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Floating leisure articles for use on and in the water —

Part 3: Additional specific safety requirements and test methods for Class A devices

Articles de loisirs flottants à utiliser sur ou dans l'eau —

Partie 3: Exigences de sécurité et méthodes d'essai complémentaire propre aux dispositifs de Classe A

Reference number
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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).

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.

ISO 25649-3 was prepared by the European Committee Standardization (CEN) Technical Committee CEN/TC 136, *Sports, playground and other recreational facilities and equipment*, in collaboration with ISO Technical Committee TC 83, *Sports and other recreational facilities and equipment*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

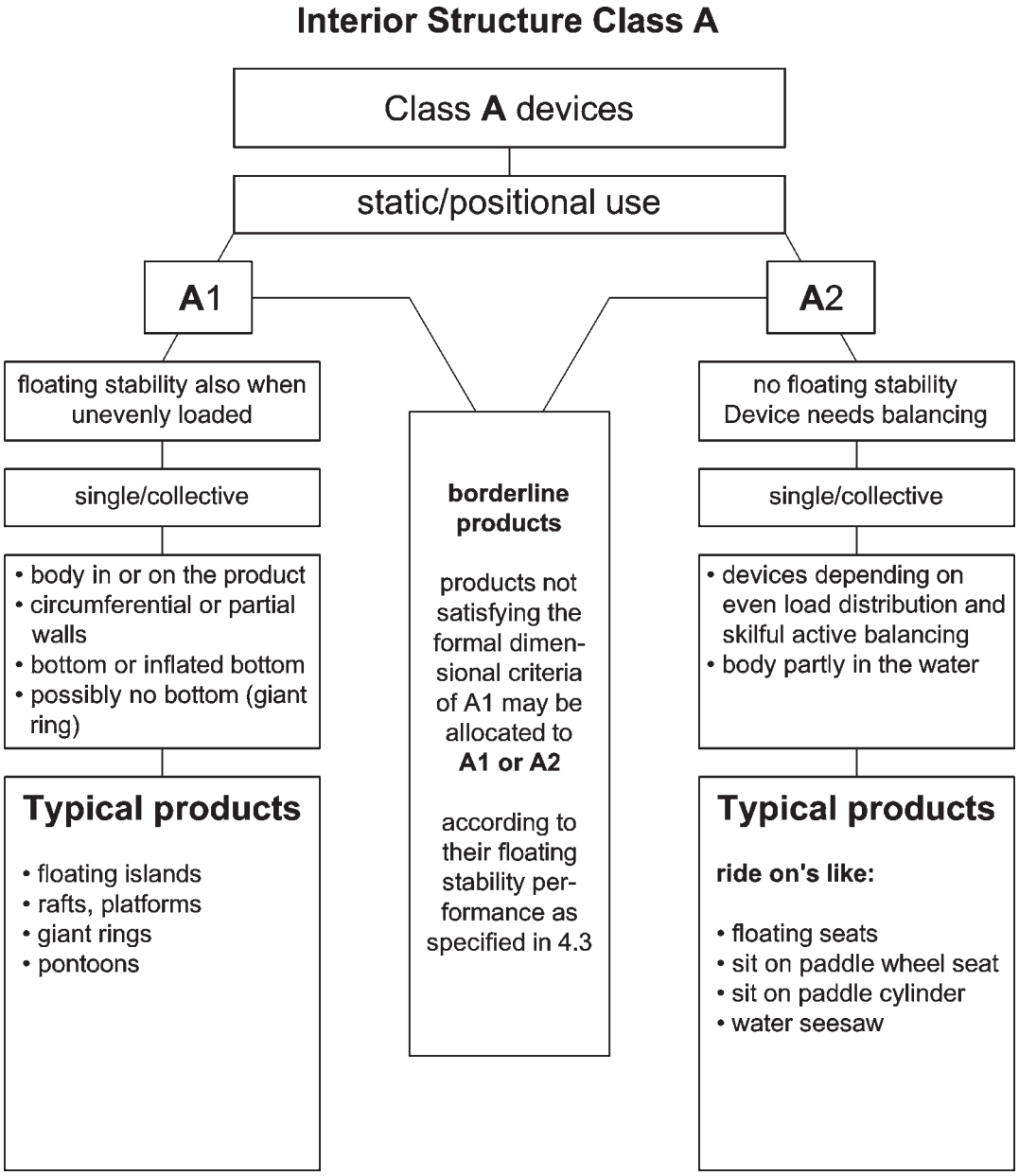
A list of all the parts in the ISO 25649-series can be found on the ISO website.

Introduction

According to the nature and the intended use of the products dealt with in this document the technical requirements are focused on space per person, floating stability matters and residual buoyancy in case of an emergency.

It needs to be taken into account that some of the products provide dual or multiple use features.

Comprehensive consumer information requirements complete the requirement profile of the document and include basic purchase information on whether a product provides floating stability or needs to be balanced by the user.



