



SLOVENSKI STANDARD
oSIST prEN ISO 25649-6:2021
01-december-2021

**Plavajoči pripomočki za prosti čas, ki se uporabljajo na vodi in v njej - 6. del:
Dodatne posebne varnostne zahteve in preskusne metode za pripomočke razreda
D (ISO/DIS 25649-6:2021)**

Floating leisure articles for use on and in the water - Part 6: Additional specific safety requirements and test methods for Class D devices (ISO/DIS 25649-6:2021)

Schwimmende Freizeitartikel zum Gebrauch auf und im Wasser - Teil 6: Zusätzliche besondere sicherheitstechnische Anforderungen und Prüfverfahren für Artikel der Klasse D (ISO/DIS 25649-6:2021) **(standards.iteh.ai)**

Articles des loisirs flottants à utiliser sur ou dans l'eau - Partie 6: Exigences de sécurité et méthodes d'essai complémentaires propres aux dispositifs de Classe D (ISO/DIS 25649-6:2021)

Ta slovenski standard je istoveten z: prEN ISO 25649-6

ICS:

| | | |
|-----------|---|------------------------------------|
| 97.220.40 | Oprema za športe na prostem in vodne športe | Outdoor and water sports equipment |
|-----------|---|------------------------------------|

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DRAFT INTERNATIONAL STANDARD

ISO/DIS 25649-6

ISO/TC 83

Secretariat: DIN

Voting begins on:
2021-10-01Voting terminates on:
2021-12-24

Floating leisure articles for use on and in the water —

Part 6: Additional specific safety requirements and test methods for Class D devices

*Articles des loisirs flottants à utiliser sur ou dans l'eau —**Partie 6: Exigences de sécurité et méthodes d'essai complémentaires propres aux dispositifs de Classe D*

ICS: 97.220.40

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ISO/CEN PARALLEL PROCESSING



Reference number
ISO/DIS 25649-6:2021(E)

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Published in Switzerland

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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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee TC 83, *Sports and other recreational facilities and equipment*, in collaboration with the European Committee Standardization (CEN) Technical Committee CEN/TC 136, *Sports, playground and other recreational facilities and equipment*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 25649-6:2017), which has been technically revised.

The main changes compared to the previous edition are as follows:

- Scope : exclusion from this document of devices exceeding 4,5 m height due to risks;
- The normative references in [Clause 2](#) and in the entire document are updated;
- Terms and definitions [Clause 3](#) is updated, with addition of new elements;
- Sub-clause [4.2.1](#), update of the requirements regarding the force to apply for the test method;
- Sub-clause [4.5.3.1](#), integration of new requirements regarding the residual buoyancy for structure > 1,5 m height;
- Creation of the new sub-clause [4.5.5.6](#) regarding products with climbing functions;
- Creation of a new sub-clause [4.5.8.1](#) regarding water depth information;
- Creation of a new sub-clause [4.5.8.2](#) providing water depth calculation for specific products;
- New requirements in the sub-clause [4.5.11.1](#) regarding the repair kit;
- Modification of the [Clause 5](#) :
 - Modification of requirements regarding the provision of instruction manual in case of module/modular arrangement (system);

- New recommendation in alinea s) for the use of buoyancy vest;
- Update of [Annex A](#) (A.1 & A.2) with Figures of new products existing on the market,
- Addition of [Annex B](#), regarding specific information for devices exceeding 4,5 m height;
- Addition of an Informative [Annex ZA](#) regarding the correspondence between this European Standard and Commission Decision No 2005/323/EC of 21/04/2005.

