



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 25649-7:2021**  
**01-december-2021**

---

**Plavajoči pripomočki za prosti čas, ki se uporabljajo na vodi in v njej - 7. del:  
Dodatne posebne varnostne zahteve in preskusne metode za pripomočke razreda  
E (ISO/DIS 25649-7:2021)**

Floating leisure articles for use on and in the water - Part 7: Additional specific safety requirements and test methods for Class E devices (ISO/DIS 25649-7:2021)

Schwimmende Freizeitartikel zum Gebrauch auf und im Wasser - Teil 7: Zusätzliche besondere sicherheitstechnische Anforderungen und Prüfverfahren für Artikel der Klasse E (ISO/DIS 25649-7:2021) **(standards.iteh.ai)**

Articles de loisirs flottants à utiliser sur ou dans l'eau - Partie 7: Exigences de sécurité et méthodes d'essai complémentaires propres aux dispositifs de Classe E (ISO/DIS 25649-7:2021)

**Ta slovenski standard je istoveten z: prEN ISO 25649-7**

---

**ICS:**

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

<b>oSIST prEN ISO 25649-7:2021</b>	<b>en,fr,de</b>
------------------------------------	-----------------

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[oSIST prEN ISO 25649-7:2021](https://standards.iteh.ai/catalog/standards/sist/66f6d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021)

<https://standards.iteh.ai/catalog/standards/sist/66f6d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021>

# DRAFT INTERNATIONAL STANDARD

## ISO/DIS 25649-7

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 7: Additional specific safety requirements and test methods for Class E devices

*Articles de loisirs flottants à utiliser sur ou dans l'eau —**Partie 7: Exigences de sécurité et méthodes d'essai complémentaires propres aux dispositifs de Classe E*

ICS: 97.220.40

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[oSIST prEN ISO 25649-7:2021](https://standards.iteh.ai/catalog/standards/sist/66f6d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021)<https://standards.iteh.ai/catalog/standards/sist/66f6d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021>

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

This document is circulated as received from the committee secretariat.

**ISO/CEN PARALLEL PROCESSING**



Reference number  
ISO/DIS 25649-7:2021(E)

© ISO 2021

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[oSIST prEN ISO 25649-7:2021  
https://standards.iteh.ai/catalog/standards/sist/66f6d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021](https://standards.iteh.ai/catalog/standards/sist/66f6d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021)



### **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
Foreword.....	v
Introduction.....	vi
<b>1 Scope.....</b>	<b>1</b>
<b>2 Normative references.....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>1</b>
<b>4 Materials.....</b>	<b>3</b>
<b>5 Construction and functional components of boats.....</b>	<b>3</b>
5.1 Conditioning.....	3
5.2 Hull integrity.....	3
5.2.1 Requirements.....	3
5.2.2 Test method.....	3
5.3 Manual lifting and carrying devices.....	4
5.3.1 Requirements.....	4
5.3.2 Test method.....	4
5.4 Rowlocks and oars.....	4
5.4.1 Requirements.....	4
5.4.2 Test methods.....	4
5.5 Hull drainage.....	5
5.6 Towing device.....	5
5.7 Seating and attachment systems (where offered as standard or optional equipment).....	5
<b>6 Safety requirements and test methods.....</b>	<b>5</b>
6.1 Minimum area and maximum permissible number of persons.....	5
6.1.1 Requirement.....	5
6.1.2 Testing.....	5
6.2 Static stability of the boat.....	6
6.2.1 Requirement.....	6
6.2.2 Test method.....	6
6.3 Dimensional stability when getting on and off the boat.....	7
6.3.1 Requirement.....	7
6.3.2 Testing.....	8
6.4 Maximum load capacity.....	8
6.4.1 Requirement.....	8
6.4.2 Testing.....	8
6.5 Safety ropes and grab handles.....	8
6.5.1 Requirement.....	8
6.5.2 Test method.....	8
6.6 Residual buoyancy specific for boats.....	9
6.6.1 Requirement.....	9
6.6.2 Test method.....	9
6.7 Manoeuvrability.....	9
6.7.1 Requirement.....	9
6.7.2 Test method.....	9
<b>7 Performance requirements and test methods for boats.....</b>	<b>9</b>
7.1 General.....	9
7.2 Strength and performance of the towing device for boats.....	9
7.2.1 Requirement.....	9
7.2.2 Test method.....	9
7.3 Rowing test (where applicable, see 5.4).....	10
7.4 Water tightness test for boats.....	10
7.4.1 Requirement.....	10
7.4.2 Test method.....	10