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 regarding equipment and elevation above water	Predictable misuse	Partial risk related to water environment	Final risk	1.1 Protection aims; 1.2 Related standard/regulation
A1	Floating inflatable islands; recreational raft; platform/ pontoon, etc.	Sea shore, close to shore; lakes; smoothly running rivers; public/ private pools; ponds	Relaxing, resting on the water; sunbathing; basis for bathing and swimming/ playing; device providing high level of floating stability; single and collective use; all age groups, swimmers	Static use within limited area; little action; movement by pushing through swimming strokes only; no mechanical means of propulsion	On or in (side walls) the device, laying, sitting, no direct body fit; grab handles might exist but resting does not depend on gripping/ balancing; no dangerous height of fall	Dangerous distance from the bank/ shore; use in currents and/ or dangerous offshore winds; use by non-swimmers; fall over board; no diving platform!	Unnoticed drifting to open waters; falling asleep and consequently extreme sunburn, etc.; capsizing; skin irritation due to long duration of skin contact/ dangerous substances in contact with skin; climbing back?; hypothermia; cold shock	DROWNING	Floating stability; minimum buoyancy; residual buoyancy; space, safety handles/lines; anchorage; warning notes, labelling, swimmers only, age restriction according to ISO 6185-1, ISO 6185-2 and ISO 6185-3
A2	Large buoyant structures	Sea shore/ close to shore, lakes, public/ private pools; ponds	Action, playing in the water; balancing children; collective and single use; all age groups, swimmers	Drifting; propulsion only by swimming strokes or third party	On the device; loose fit via handles; no dangerous height	Use by non-swimmers; use In current, canal, lack of supervision	Drifting away in open waters due to wind and/or current; devices provokes use in deep; used by non-swimmers; falling into deep water		Labelling, residual buoyancy, grab handles, supervision; warnings
A1/A2	Air mattress for use in water; floatable pool loungers; floating seating structures; giant rings/ tubes	Sea shore close to the shore; lakes, public/ private pools; ponds sea	Resting on the water; observation of under water environment; play; mainly single use; floating stability depends on design; all age groups, swimmers	Normally no mechanical means of propulsion but possible; drifting or propulsion by swimming strokes; seats might be equipped with pedals (wheel propulsion)	On/in the device; device is clung on; device is held; mainly a near horizontal posture sitting; no relevant elevation above water level	See A1/A2	See A1/A2		See A1/A2 No rule is known to provide technical substance

Floating leisure articles for use on and in the water —

Part 3:
Additional specific safety requirements and test methods for Class A devices

1 Scope

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

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

NOTE 1 Typical products forming Class A (see Annex A):

- "Floating Islands" in near round or square shaped forms decorated with palm tree, sun shade, etc. high superstructure;
- large floats/rafts in various forms from round to square;
- large floating tubes, giant tubes (inflatable or inherently buoyant);
- floating arm chairs, seats and sun beds;
- air mattresses for use on the water;
- recreational rafts/floating platforms/pontoons.

NOTE 2 Typical places for application:

- pools;
- protected areas of lakes, ponds;
- protected area 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.

ISO 25649-1:2017, *Floating leisure articles for use on and in the water — Part 1: Classification, materials, general requirements and test methods*

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

3 Terms and definitions

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

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

— ISO Online browsing platform: available at http://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
residual buoyancy
provision of remaining buoyancy in case of a defect of any buoyancy chamber

3.2
floating stability
no user action required to maintain safe floating

Note 1 to entry: One or several users can be safely on or in the device even if the weight is not evenly distributed.

Note 2 to entry: In accordance with intended use.

3.3
device to be balanced by the user
user action required to create safe floating

Note 1 to entry: In accordance with intended use.

3.4
escape
easy and complete separation between the user and the device in case of capsizing of the device or system without hindrance through any part or feature of the floating device

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

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

3.7
inherent buoyant material
non-crosslinked (closed-cell) foam or other materials enclosed in (a) sealed compartment(s) in the hull which have a specific weight less than water

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

4 Safety requirements and test methods

4.1 General

Construction of a floating leisure article shall be such that it corresponds in terms of design, dimensions, safety, strength and durability for its intended use. The requirements set out in this standard were chosen to ensure compliance with these considerations. If inflatable floating leisure articles shall provide buoyancy in several components then requirements apply to all components. Floating leisure articles shall provide residual buoyancy if one air chamber fails. This residual buoyancy shall maintain the safety of the device even if its function is lost. The following safety requirements are therefore related to:

— design;

— sizing;

— materials;

— strength;

— performance;

— information.

In individual cases, due to the unpredictability, valency and indeterminability of existing and future concrete products, a corresponding choice shall be made.

Design and appearance of floating leisure articles shall not change the intended primary function of these floating leisure articles nor introduce a toy play value.

4.2 Design, sizing, admissible number of users and maximum load capacity

4.2.1 General

Devices shall be marked according to their size and/or number of permitted users and maximum load capacity.

4.2.2 Sizing

4.2.2.1 Requirements

If a specific size/body weight correlation between user and device is relevant, the marking shall be in accordance with the range of body weights. The size/body weights of the user shall be indicated on the product by completing the relevant boxes of the appropriate safety information symbol “User’s body weight range” as specified in ISO 25649-2.

4.2.2.2 Test method

Check for correct marking and completion.

4.2.3 A1-products, space per person and admissible number of users

4.2.3.1 Requirements

A1-products shall be labelled with regard to the intended posture — lying/sitting — of the user(s) and the maximum permissible number of users. The minimum space for a user in lying posture shall correspond to a flexible template (adult/child) the dimensions of which are specified in ISO 25649-1:2017, A.1.1. The minimum space for a sitting user shall correspond to the template (adult/child) as specified in ISO 25649-1:2017, A.1.2. In cases of combined use (sitting and lying), the template for a lying person shall be applied to determine the available area.