A list of all parts in the ISO 25649 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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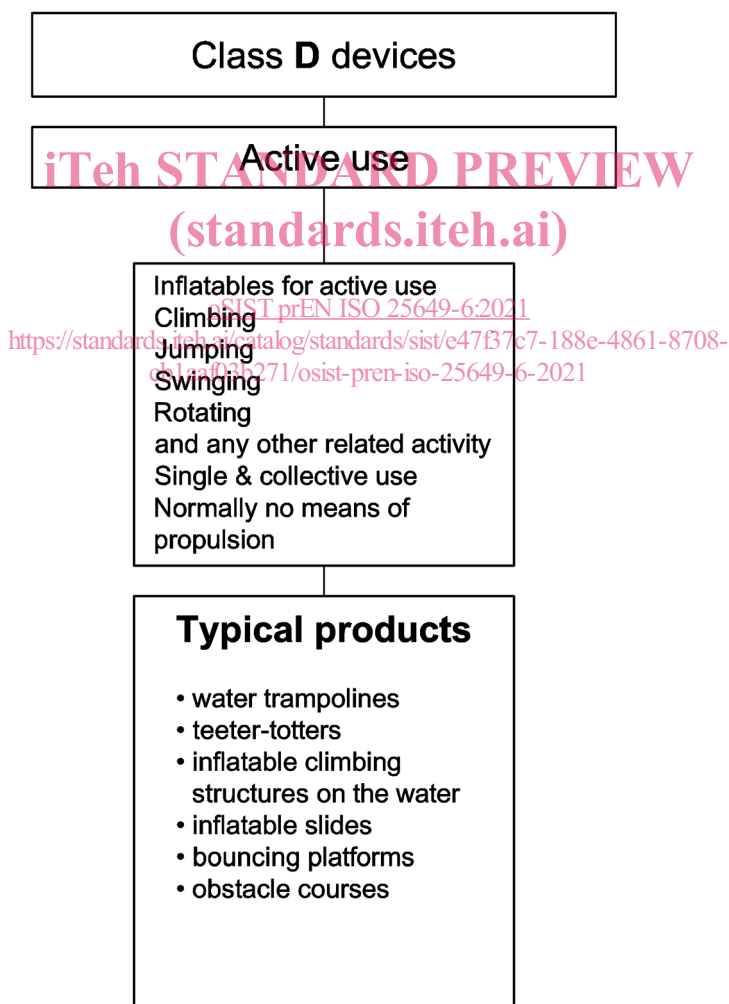
Introduction

The products described in this document are characterised by their enormous size and intended collective use. Therefore, the majority of safety requirements concentrate on floating stability under full and single sided load, collision of users, entrapment and entanglement issues as well as safety distances and sufficient water depth in relation to jumping and potential falling heights provided by the various “action modules”. Another issue is the assembly of these stand-alone modules to large and complex activity courses. The assembly creates entrapment risks at the interfaces and needs to be assessed and regulated under the aspect of closing those interfaces.

Consumer information related to safe use is an important supplement.

Class D devices are applicable to persons older than 36 months with the restriction of the capability to swim. Class D devices are intended to be anchored in position or free floating. They are designed for active use on the water surface. Characteristics for Class D devices are especially the active use. Jumping, playing, climbing and any other related activity on the inflatable are part of the use.

Interior Structure Class D



The risk assessment for entire part 6 is shown in [Table 1](#).

