BS EN ISO 25649-4:2024

BSI Standards Publication

Floating leisure articles for use on and in the water

Part 4: Additional specific safety requirements and test methods for Class B devices

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National foreword

This British Standard is the UK implementation of EN ISO 25649-4:2024. It is identical to ISO 25649-4:2024. It supersedes BS EN ISO 25649-4:2017, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee SW/136, Sports, playground and other recreational equipment.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Floating leisure articles for use on and in the water - Part 4: Additional specific safety requirements and test methods for Class B devices (ISO 25649-4:2024)

Articles de loisirs flottants à utiliser sur ou dans l'eau - Partie 4: Exigences de sécurité et méthodes d'essai complémentaires propres aux dispositifs de Classe B (ISO 25649-4:2024)

Schwimmende Freizeitartikel zum Gebrauch auf und im Wasser - Teil 4: Zusätzliche besondere sicherheitstechnische Anforderungen und Prüfverfahren für Artikel der Klasse B (ISO 25649-4:2024)

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

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European foreword

This document (EN ISO 25649-4:2024) 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of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.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 25649-4:2017.

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.

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Endorsement notice

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Annex ZA
(informative)

Relationship between this European standard and the safety requirements of Directive 2001/95/EC aimed to be covered

This European Standard has been prepared under a Commission's standardization request Mandate **M/372 Floating leisure products for use on or in the water** to provide one voluntary means of conforming to the product safety requirements for floating leisure products for use on or in the water pursuant to **Directive 2001/95/EC** of the European Parliament and of the Council.

Once this standard is cited in the Official Journal of the European Union under that **Directive 2001/95/EC**, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety requirements set in the Directive and specified in the request M/372 and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and Commission Decision No 2005/323/EC of 21/04/2005 implementing the General Product Safety Directive 2001/95/EC and Commission's standardization request M/372 for floating leisure articles for use on or in the water

Correspondence between this European Standard and the Safety Requirements of Commission Decision No 2005/323/EC implementing the Directive 2001/95/EC and specified in the request M/372	Clause(s)/subclause(s) of this EN ISO 25649-4	Remarks/Notes
C.1 Specific safety requirements		
C.1 (a) floating stability in accordance with the intended and foreseeable use;	4.4, 4.5	
C.1 (b) minimum buoyancy and, in case of inflatable articles, residual buoyancy after failure of one air chamber. Additionally retention of function where appropriate and in particular where collective use is intended or likely;	4.4, 4.5	
C.1 (d) easy escape in case of capsizing, avoidance of any other forms of entrapments or entanglement regarding parts of the human body	4.4.5, 4.5.4, A.5, A.7.5	
C.1 (e) means to facilitate re-embarkation in particular where collective use is intended as well as means of getting hold when in the water in an emergency;	N/A	
C.1 (f) presence of a reliable quick release for products moved (towed) at high speed;	N/A	

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Correspondence between this European Standard and the Safety Requirements of Commission Decision No 2005/323/EC implementing the Directive 2001/95/EC and specified in the request M/372	Clause(s)/subclause(s) of this EN ISO 25649-4	Remarks/Notes
C.2 Warnings and information in respect of cautious use of the product		
C.2 (a) labelling regarding limitation of use:		
— Number of users	4.2	
— Total weight	4.2	
— Risks linked to wind	4.1, Clause 5	
— currents and tides	4.1, Clause 5	
— specifications on distance from shore	4.1, Clause 5	
— height	4.1, Clause 5	
— speed	4.1, Clause 5	
— interactions with other products and objects (safety distance)	4.1, Clause 5	
— foreseeable misuse	4.1, Clause 5	
C.2 (b) Warning “Attention: no protection against drowning. Swimmers only”	Clause 5	
C.2 (c) Use of adequate personal protective equipment (PEE) against drowning and for impact resistance.	Clause 5	
C.2 (d) Instruction of inflation and pressure conditions, maintenance, repair, storage and disposal (repeated use and aging process)	5.4	
C.2 (e) specific warnings for categories of consumers at risk when using product (children, non-swimmers, elderly, etc.)	5.2, 5.3, 5.4.2, 5.4.4	

WARNING 1 Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 Other Union legislation may be applicable to the products falling within the scope of this standard.