Templates may exceed the outer circumference of the device to a total amount of 30 %. This amount is divided in 15 % of template length for the head area and 15 % of template length for the leg area (see shaded area of templates in ISO 25649-1:2017, Annex A). The angle between centre line of the template and tangential of a possible back rest, board wall, etc. shall be greater than 60° (see Figure 1).

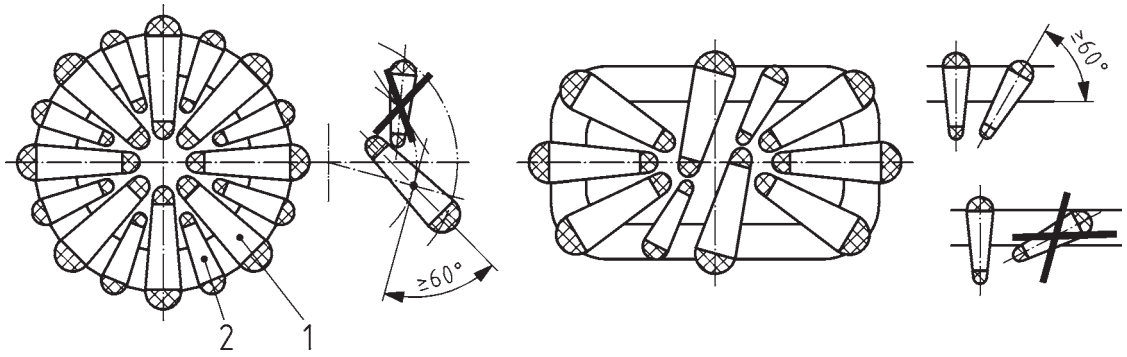
The total amount of users determined by the templates shall not contradict to the load capacity and floating stability of the device.

Space requirement using templates is not applicable for ride-on devices where distinct upright seats and/or seating positions are imposed by the device.

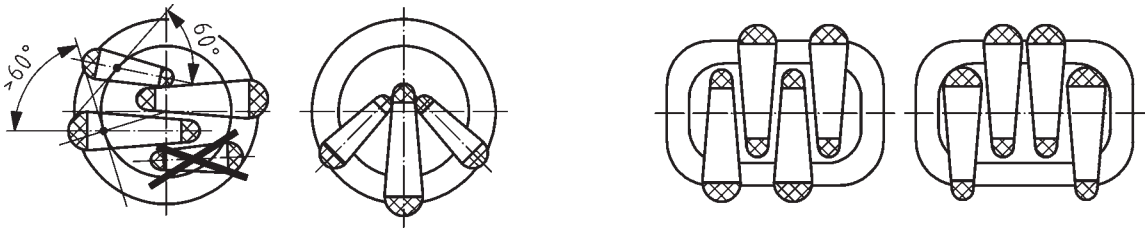
4.2.3.2 Test method

Testing shall be done by applying the relevant templates as specified in ISO 25649-1:2017, A.1 and shown in Figure 1. Templates shall be stretched out over the area available to the user without overlapping.

Templates may be arranged to optimize the amount of users and the mix of adults and children without contradicting to the load capacity of the device. Blank areas of templates shall be completely inside the outer circumference. Check by visual inspection for appropriate labelling in accordance with safety information symbols “Number of users, adult/children” and/or “Maximum load capacity” as specified in ISO 25649-2.



a) A1, “Big raft”: 3,8 m in diameter/4,8 m × 2,8 m



b) A1, “Small raft”: 2,5 m in diameter/3 m × 2 m

Key

1 template space per person, adult

2 template Space per person, child

Figure 1 — Available space per person, determination of number of users

4.2.4 A2-products, space per person and admissible number of users

4.2.4.1 Requirements

A-2 products shall provide distinct seat(s) or sitting areas or recognizable space where the user is to be positioned in the intended posture. Seats, etc. of ride-on devices shall be equipped with at least one grab handle for each permissible user.

If the device implies sitting in line of more than one user, the sitting space for each user shall be at least a length of:

— Child = 30 cm if the legs hang down;

— Child = 60 cm if the thighs follow the seat surface.

— Adult = 35 cm if the legs hang down;

— Adult = 70 cm if the thighs follow the seat surface.

4.2.4.2 Test method

Visual inspection and measurement.

4.3 In water performance

4.3.1 Amount of buoyancy and stable floating position

4.3.1.1 Requirements

All devices (A1, A2) shall provide sufficient buoyancy and adequate buoyancy distribution to bear the weight of the intended number of users. Floating devices shall float stable with all test subjects placed on the intended position and posture on the device. The design supporting area shall not be flooded, not applicable if the product is designed to provide a supporting area which is intentionally under water.

Floating leisure articles claiming to provide floating stability (A1) shall additionally meet the test as specified in 4.3.2.2.2. When loaded with the maximum/minimum number of passengers, the device shall maintain the stable floating position as defined in ISO 25649-1:2017, 3.13.

The capability of stable floating performance or the need for balancing shall be marked on the packaging via the relevant pair-safety information symbol “Device provides floating stability” and “Device requires balancing” as specified in ISO 25649-2.