## ISO/DIS 25649-7:2021(E)

<b>8</b>	<b>Standard equipment and accessories for boats</b> .....	<b>10</b>
8.1	Requirement.....	10
8.2	Testing.....	10
<b>9</b>	<b>Marking</b> .....	<b>10</b>
<b>10</b>	<b>Instructions for use for boats</b> .....	<b>10</b>
<b>11</b>	<b>Exclusions</b> .....	<b>12</b>
<b>Annex A</b>	<b>(normative) Inflatable canoes, kayaks and sit-on-top kayaks</b> .....	<b>13</b>
<b>Annex B</b>	<b>(normative) Inflatable boat propelled by sail or motor</b> .....	<b>15</b>
<b>Annex C</b>	<b>(informative) General arrangement of a typical boat with the hull made of non-reinforced material</b> .....	<b>21</b>
<b>Annex D</b>	<b>(informative) General arrangement of a typical boat with the hull made of reinforced material</b> .....	<b>22</b>
<b>Annex E</b>	<b>(informative) General arrangement of a typical paddle boat/kayak</b> .....	<b>23</b>
<b>Annex F</b>	<b>(informative) Examples of typical products forming Class E</b> .....	<b>24</b>
<b>Annex ZA</b>	<b>(informative) Relationship between this European Standard and the safety requirements of Directive 2001/95/EC aimed to be covered</b> .....	<b>25</b>
<b>Bibliography</b>	.....	<b>27</b>

## iTeh STANDARD PREVIEW (standards.iteh.ai)

oSIST prEN ISO 25649-7:2021  
<https://standards.iteh.ai/catalog/standards/sist/66f6d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021>

## 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](http://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](http://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 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](http://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 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 25649-7:2017), which has been technically revised.

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

- Update of the normative references in [Clause 2](#) and in the entire document,
- Clause 12, addition of requirement dedicated to specific supervision for categories of consumers at risk when using product (children, non-swimmers, elderly, etc.);
- Addition of an informative [Annex ZA](#) regarding 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](http://www.iso.org/members.html).

## ISO/DIS 25649-7:2021(E)

## Introduction

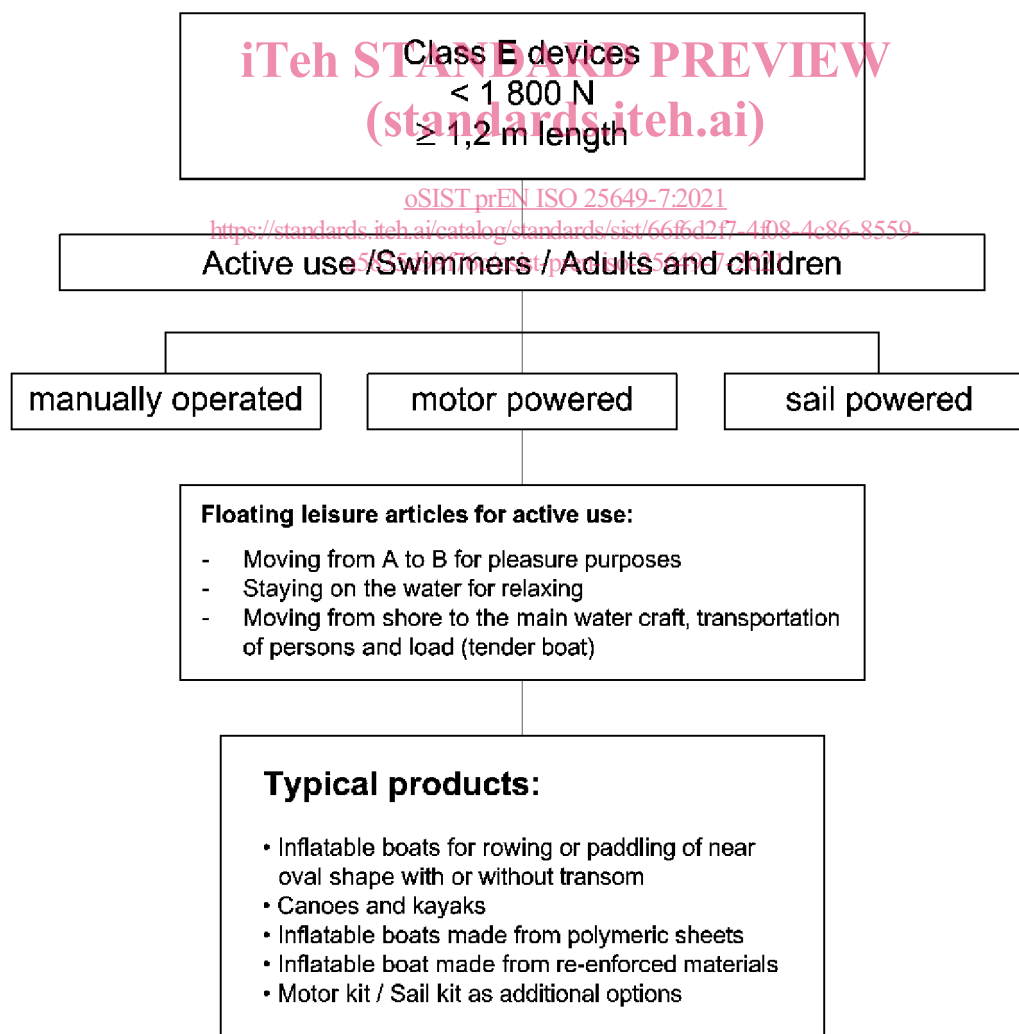
This document is closing the regulatory gap between aquatic toys smaller than 1,2 m on the one hand and inflatable boats providing a buoyancy greater than 1 800 N on the other hand. It includes all kinds of boat propulsion and covers canoes and kayaks as well. The mostly combined safety and performance requirements deal with space per person, load capacity, floating stability, engine power and behaviour after loss of air pressure (failure of an air chamber).