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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 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).

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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 25649-4:2017), which has been technically revised.

The main changes are as follows:

— update of the introduction;

— update of Clause 2;

— in Table 3, modifications of smallest interior dimensions for xx-large devices;

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

0.1 General

Class B devices are marketed and used for activities in the water. Typically, they are characterized by a partly immersed position of the user inside the device, distinguishing them from other floating devices. The development of new products in this area is progressing. Beyond the classical swim seat rafts for more dynamic action on and in the water, different body postures and extended user groups have been developed. ISO 25649-4 aims at increased safety with regard to all foreseeable uses of Class B floating leisure articles.

This document does not apply to only one technically clearly determined product, but to a diverse group of products including two major design principles, B1 and B2, as laid down in the classification of Class B floating leisure articles (see Clause 4).

Figure 1 shows the distinction between Classes B1 and B2 products.

Class B1 includes products, e.g. swim seats for children older than 36 months, with an interior body holding system. In the case of very young users (non-swimmers 4-years-old and older) the body position can be such that the body is kept afloat and laterally supported by a surrounding inflatable structure. This structure provides a relatively tight fit between user and buoyant structure, creating a risk of entrapment in case of capsizing.

Class B1 products for children younger than 36 months are dealt with in EN 13138-3:2021.

Class B2 products do not provide this kind of support for the body of the user. Although they have a circumferential buoyant structure in common with Class B1 products – and thus a risk of entrapment if this fit becomes too tight – flotation of the user depends on his ability to hold himself by hands or body inside the very loosely surrounding buoyant structure.

Both classes of products include also adult use. Activities range from passive floating to actions such as wave surfing, tubing, balancing, swinging, etc. (See Figure 1). The devices are associated with the identified risks given in Table 1.

Since Class B products support the user's body in a partly and permanently immersed position, they do not need requirements for re-embarkation (unlike ISO 25649-3 devices). The degree of immersion can vary. In the case of a big floating ring, e.g. B1.1 and B2.2, the user can be immersed up to the chest or only the buttocks can be immersed. In the case of B1-products (e.g. swim seat), the human body is permanently immersed to a large degree.

Dealing with a partly intentionally immersed human body leads to the question of loads to be applied for appropriate testing. For the purpose of this document, load resulting from the body weight is set with 75 % of the body weight of the heaviest foreseeable or specified user, even when in certain circumstances this immersed body weight may be reduced to roughly 10 %. In the case of devices on top of which the user can sit (e.g. big rings) the maximum body weight out of the stipulated user group is assessed as adequate.

0.2 Child testing

See Annex A and ISO 25649-1:2024, Clause 4, as alternatives. Class B products can be used by children from the age of 4 years. Some essential requirements ensuring safety in use and in dangerous situations which can occur – e.g. capsizing – cannot be simulated and verified via the application of forces or other instrumental procedures, but only by practical testing involving human test subjects or test manikins that sufficiently represent the envisaged user groups. Children testing increases the nearness to real-life situation but can lead to subjective results. An increased number of test cycles is an appropriate means to get an average result that makes the subjective test more objective. The use of test manikins reduces the nearness to real life situation but increases reproducibility of testing. The worst alternative is to eliminate certain requirements if they cannot be verified for the lack of either test manikins or human test subjects.

This document refers amongst others to children as test subjects. The anthropometric requirements related to these test subjects are based on children 5 years of age and 9 years of age with a body height of 126 cm and 149 cm and a body weight of 25 kg and 38 kg, respectively. Children of 14 years of age and above can be represented by the smallest adult female person representing the 5th percentile of the anthropometric range.