4.3.1.2 Test method

The maximum number of test subjects according to manufacturer's declaration (adults, children) shall be placed within the available area with no part of the body outside the product in a way as shown in Figure 2. If a device is classified for more than one user, the array of all test subjects shall be done by applying the determined postures and positions in a way most likely to cause failure.

If there are distinct sitting/lying positions provided by the device tests subject shall be positioned on this/these place(s) in a way most likely to cause failure.

If a floating article deviates from the shown types a) to h) test positions and postures as shown in Figure 2 shall be applied in consideration of the foreseeable uneven load distribution.

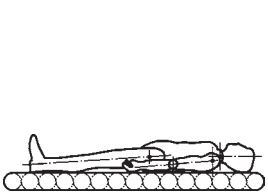
The basic posture of test subjects shall be in accordance with manufacturers declaration (lying/sitting) and in detail in accordance with ISO 25649-1:2017, 5.5.5. If a device allows for several postures, the one most likely to cause failure shall be chosen from the standardised range.

The test shall be repeated with the minimum and maximum load applicable (one child test subject or one adult test subject) if the intended floating position depends by design, e.g. teeter-totter, on a distinct balanced weight distribution in pairs or other even-numbered groups of users.

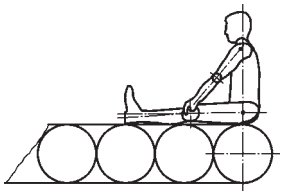
Floating arm chairs, loungers with arm rests, etc. shall be tested so that the test subject(s) is positioned on the determined seat/sitting area but at the utmost side of the seat's sitting area (left or right hand side) as provided by the seat. The test subject shall then lean to the arm rest (side barrier) until this structural part bears the relevant portion of the entire load of the body. Then the outer arm shall be stretched out as to reach for something outside the seat. If the seat is equipped with a paddle wheel propulsion feet shall be positioned on the pedals.

Check whether the device stays in a safe floating position. Verification by assessment panel.

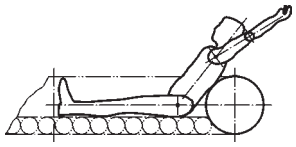
Arm chairs, etc. that do not meet this requirement shall be classified as “Balancing needed” according to the safety information symbols “Device provides floating stability” and “Device requires balancing” specified in ISO 25649-2 because they provide floating stability only under the condition of symmetric load distribution. Drawings are to show position and posture of one test person. Multiple seaters are dealt with according to the specifications in 5.2.



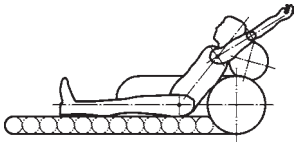
a) Pontoon type, lying only, no walls, posture 3



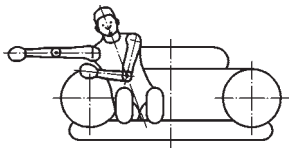
b) Pontoon type, lying/sitting, no walls, posture 4



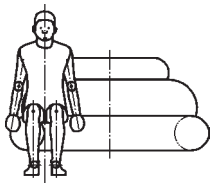
c) Raft type, walls, back rest, posture 4a



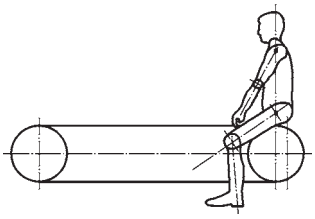
d) Seat/lounger type, rearwards stability back rest and/or arm-rest, posture 4b



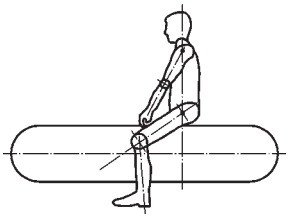
e) Seat/lounger type, sideways stability, back rest and/or arm rest, posture 4c



f) Seat/lounger type, sideways stability, back rest, no arm rest, posture 4d



g) Giant ring type, no walls, no back rest, posture 4e



h) Tube type, no walls, no back rest, posture 4f

NOTE lying position, entire body stretched out, feet, legs, torso, arms, head resting on bottom of available area on centre line and on the outer edge (as basic posture 3);

sitting upright, legs stretched out, hands on knees, torso centre line vertical, head upright (as basic posture 4);

sitting reclined to a back rest, reclining angle according to back rest, arms laid back (variant 4a of basic posture 4);

sitting reclined, reclining angle determined by back and head restarms laid back (variant 4b of basic posture 4);

sitting reclined to an arm rest, reclining angle according to armrest, outer arm reaching out, inner arm resting (variant 4c of basic posture 4); on centre line of arm rest (variant 4d of basic posture 4);

sitting upright at the outer edge of the floating structure, arms to right and left of thighs, legs hanging down (variant 4d of basic posture 4);

sitting upright, body centre line on centre line of air chamber, legs hanging down inside floating ring or frame shaped structure, hands on thighs (variant 4e of basic posture 4);

sitting upright, body centre line on centre line of longitudinal buoyant structure but at the utmost end of the available sitting length, legs hanging down to the right and left of longitudinal structure (variant 4f of basic posture 4);

Figure 2 — A1 products claiming floating stability, determined positions and postures of test subjects in combination with predictable uneven load distribution

NOTE Annex A shows a number of typical wide spread products.

