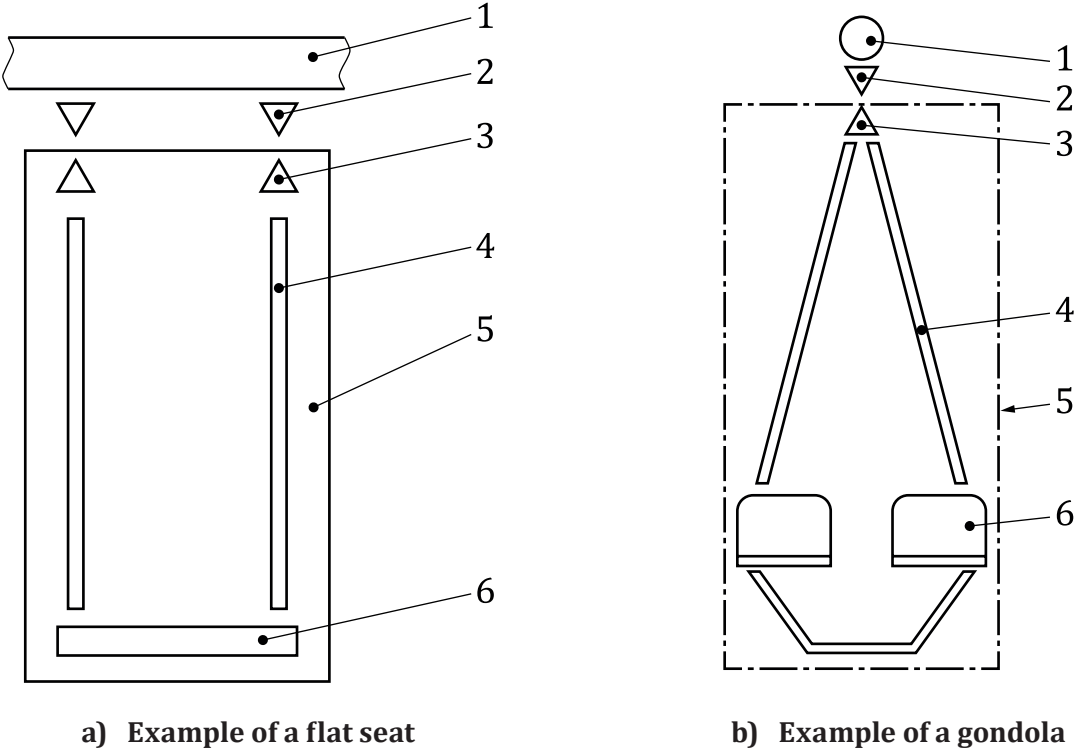
2 × 4,5 kg barbell weights – maximum 210 mm diameter and approximately 25 mm thickness

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.



- 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