



**NSAI**  
Standards

**Irish Standard**  
**I.S. EN ISO 9094:2022**

**Version 3.00**

## Small craft - Fire protection (ISO 9094:2022)

## I.S. EN ISO 9094:2022 V3.00

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## **National Foreword**

I.S. EN ISO 9094:2022 V3.00 is the version of the NSAI adopted European document EN ISO 9094:2022, *Small craft - Fire protection (ISO 9094:2022)*, including any Corrections, Amendments etc. to EN ISO 9094:2022.

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EUROPEAN STANDARD

**EN ISO 9094**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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## Small craft - Fire protection (ISO 9094:2022)

Petits navires - Protection contre l'incendie (ISO 9094:2022)

Kleine Wasserfahrzeuge - Brandschutz (ISO 9094:2022)

This European Standard was approved by CEN on 2 December 2022.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

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

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

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## **European foreword**

This document (EN ISO 9094:2022) has been prepared by Technical Committee ISO/TC 188 "Small craft" in collaboration with Technical Committee CEN/TC 464 "Small Craft" the secretariat of which is held by SIS.

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of an identical text or by endorsement, at the latest by June 2023, and conflicting national standards shall be withdrawn at the latest by December 2023.

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 9094:2017.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For the relationship with EU Directive(s) / Regulation(s), 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 9094:2022 has been approved by CEN as EN ISO 9094:2022 without any modification.

## Annex ZA (informative)

### Relationship between this European Standard and the essential requirements of Directive 2013/53/EU aimed to be covered

This European Standard has been prepared under a Commission's standardization request M/542/C(2015) 8736 final to provide one voluntary means of conforming to essential requirements of Directive 2013/53/EU.

Once this standard is cited in the Official Journal of the European Union under that Directive, 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 essential requirements of that Directive, and associated EFTA regulations.

**Table ZA.1 — Correspondence between this European Standard and Directive 2013/53/EU**

Essential Requirements of Directive 2013/53/EU	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
Annex I.A.3.8 – Escape	Clause 6 (except 6.2.6)	Annex 1.A.3.8 applies with respect to viable means of escape in the event of fire, it does not deal with inversion
Annex I.A.5.6.1 – Fire Protection	Clauses 4 and 5	
Annex I.A.5.6.2 – Fire Fighting Equipment	Clauses 7 and 8	
Annex I.A.2.5 – Owner's Manual	Clauses 9 and Annex A	

**Table ZA.2 — Applicable Standards to confer presumption of conformity as described in this Annex ZA**

Column 1 Reference in Clause 2	Column 2 International Standard Edition	Column 3 Title	Column 4 Corresponding European Standard Edition
IEC 60092-507:2014	IEC 60092-507:2014	<i>Electrical installations in ships — Part 507: Small vessels</i>	EN 60092-507:2015
ISO 4589-3:2017	ISO 4589-3:2017	<i>Plastics — Determination of burning behaviour by oxygen index — Part 3: Elevated-temperature test</i>	EN ISO 4589-3:2017
ISO 7165:2017	ISO 7165:2017	<i>Fire fighting — Portable fire extinguishers — Performance and construction</i>	Not yet available
ISO 8846:1990	ISO 8846:1990	<i>Small craft — Electrical devices —</i>	EN ISO 8846:2017



		<i>Protection against ignition of surrounding flammable gases</i>	
ISO 10088	ISO 10088:2022	<i>Small craft — Permanently installed fuel systems</i>	EN ISO 10088:2022
ISO 10239:2014	ISO 10239:2014	<i>Small craft — Liquefied petroleum gas (LPG) systems</i>	EN ISO 10239:2017
ISO 11105:2020	ISO 11105:2020	<i>Small craft — Ventilation of petrol engine and/or petrol tank compartments</i>	EN ISO 11105:2020
ISO 12216	ISO 12216:2020 ISO 12216:2020/ Amd 1:2022	<i>Small craft — Windows, portlights, hatches, deadlights and doors — Strength and watertightness requirements</i>	EN ISO 12216:2020 EN ISO 12216:2020/Amd 1: 2022
ISO 13297	ISO 13297:2020 ISO 13297:2020/ Amd 1:2022	<i>Small craft — Electrical systems — Alternating and direct current installations</i>	EN ISO 13297:2021 EN ISO 13297:2020/Amd 1:2022
ISO 14895:2016	ISO 14895:2016	<i>Small craft — Liquid-fuelled galley stoves and heating appliances</i>	EN ISO 14895:2016
ISO 16315	ISO 16315:2016	<i>Small craft — Electric propulsion system</i>	EN ISO 16315:2016
ISO 21487	ISO 21487:2012	<i>Small craft — Permanently installed petrol and diesel fuel tanks</i>	EN ISO 21487:2018