4.3.2 Residual buoyancy of devices claiming floating stability (CASES A, B)

4.3.2.1 General

Where buoyancy is not provided by inherently buoyant material, the device shall have a minimum of two separate air chambers distributing the buoyancy so that the requirements in 4.3.2.2 are met.

4.3.2.2 CASE A, residual buoyancy and stable floating after failure of one air chamber

4.3.2.2.1 Requirements

A1-devices having a lying/seating area (cockpit) fully or partly surrounded by circumferential inflated chambers (walls) regardless of their shape or form which provide an inner wall height of at least 15 cm when measured from top of the inflated bottom to the top of the inflated wall:

a) shall not collapse in a way that the permissible number of users or a single user falls or slides into the water if the air chamber most likely to cause failure is fully deflated;

b) shall allow the permissible number of users to stay safely on the device for at least 10 min;

c) shall retain their function to stay on the device as far as there is an initial function which is relevant with regard to safety (e.g. propulsion to reach the shore).

If the device is made up by several independent components, these requirements apply for each of them. Testing shall be done in accordance with 4.3.2.2.2.

4.3.2.2.2 Test method

Load the device with the maximum/minimum number of users within the available area. Select test persons in accordance with manufacturer's declaration regarding permissible users and in accordance with ISO 25649-1:2017, 5.5. Apply posture 4 as specified in ISO 25649-1:2017, 5.5.5. Deflate completely the air chamber most likely to cause failure by sudden deflation. Check whether the requirements in 4.3.2.2.1 a) to c) are met. Test subjects may take any position on the device in order to stabilize it but maintain posture 4.

Verification by assessment panel.

4.3.2.3 CASE B, residual buoyancy and distinct means to hold on after failure of one air chamber

4.3.2.3.1 Requirements

A1-devices without distinct circumferential air chambers (walls) higher than the available area, CASE B-designs:

a) shall at least provide a residual buoyancy which is sufficient to keep all permissible users somehow afloat on the device regardless of their posture on or in the water when holding onto the device;

NOTE Persons are considered to be still on the device even if parts of the available area onto which they can remain is partly flooded, respectively the device takes a crucial floating angle so that these persons get partly into the water.

b) the achievable floating position shall enable the users to keep their airways above water level without exercising swimming strokes or any other active movements to keep them afloat except holding to the device;

c) there shall be means on the device to grab on for each permissible user;

d) these means shall be available and reachable for each permissible user after immersion.

If the device is made up by several independent components these requirements apply for each of them. Testing shall be done in accordance with 4.3.2.3.2.

Verification by assessment panel.

4.3.2.3.2 Test method

Load the device with the maximum number of users within the available area. Select test persons in accordance with manufacturer's declaration regarding permissible users and in accordance with

ISO 25649-1:2017, 5.5. Apply posture 4 as specified in ISO 25649-1:2017, 5.5.5 or the variation of it [see Figure 2 a) to h) in 4.3.1.2] which corresponds most appropriately to the product design and intended function. If there are no distinct sitting positions, test subjects shall be positioned within the available area according to 4.3.1.2 and in a way most likely to cause failure (uneven load distribution inside the available area). Deflate the air chamber most likely to cause failure by sudden deflation. Check whether the requirements are met after test subjects have fallen into the water and taken action according to 4.3.2.3.1 a) to d).

Verification by assessment panel.

4.3.3 Residual buoyancy of floating leisure articles not claiming floating stability (CASES C, D)

4.3.3.1 CASE C, residual buoyancy

4.3.3.1.1 Requirements

A2-products of floating articles for single and collective use, CASE C-designs:

a) shall at least provide a residual buoyancy which is sufficient to keep all permissible users afloat when holding onto it;

b) the achievable floating position shall enable the users to keep their airways above water without exercising swimming strokes or any other active movements to keep them afloat except holding to the device;

c) there shall be means on the device to grab on for each permissible user;

d) these means shall be available and reachable for each permissible user after immersion.

If the device is made up by several independent components, this requirement applies for each of them.

Testing shall be done in accordance with 4.3.3.1.2.

Verification by assessment panel.

4.3.3.1.2 Test method

Load the device according to the maximum number of users within the available area. Select test persons in accordance with manufacturer's declaration regarding permissible users and in accordance with ISO 25649-1:2017, 5.5. Apply posture 4 or the variation of it (4a to 4e in 4.3.1.2) which corresponds most appropriately to the product design and intended function. If there are no distinct seats, position test subjects within the available area according to 4.3.1.2 and in a way most likely to cause failure through uneven load distribution inside the available area. Deflate the air chamber most likely to cause failure by sudden deflation. Check whether the requirements are met after test subjects have fallen into the water and taken action according to 4.3.3.1.1 a) to d).

Verification by assessment panel.

4.3.3.2 CASE D, residual buoyancy

4.3.3.2.1 Requirements

A2-products of floating articles for single use only, CASE D designs:

a) shall at least provide a residual buoyancy which is sufficient to keep the user when holding on to it after immersion;

b) it shall be shown that the user is able to grab at least the entire remaining buoyant structure or parts of it in a way enabling him to stay safely afloat with the airways above water level without

exercising swimming strokes or any other active movements to keep them afloat except holding onto the device.

If the device is made up by several independent components, this requirement applies for each of them.

