UJUVVAHENDID VABA AJA VEETMISEKS VEE PEAL JA VEES. OSA 6: SPETSIAALSED LISAOHUTUSNÕUDED JA -KATSEMEETODID D KLASSI VAHENDITELE

Floating leisure articles for use on and in the water - Part 6: Additional specific safety requirements and test methods for Class D devices (ISO 25649-6:2024)

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 25649-6:2024 sisaldab Euroopa standardi EN ISO 25649-6:2024 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 25649-6:2024 consists of the English text of the European standard EN ISO 25649-6:2024.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 27.11.2024.	Date of Availability of the European standard is 27.11.2024.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Floating leisure articles for use on and in the water - Part 6: Additional specific safety requirements and test methods for Class D devices (ISO 25649-6:2024)

Articles de 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 25649-6:2024)

Schwimmende Freizeitartikel zum Gebrauch auf und im Wasser - Teil 6: Zusätzliche besondere sicherheitstechnische Anforderungen und Prüfverfahren für Artikel der Klasse D (ISO 25649-6:2024)

This European Standard was approved by CEN on 2 November 2024.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN ISO 25649-6:2024 E

European foreword

This document (EN ISO 25649-6:2024) has been prepared by Technical Committee ISO/TC 83 "Sports and other recreational facilities and equipment" in collaboration with Technical Committee CEN/TC 136 “Sports, playground and other recreational facilities and equipment” the secretariat of which is held by DIN.

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 May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

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 supersedes EN ISO 25649-6:2017.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 25649-6:2024 has been approved by CEN as EN ISO 25649-6:2024 without any modification.

Contents

Page

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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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 ISO/TC 83, *Sports and other recreational facilities and equipment*, in collaboration with the European Committee for 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 are as follows:

— update of the scope;

— update of Clause 2;

— update of Clause 3;

— in 4.2.1, update of the requirements regarding the force to apply for the test method;

— in 4.5.3.1, addition of requirements on the residual buoyancy for structure > 1,5 m height;

— creation of 4.5.5.6 on products with climbing functions;

— creation of 4.5.8.1 on water depth information;

— creation of 4.5.8.2 on water depth calculation for specific products;

— in 4.5.11.1 addition of requirements on the repair kit;

— update of Clause 5;

— update of Annex A,

— creation of Annex B on specific information for devices exceeding 5 m height;

— creation of Annex C and specific requirement for pool use of water parc modules.

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.

Introduction

The products described in this document are characterized by their enormous size and intended collective use. Therefore, most 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 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 who are able 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. Class D devices are especially designed for active use, including jumping, playing, climbing and any other related activity on the inflatable.

See Annex A for examples of typical products forming Class D. See Figure 1 for interior structure of Class D devices.

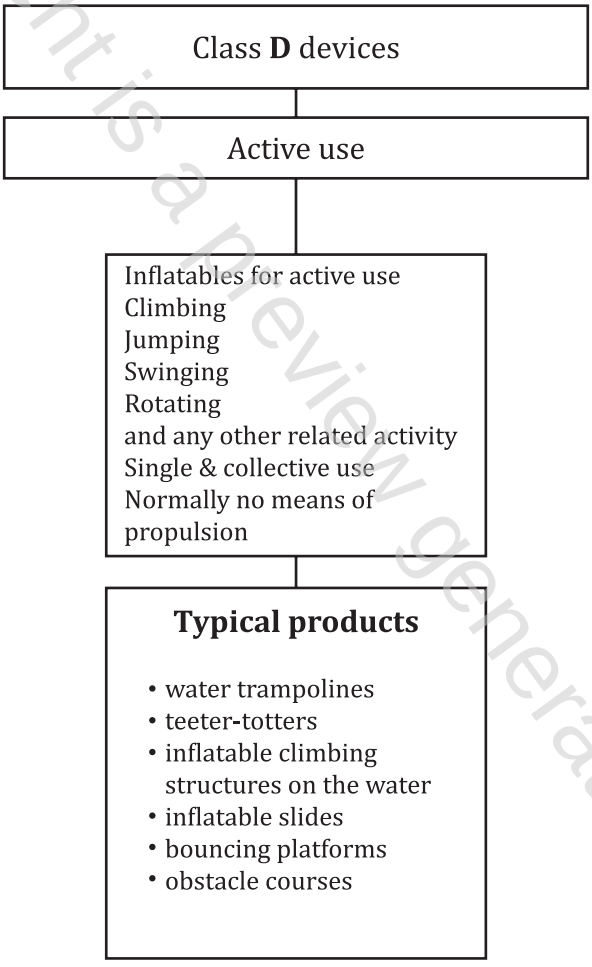

Figure 1 — Interior structure of Class D devices

The risk assessment for this document is shown in Table 1.

Table 1 — Introductory risk analysis

Class	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 or close to shore; lakes; smoothly running rivers; big pools; amusement 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)	DROWNING	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; amusement 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

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 specifies safety requirements and test methods related to materials, safety, performance and consumer information for classified floating leisure articles for use on and in the water according to ISO 25649-1:2024.

This document is applicable to Class D floating leisure articles for use on and in water according to ISO 25649-1:2024 regardless whether the buoyancy is achieved by inflation or inherent buoyant material.

NOTE 1 Typical products forming Class D (see Figure A.1 and Figure A.2):

— inflatable climbing structures on the water;

— bouncing platforms;

— inflatable slides;

— water trampolines;

— teeter totters;

— obstacle courses.

NOTE 2 Typical places for application:

— pools;

— lakes, ponds;

— open sea;

— sea shore (no offshore winds, no currents).

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. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

ISO 25649-1:2024, *Floating leisure articles for use on and in the water — Part 1: Classification, materials, general requirements and test methods*

ISO 25649-2:2024, *Floating leisure articles for use on or in the water — Part 2: Consumer information*

ISO 25649-3:2024, *Floating leisure articles for use on and in the water — Part 3: Additional specific safety requirements and test methods for Class A devices*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 25649-1:2024 and the following apply.

ISO and IEC maintain terminology 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
residual buoyancy
provision of remaining buoyancy in case of a defect of any buoyancy chamber

3.2
re-embarkation aids
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

3.3
safety pad
trampoline cover for springs, metal frame and fringe zone of the jumping surface

3.4
available area
area on or inside a floating article that can be unrestrictedly used for user accommodation when taking the intended posture(s)

3.5
load capacity
value stated by the manufacturer representing the maximum load on a buoyant structure under which a safe floating position is assured

3.6
unsupported material
materials that have no reinforcing textiles

3.7
module
functional element of floating leisure articles that can be used as a stand-alone device or integrated with other functional elements into a complex *modular arrangement* (3.8) of any optional shape

Note 1 to entry: The two major types of modules are flat connection modules and action modules.

3.8
modular arrangements
individually and variable combination of single floating leisure article *modules* (3.7), flat connection and action modules in a way that a multi-functional water park is created and can be modified by exchanging an optional number of modules when needed

Note 1 to entry: Action modules include climbing module, water slide module, trampoline module, swing module, etc.