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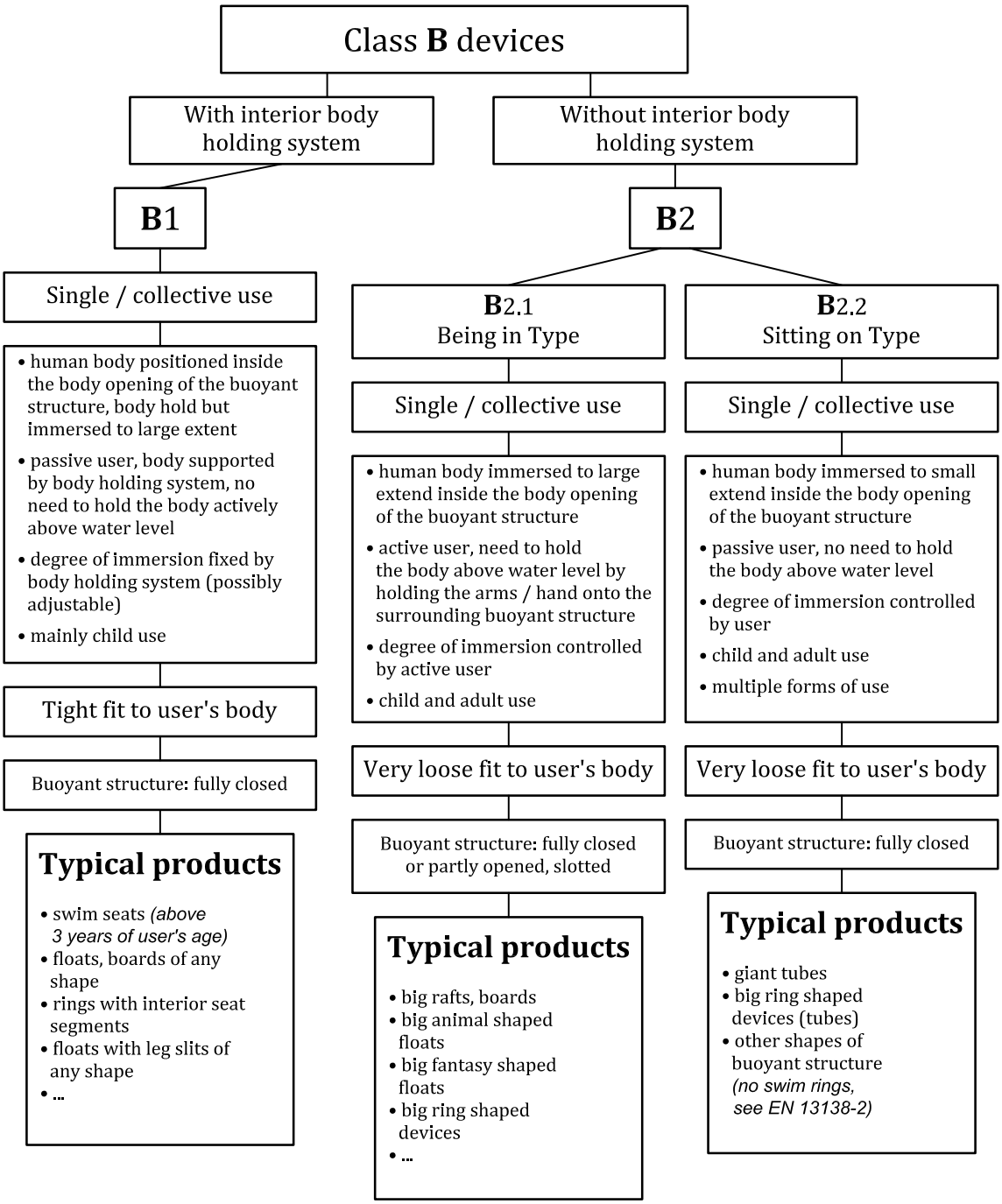
In order to provide in all cases an alternative to child testing, the anthropometric data of relevant manikins are specified for optional application in Annex A.



NOTE Rings and ring shaped tubes dealt with in this document are in no case swim rings as means to learn to swim (see EN 13138-2) but water leisure articles for hanging in or sitting on.

Figure 1 — Interior structure Class B devices

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