Testing shall be done in accordance with 4.3.3.2.2.

Verification by assessment panel.

4.3.3.2.2 Test method

Load the device with the maximum number of users within the available area. Select test persons in accordance with manufacturer's declaration regarding permissible users and in accordance with ISO 25649-1:2017, 5.5. Apply posture 4 or the variation of it (4a) to e) in 4.3.1.2) which corresponds most appropriately to the product design and intended function. If there are no distinct seats, position test subjects within the available area according to 4.3.1.2 of the present standard and in a way most likely to cause failure through uneven load distribution inside the available area. Deflate the air chamber most likely to cause failure by sudden deflation. Check whether the requirements are met after test subject has fallen into the water and taken action according to 4.3.3.2.1 a) to b).

Verification by assessment panel.

4.3.4 Capsizing and escape

4.3.4.1 Escape from the device (body entrapment, leg/foot entanglement)

In normal foreseeable use and during incidents of sudden capsize none of the users shall become entrapped, entangled or otherwise hindered from complete separation from the device. For this purpose, the standard is focusing on the following known major entrapment risks:

— foot/leg entrapment;

— head/neck entrapment;

— torso entrapment;

— entanglement due to protruding parts.

There shall be no entrapment/entanglement of the test devices/test probes if they are applied on the product in its normal working position.

4.3.4.2 Test method for foot/leg entrapment

Testing shall be done in accordance with ISO 25649-1:2017, 5.2.

4.3.4.3 Test method for torso entrapment

Testing shall be done in accordance with ISO 25649-1:2017, 5.3.

4.3.4.4 Test method for protruding parts

Testing shall be done in accordance with ISO 25649-1:2017, 5.4.

4.3.5 Grab handles and safety lines (not applicable to air mattresses)

4.3.5.1 Requirements

Floating leisure articles of CASES A, B and C in 4.3.2.2; 4.3.2.3 and 4.3.3.1 shall be fitted with means of holding (grab handles, safety lines, etc.) for each permissible user which are reachable from an on-

board position and/or also for persons in the water. Safety lines shall be arranged in a way that they can be grabbed from an in-water position and shall not cause entrapment (see 4.3.2.2). The means of holding shall be provided regardless of the floating stability of the device and shall be reachable also in capsized condition of the device. Testing in accordance with 4.3.5.2.

4.3.5.2 Test method

Visual check during one of the in water tests above. Verification by assessment panel.

4.3.6 Re-embarkation from the water in normal use and failure of one air chamber in CASE A1

4.3.6.1 Requirements

Floating devices shall be so designed that a normal user (test subject) is able to re-embark on the device. Testing shall be done in accordance with 4.3.6.2.

Not applicable to A.2 products or borderline products falling under A.2.

4.3.6.2 Test method

All test subjects of the test panel shall show that it will be possible to climb back onto the device. Verification by assessment panel.

4.3.7 Extreme high super structure (wind, drift)

4.3.7.1 Requirements

Floating articles of Class A having a superstructure which exceeds 100 cm above water level shall be restricted to pool use by marking them with the safety information symbol “Pool use only” according to ISO 25649-2.

4.3.7.2 Test method

Measure height of super structure of the floating device from floor to which the device is put to top of superstructure and check for safety information symbol if need be.

4.3.8 Anchorage

4.3.8.1 Requirements

If a floating leisure article is equipped with an anchoring device, it shall be capable to hold the device in place up to a pulling force of 500 N. Testing shall be done according to 4.3.8.2.

4.3.8.2 Test method

Put the device in water with a depth of preferable (200 ± 20) cm. Activate anchoring device according to suppliers instructions. Length of anchoring rope shall be 5 times the water depth but not shorter than 6 m. For compensating the unnatural smooth surface of the test pool bottom fix a threshold board (preferably a steel rod) of 3 cm diameter or a board with the dimensions of (3 cm × 10 cm × 60 cm) on the pool bottom in a way that it hampers the anchoring bag from slipping.

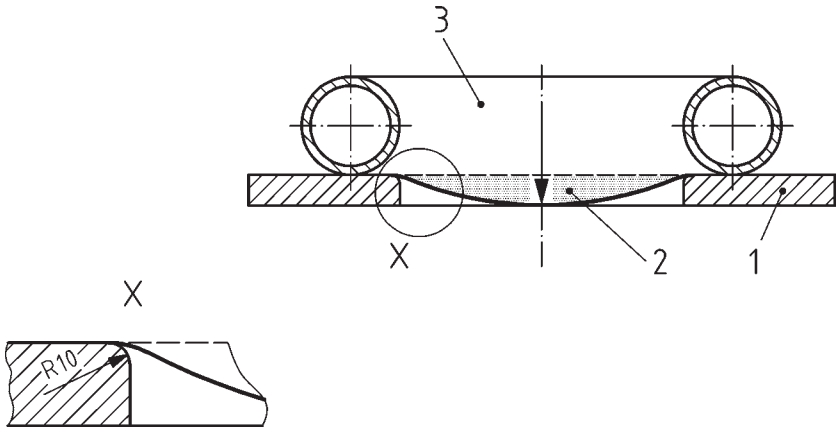
Pool/nature: apply a horizontal pulling force of 500 N. Check whether the device stays in position (except the slip through tightening of the anchor cord).