Practical test runs shall prove the manoeuvrability of the boat under various conditions and the adequate motorization.

Comprehensive consumer information related to selection before purchase and during use complete the requirement profile of the document.

This document covers boats of customary construction and design with an overall length from 1,2 m (uninflated, flat) up to 1 800 N buoyancy. Such boats are mostly intended for recreational water activities and for the use by children. However, smaller tender boats such as those used on yachts also fall within this size range and small boats for specific applications (e.g. fishing boats) may also be included. Therefore, irrespective of the main group of users, powered boats and sail boats have also been taken into consideration.

### Interior Structure Class E



For figurative examples see [Annex C](#), [D](#), [E](#) and [F](#).



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
<b>E</b> <b>in work programme</b>	Adults and children's boats rowing boats of near oval shape with or without transom canoes, kayaks, tender boats to yachts	Pools; sea, shore/close to shore; rivers; lakes	Children, adults	Padding, rowing, sail, engine passive and active use by hand, drifting; third party (towing) ...	Inside the boat	Overload; use by non-swimmers; wave riding	Drifting away; capsizing; entrapment; lack of supervision in case of child use ...	<b>DROWN-ING</b>	This document closes the gap between ISO 6185 and EN 71)

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

oSIST prEN ISO 25649-7:2021  
<https://standards.iteh.ai/catalog/standards/sist/66f5d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[oSIST prEN ISO 25649-7:2021](https://standards.iteh.ai/catalog/standards/sist/66f6d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021)

<https://standards.iteh.ai/catalog/standards/sist/66f6d2f7-4f08-4c86-8559-a5835d99f76c/osist-pren-iso-25649-7-2021>

# Floating leisure articles for use on and in the water —

## Part 7:

# Additional specific safety requirements and test methods for Class E devices

## 1 Scope

This document is applicable for Class E floating leisure articles for use on and in water according to ISO 25649-1:2021 regardless whether the buoyancy is achieved by inflation or inherent buoyant material.

This document is applicable with ISO 25649-1:20xx and ISO 25649-2:20xx.

Class E devices are intended for use in bathing areas or in protected and safe shore zones.

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

- inflatable boats for rowing or paddling of near oval shape with or without transom;
- canoes and kayaks;
- inflatable boats made from plastic sheets or from reinforced materials;
- motor kit/sail kit as additional option.

NOTE 2 Typical places for application of Class E devices:

- moving from A to B for pleasure purposes;
- staying on the water for relaxing;
- moving from shore to the main boat, transportation of persons and load (tender boat).

## 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 8665:2017, *Small craft — Marine propulsion reciprocating internal combustion engines — Power measurements and declarations*

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*

EN 837-1:1997, *Pressure gauges — Part 1: Bourdon tube pressure gauges — Dimensions, metrology, requirements and testing*

## 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/DIS 25649-7:2021(E)**

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****residual buoyancy**

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

**3.2****inflatable boat**

buoyant structure (hull), achieving all or part of its intended shape and buoyancy by the medium of inflation and intended for the transportation of persons on the water; its design and shape give it the capability to withstand forces and movements arising from various sea conditions

Note 1 to entry: An inflatable boat is considered as an aquatic toy (toy in form of a boat) according to EN 71-1, when

- a) it is intended for use without any propelling means (oars, paddles, motor, sail) and these are also not to be fitted subsequently, and
- b) its overall length is <120 cm and the boat is additionally marked with the following warning note "Caution, to be used only in shallow water and under supervision".

**3.3****tender**

boat that serves as an auxiliary means in working around a bigger boat but mainly to commute from the boat to shore or other places nearby

Note 1 to entry: In this respect it serves for-transport of crew and load. Tenders are propelled by oars, frequently they are equipped with an outboard engine, partly they can be fitted with sails. For stowage reasons tenders are often small in size but robust in material and construction.

**3.4****leisure boat**

boat that serves as a recreational boat, slowly moving around on the water for relaxing, extended bathing, etc

Note 1 to entry: It does not have the purpose of a working boat.

**3.5****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: Boat 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.

**3.6****inboard area**

internal surface area defined by a vertical plane tangential to the innermost side of the buoyancy tube and perpendicular to the deck

**3.7****inboard length**

length of the cockpit, including the area below any spray cover, measured along the boat centreline between the innermost points of the bow and stern

**3.8****usable seating area**

inboard area, including the area below any spray cover, available for the users to sit on