Table 1 — Introductory risk analysis

| No. | Typical products | Place of usage | Function; range of usage; target/age group | Type of movement/propulsion | Position of user in regard to the equipment, elevation above water | Predictable misuse | Partial risk related to water environment | Final risk | Protection aims standard/regulation |
|---|---|---|--|--|---|--|--|------------|--|
| Trampoline D (D1, D2) Climbing/ jumping structures | Trampolines on the water of various sizes | Sea shore/ close to shore; lakes; smoothly running rivers; big pools; fun parks | Jumping on devices/in the water, dual use: resting, use as platform all age groups, swimmers | Static use on a determined place, device moored may also be free floating; users jumping; all sorts of movements | Considerable elevation depending on the size of the device and jumping height; entrapment through swimming underneath the structure | Use by non swimmers; overcrowding; insufficient water depth; impact in water, collision; entrapment through swimming underneath device, lack of supervision (small children) | Collision of persons; collision with objects (anchoring); insufficient water depth; safety distances; dangerous proximity to other objects; shallow water; re-embarking (grab handles) | DROWN-ING | Age limits; swimmers only; no protruding parts; no entrapment; cushioning; warnings; supervision of small children |
| | Large floatable structures for action and fun, mainly climbing jumping, rollicking; bouncing castles on water | Sea shore/ close to shore; lakes; rivers; big pools; fun parks | All age groups, swimmers | Devices static (drifting or moored); users are jumping; climbing; sliding; bouncing; (see also trampolines) | Depending on the size of the device; height up to 4 m are likely; jumps and falls are part of the game | Depending on the size of the device; heights up to 4 m are likely; jumps and falls are part of the game | As above | | Supervision; no rules are known for on the water equipment; safety transfers are likely from land bound toy-structures |

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Floating leisure articles for use on and in the water —

Part 6:

Additional specific safety requirements and test methods for Class D devices

1 Scope

This document is applicable for Class D floating leisure articles for use on and in water according to ISO 25649-1:20xx regardless whether the buoyancy is achieved by inflation or inherent buoyant material.

This document is to be applied with ISO 25649-1:20xx and ISO 25649-2:20xx.

NOTE 1 Typical products forming Class D (see [Annex A](#)):

- inflatable climbing structures on the water;
 - bouncing platforms;
 - inflatable slides;
 - water trampolines;
 - teeter totters;
 - obstacle courses.
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NOTE 2 Typical places for application:

- pools;
- lakes, ponds;
- open sea;
- sea shore (no offshore winds, no currents).

The following devices are excluded from the scope of this document:

- devices exceeding 4,5 m height with regard to those risks resulting from extreme height (see [Annex B](#)).

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.

ISO 25649-1:20xx, *Floating leisure articles for use on and in the water — Part 1: Classification, materials, general requirements and test methods*

ISO 25649-2:20xx, *Floating leisure articles for use on and in the water — Part 2: Consumer information*

ISO 25649-3:20xx, *Floating leisure articles for use on and in the water — Part 3: Additional specific safety requirements and test methods for Class A devices*

EN 913:2018, *Gymnastic equipment — General safety requirements and test methods*

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FprEN 13138-3:2021, *Buoyant aids for swimming instruction — Part 3: Safety requirements and test methods for swim seats into which a user is positioned*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 25649-1:2021 and the following apply.

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

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

3.1 inherent buoyancy
upthrust provided by material which is less dense than water or by sealed chambers that are not inflatable and are filled with air or gas

[SOURCE: FprEN 13138-1:2021, 3.2]

3.2 residual buoyancy
provision of remaining buoyancy in case of a defect of any buoyancy chamber

3.3 means to assist re-embarkation
design feature that facilitates getting back on the floating leisure article from an in-water position, regardless whether the buoyant structure is fully inflated or any chamber is deflated

3.4 safety pad
trampoline cover for springs, metal frame and fringe zone of the jumping surface

3.5 available area
area on or inside a floating article which can be unrestrictedly used for user accommodation when taking the intended posture(s)

3.6 multiple use products
any products that are intended to be used for more than one purpose (jumping, resting, climbing, etc.)

3.7 permanent air flow articles
floating leisure articles that use a power source to continuously inflate a product maintaining its shape

3.8 inherent buoyant material
non-crosslinked (closed-cell) foam or other materials enclosed in (a) sealed compartment(s) in the hull which has a specific weight less than fresh water

Note 1 to entry: Inflatable made from inherent buoyant material is a buoyant structure (hull) achieving all or parts of its intended shape and buoyancy from soft foam, hard foam or sealed chambers filled with air, gas or granules.

3.9 unsupported materials
materials which have no reinforcing textiles