4.3.9 Giant rings with bottom, strength of entire device

4.3.9.1 General

When tested in accordance with 4.3.9.2, no part or component of the body holding system or its attachment to the buoyant structure (welding seams) shall break or show any deficiency compromising safety.

Dimensions in millimetres



Key

1 test board, opening in compliance with the inner contour of the device to be tested
2 load, body mass of maximum designated user(s)/test dummy mass
3 floating device

Figure 3 — Giant rings with bottom, strength of entire device, load application

4.3.9.2 Testing giant rings with bottom

Place the device on an appropriate even surface in a way that the buoyancy structure is completely supported and the body holding system hangs freely downwards inside the opening as shown in Figure 3. Load the body holding system (bottom) with a dead weight representing the body mass of the maximum user of the designated body weight range. Load duration: 10 min, ambient temperature 20 °C.

5 Consumer information

5.1 General

Consumer information (on the packaging, on the product and by means of written instructions for use) shall be in accordance with ISO 25649-2.

Specifically for CLASS A products the following requirements apply.

5.2 Consumer information on the packaging (point of sale information)

Information on the packaging of Class A products shall

— show a picture or dimensional correct drawing of the floating article inside,

— disclose via the appropriate safety information symbols any warning and restriction related to use and application, and

— disclose via the appropriate safety information symbols the maximum number of users and the maximum load capacity.

5.3 Consumer information on the product (information related to safe use)

Consumer information on the product shall

— show via the appropriate safety information symbols all warnings and obligatory instructions related to the safe use of the product. Safety information symbols related to very serious risks shall be accompanied by the plain text version as specified in ISO 25649-2.

Very serious risks for Class A products are:

— Attention! No protection against drowning!

— Swimmers only!

5.4 Consumer information by instructions for use (separate written information)

5.4.1 General

Instructions of use shall be in accordance with ISO 25649-2.

5.4.2 Safety and product information

Instruction for use shall contain all information provided in 5.1, 5.2 and 5.3. Warnings, obligatory instructions and all restrictions in use shall be explained in a way that they can be understood and perceived by the user. Safety information symbols shall be explained by their plain text version.

5.4.3 Assembly (if applicable)

Instructions shall enable the user to assemble the floating article correctly and ready for safe use.

5.4.4 Maintenance and repair (if applicable)

Instructions shall enable the user to maintain store and repair the floating article correctly.

6 Test report

A test report shall document all tests of this standard and their results. In particular the following facts:

a) all human subject testing with regard to posture, position and result;

b) any applied worst case positions and deviation from the standard due to special circumstances of the product;

c) number of this standard.

7 Exclusions

The following subclasses/products dealt with in this document are exempted from the general requirements included in ISO 25649-1 and ISO 25649-2 as listed below:

— no towing device for A1-products for single use only (see ISO 25649-1:2017, 5.8);

— no towing device for A2 products (see ISO 25649-1:2017, 5.8);

— inflatable devices of type A may display the safety information at a location starting within 200 mm from an inflation valve.

Annex A
(informative)

