

## VÄIKELAEVAD. TULEKAITSE

Small craft - Fire protection (ISO 9094:2015)

## EESTI STANDARDI EESSÕNA

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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.
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English Version

## Small craft - Fire protection (ISO 9094:2015)

Petits navires - Protection contre l'incendie (ISO  
9094:2015)

Kleine Wasserfahrzeuge - Brandschutz (ISO  
9094:2015)

This European Standard was approved by CEN on 31 October 2015.

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## European foreword

This document (EN ISO 9094:2015) has been prepared by Technical Committee ISO/TC 188 "Small craft".

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of an identical text or by endorsement, at the latest by June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 9094-1:2003, EN ISO 9094-2:2002.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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## Endorsement notice

The text of ISO 9094:2015 has been approved by CEN as EN ISO 9094:2015 without any modification.

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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 88, *Small craft*.

This first edition of ISO 9094 cancels and replaces ISO 9094-1:2003 and ISO 9094-2:2002.

The major technical changes concern:

- change in definition of “readily accessible” being for “emergency conditions”;
- added definitions and requirements for cooking appliances, solid fuel appliances and heating appliance installations;
- requirements for cooking and heating appliances using liquid fuel;
- specific requirements addressing compartments containing petrol tanks and containers and portable petrol driven engines;
- added requirements for fire protection for “domed ” decklights;
- fire detection requirements for craft over 12 m;
- clarification of escape routes for quarter cabin arrangements;
- detailed requirements for access to deck hatches designated as fire exits;
- changes to engine and engine compartment fire extinguishing requirements;
- fixed fire extinguishing systems to be “approved systems”;
- requirement for diesel engine shut down and “shut off dampers”;
- audible alarm requirements required only for protected spaces able to be occupied.

## Introduction

This International Standard 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 might not be effective against 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 International Standard 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 all small craft of up to 24 m length of hull ( $L_H$ ) except for personal watercraft.

This International Standard excludes:

- the design and installation of those 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;
- carbon monoxide detecting systems, which are covered by ISO 12133[3].

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN 1869, *Fire blankets*

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

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

ISO 5923, *Equipment for fire protection and fire fighting — Fire extinguishing media — Carbon dioxide*

ISO 7010:2011, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 7165, *Fire fighting-Portable fire extinguishers – Performance and construction*

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

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

ISO 10133, *Small craft — Electrical systems — Extra-low-voltage d.c. installations*

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

ISO 10240, *Small craft — Owner's manual*

ISO 11105:1997, *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 current installations*

ISO 14895, *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*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

**3.1**  
**accessible**  
capable of being reached for inspection, removal or maintenance without removal of permanent craft structure

Note 1 to entry: Hatches are not regarded as permanent craft structures in this sense even if tools are needed to open them.

**3.2**  
**readily accessible**  
capable of being reached quickly and safely for effective use under emergency conditions without the use of tools

**3.3**  
**engine compartment**  
compartment of the craft, containing main or auxiliary engine(s)

**3.4**  
**fixed fire extinguishing system**  
fire fighting system having all components fixed in position and having automatic activation and/or manual release from outside of the space protected

Note 1 to entry: In the following text this system is called "a fixed system".

**3.5**  
**fire exit**  
any door, hatch, or aperture designated as an exit in case of fire and leading either directly or via other areas of the craft, to the open air

**3.6**  
**open flame device**  
any appliance where direct bodily contact with an exposed open flame is possible during normal operation

**3.7**  
**petrol**  
hydrocarbon fuel or blends thereof which is liquid at atmospheric pressure and is used in spark ignition engines

Note 1 to entry: In this context, kerosene is not regarded as petrol.

**3.8**  
**diesel**  
hydrocarbon fuel or blends thereof which is liquid at atmospheric pressure and is used in compression ignition engines

**3.9**  
**asphyxiant**  
any fire extinguishing medium that can dilute or displace oxygen in air, leading to asphyxiation if inhaled

**3.10**  
**toxic**  
any fire extinguishing medium that can be poisonous or harmful if inhaled