The documents listed in the Column 1 of table [ZA.2], in whole or in part, are normatively referenced in this document, i.e. are indispensable for its application. The achievement of the presumption of conformity is subject to the application of the edition of Standards as listed in Column 4 or, if no European Standard Edition exists, the International Standard Edition given in Column 2 of table [ZA.2].

**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 product(s) falling within the scope of this standard.

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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](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 88, *Small craft*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 464, *Small craft*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 9094:2015), which has been technically revised.

The main changes are as follows:

- the “engine compartment” definition (3.3) has been updated;
- the “fire resistant” definition (3.21) has been added;
- the pitch angle up to 15° for all craft to prevent cooking devices from sliding off the stove, in 4.1.1, has been updated;
- the pitch and heel angles in 4.2.1 have been updated;
- the requirements for protection from open flame in 4.2.2 have been updated;
- Table 1 to expand the understanding of zone protection has been updated;
- a clarification for fire escape routes in 6.1 has been added;
- Table 2, “Protection of the engine(s) and engine compartments”, has been updated;
- the requirements for portable fire extinguisher locations have been updated (see 7.5);
- the asphyxiant medium from fixed fire extinguishing systems has been removed (see 7.6);
- Clause 8, “Displayed information”, has been updated;
- the Bibliography has been updated.

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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).

## **Introduction**

This document covers the prevention of fire and the protection of life in case of fire on small craft.

It is intended to ensure that the design and layout of the craft and the type of equipment installed minimize the risk and spread of fire and that every habitable craft is provided with viable means of escape in the event of fire.

The requirements in this document may not be effective against fires of some battery chemistries (for example lithium-based products). Battery manufacturers should be consulted for appropriate methods of fire suppression.





# Small craft — Fire protection

## 1 Scope

This document defines a practical degree of fire prevention and protection intended to provide enough time for occupants to escape a fire on board small craft.

It applies to small craft having a length of the hull ( $L_H$ ) of up to 24 m except for personal watercraft.

This document does not cover:

- the design and installation of permanently installed galley stoves and heating appliances (including components used to distribute the heat) using fuels that are liquid at atmospheric pressure on small craft, which are covered by ISO 14895:2016;
- carbon monoxide detecting systems, which are covered by ISO 12133.

## 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 4589-3:2017, *Plastics — Determination of burning behaviour by oxygen index — Part 3: Elevated-temperature test*

ISO 7165:2017, *Fire fighting — Portable fire extinguishers — Performance and construction*

ISO 8846:1990, *Small craft — Electrical devices — Protection against ignition of surrounding flammable gases*

ISO 10088, *Small craft — Permanently installed fuel systems*

ISO 10239:2014, *Small craft — Liquefied petroleum gas (LPG) systems*

ISO 11105:2020, *Small craft — Ventilation of petrol engine and/or petrol tank compartments*

ISO 12216, *Small craft — Windows, portlights, hatches, deadlights and doors — Strength and watertightness requirements*

ISO 13297, *Small craft — Electrical systems — Alternating and direct current installations*

ISO 14895:2016, *Small craft — Liquid-fuelled galley stoves and heating appliances*

ISO 16315, *Small craft — Electric propulsion system*

ISO 21487, *Small craft — Permanently installed petrol and diesel fuel tanks*

IEC 60092-507:2014, *Electrical installations in ships — Part 507: Small vessels*

EN 3-7:2004+A1:2007, *Portable fire extinguishers – Part 7: Characteristics, performance requirements and test methods*

EN 1869:2019, *Fire blankets*

EN 15609:2021, *LPG equipment and accessories — LPG propulsion systems for boats, yachts and other craft*

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