Examples of typical products forming Class A

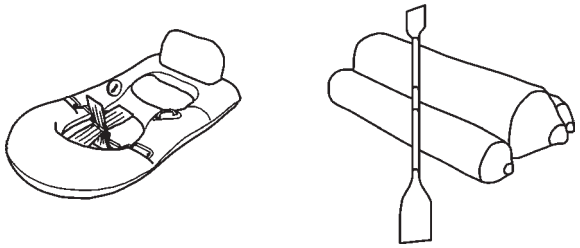


Figure A.1 — Examples of object-shaped ride-ons

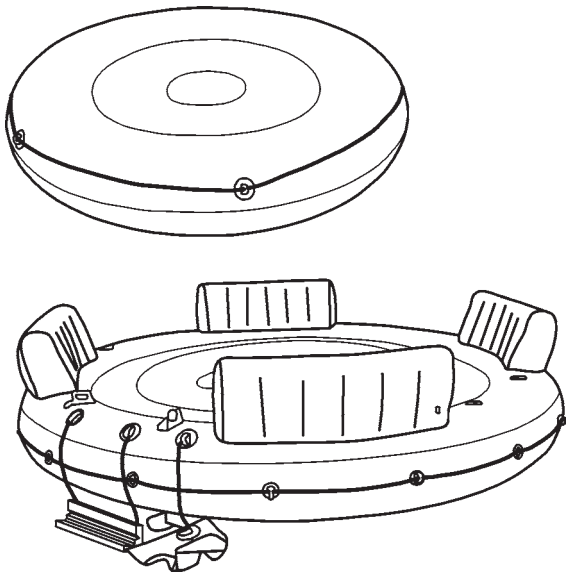


Figure A.2 — Examples of large floating platforms, islands, etc

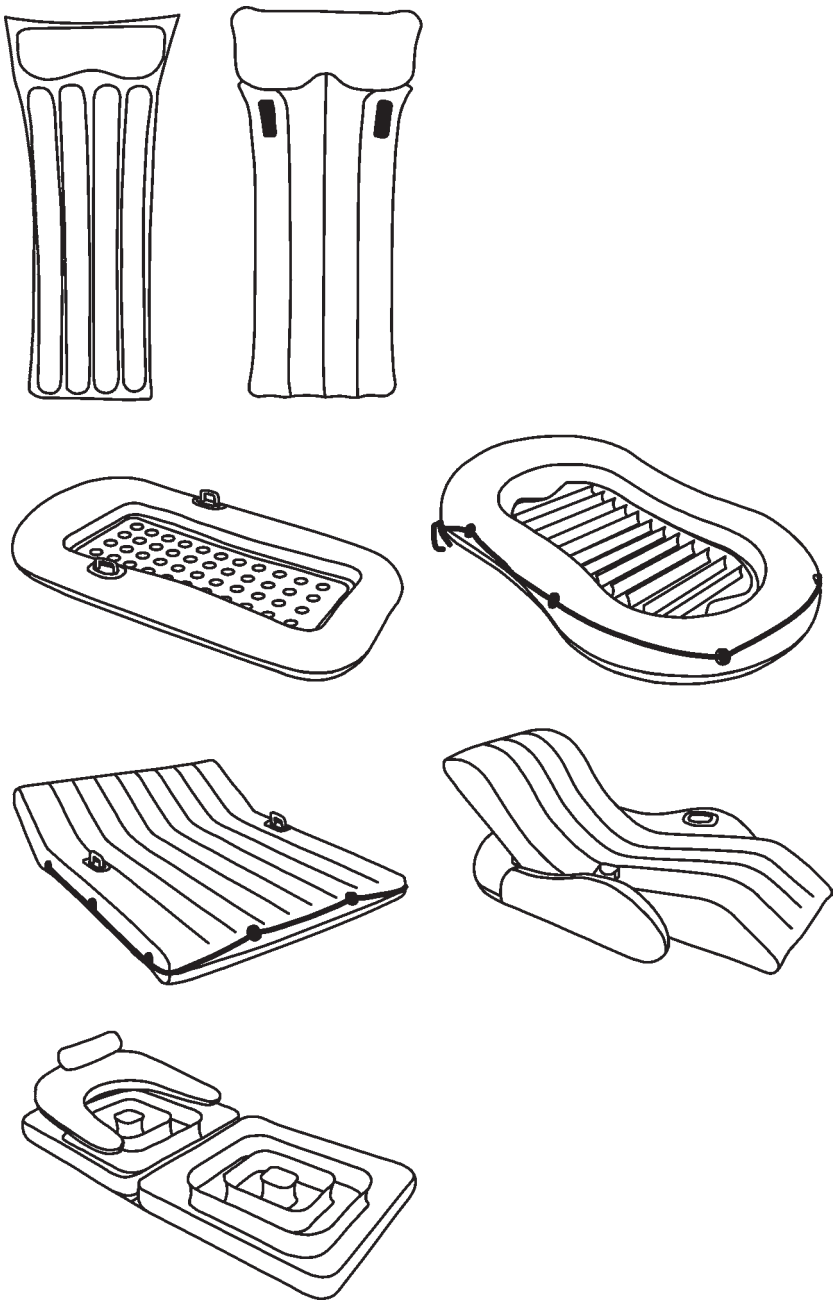


Figure A.3 — Examples of airmats, lounges, floating chairs

Bibliography

[1] ISO 6185-1:2001, *Inflatable boats — Part 1: Boats with a maximum motor power rating of 4,5 kW*

[2] ISO 6185-2:2001, *Inflatable boats — Part 2: Boats with a maximum motor power rating of 4,5 kW to 15 kW inclusive*

[3] ISO 6185-3:2001, *Inflatable boats — Part 3: Boats with a maximum motor power rating of 15 kW and greater*

[4] ISO 12402-1:2005, *Personal flotation devices — Part 1: Lifejackets for seagoing ships — Safety requirements*

[5] ISO 12402-2:2006, *Personal flotation devices — Part 2: Lifejackets, performance level 275 — Safety requirements*

[6] ISO 12402-3:2006, *Personal flotation devices — Part 3: Lifejackets, performance level 150 — Safety requirements*

[7] ISO 12402-4:2006, *Personal flotation devices — Part 4: Lifejackets, performance level 100 — Safety requirements*

[8] ISO 12402-5:2006, *Personal flotation devices — Part 5: Buoyancy aids (level 50) — Safety requirements*

[9] ISO 12402-6:2006, *Personal flotation devices — Part 6: Special purpose lifejackets and buoyancy aids — Safety requirements and additional test methods*

[10] ISO 12402-7:2006, *Personal flotation devices — Part 7: Materials and components — Safety requirements and test methods*

[11] ISO 12402-8:2006, *Personal flotation devices — Part 8: Accessories — Safety requirements and test methods*

[12] ISO 12402-9:2006, *Personal flotation devices — Part 9: Test methods*

[13] ISO 12402-10:2006, *Personal flotation devices — Part 10: Selection and application of personal flotation devices and other relevant devices*

[14] EN 71-1, *Safety of toys — Part 1: Mechanical and physical properties*

[15] EN 13138-1, *Buoyant aids for swimming instruction — Part 1: Safety requirements and test methods for buoyant aids to be worn*

[16] EN 13138-2, *Buoyant aids for swimming instruction — Part 2: Safety requirements and test methods for buoyant aids to be held*

[17] EN 13138-3, *Buoyant aids for swimming instruction — Part 3: Safety requirements and test methods for buoyant aids for swim seats to be worn*

ICS 97.220.40

Price based on 15 pages