

VÄIKELAEVAD. TULEKAITSE

Small craft - Fire protection (ISO 9094:2015)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 9094:2017 sisaldab Euroopa standardi EN ISO 9094:2017 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 9094:2017 consists of the English text of the European standard EN ISO 9094:2017.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 16.08.2017.	Date of Availability of the European standard is 16.08.2017.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 47.080

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

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 16 July 2017.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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

European foreword

The text of ISO 9094:2015 has been prepared by Technical Committee ISO/TC 188 “Small craft” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 9094:2017.

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 February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

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 9094:2015.

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

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 9094:2015 has been approved by CEN as EN ISO 9094:2017 without any modification.

Annex ZA (informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2013/53/EU

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide one means of conforming to Essential Requirements of the New Approach Directive 2013/53/EU.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, 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 relevant Essential Requirements of that Directive and associated EFTA regulations.

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

Clauses/sub-clauses of this standard	Corresponding annexes/paragraphs of Directive 2013/53/EU	Comments
9 Annex B	I.A.2.5 - Owner's manual	
5; 6	I.A.3.8 - Escape	In respect of viable means of escape in the event of fire only, this standard does not deal with escape from inversion.
4.3.1.1; 4.3.2	I.A.5.1.1 - Engine and engine compartments, inboard engine	In respect of insulating materials and separation from habitable spaces.
4.3.2.3	I.A.5.1.2 - Engine and engine compartments, ventilation	With respect to the requirements for fixed petrol engines and fixed petrol tanks only.
4.1.3	I.A.5.2.1 - Fuel system, General	
4.1.3; 4.3.1.2	I.A.5.2.2 - Fuel system, Fuel tanks	
4.4; 4.6	I.A.5.3 - Electrical system	In respect of minimizing the risk of fire and to prevent the accumulation of explosive gases which might be emitted from batteries.

		Ignition-protected items shall be in accordance with EN ISO 8846 (EN 28846).
4.5	I.A.5.5 - Gas system	In respect of liquefied petroleum gas (LPG) systems and self-contained appliances.
4; 5; 6 Annex A	I.A.5.6.1 - Fire protection - general	The scope of this 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 up to 24m length of hull. The exclusions shall be noted.
7; 8	I.A.5.6.2 - Fire protection - Fire-fighting equipment	In respect of minimum firefighting requirements according to the type of engine fuel and power rating, habitable spaces and provision of heating and cooking appliances. Informative annexes C and D should be noted.

WARNING - Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Fire prevention	3
4.1 Cooking and heating appliances	3
4.1.1 General	3
4.1.2 Appliances with flues	4
4.1.3 Permanently installed fuel systems	4
4.2 Materials near cooking or heating appliances	4
4.2.1 General	4
4.2.2 Protection from open flames	4
4.2.3 Protection from radiated heat devices	5
4.2.4 Protection from solid fuel appliances	6
4.2.5 Protection from electrical appliances	6
4.3 Engine and fuel compartments and exhausts	6
4.3.1 General requirements not dependent on fuel type	6
4.3.2 Specific requirements for compartments containing fixed petrol engines and permanently installed petrol tanks	7
4.3.3 Specific requirements for compartments containing portable petrol-engined equipment and portable petrol tanks or containers	8
4.4 Electrical installations	8
4.5 Liquefied petroleum gas (LPG) systems	8
4.5.1 General	8
4.5.2 LPG systems not used for propulsion	8
4.5.3 LPG systems used for propulsion	8
4.5.4 Self-contained portable appliances	8
4.6 Ignition protection	8
4.7 Decklights	9
5 Fire detection	9
6 Fire escape	9
6.1 Fire escape routes	9
6.1.1 General	9
6.1.2 Escape routes passing over or beside an engine compartment	10
6.1.3 Escape routes passing over an open flame or radiated heat device	10
6.2 Fire exits	10
6.2.1 General	10
6.2.2 Minimum clear dimensions	10
6.2.3 Positioning fire exits	10
6.2.4 Capability to open fire exits	10
6.2.5 Deck hatches designated as fire exits	11
6.2.6 Water tightness of fire exits	11
7 Fire fighting equipment	11
7.1 Purpose	11
7.2 Protection of habitable spaces containing sleeping bunks	11
7.3 Protection of habitable spaces containing cooking and heating appliances	11
7.4 Protection of engine compartment(s)	12
7.4.1 General	12
7.4.2 Fire ports	12
7.5 Portable fire extinguishers	13
7.5.1 Purpose	13

7.5.2	General requirements.....	13
7.5.3	Carbon dioxide (CO ₂) extinguishers.....	13
7.5.4	Location and capacity of portable fire extinguishers.....	14
7.6	Fixed fire extinguishing systems.....	14
7.6.1	Purpose.....	14
7.6.2	General requirements.....	14
7.6.3	Requirements for use of asphyxiant mediums.....	15
7.6.4	General installation requirements.....	16
7.6.5	Activation of the system.....	16
7.7	Fire blanket.....	17
8	Displayed information.....	17
8.1	General requirements.....	17
8.2	Fixed system warning for non-asphyxiant medium.....	17
8.3	Fixed system warning for asphyxiant medium.....	18
8.4	CO ₂ portable extinguisher.....	18
8.5	Storage of ladder to escape hatch.....	18
8.6	Displayed symbol requirements.....	18
9	Owner's manual.....	19
Annex A	(normative) Fire test referenced in 4.2.2.....	20
Annex B	(normative) Information to be provided in the Owner's manual.....	21
Annex C	(informative) Classification of fires, fire ratings according to EN 3-7 and the selection of portable fire extinguishers.....	24
Annex D	(informative) Selection of fixed fire extinguishing systems.....	26
Bibliography	28

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).

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 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.