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Small craft — Fire protection

Petits navires — Protection contre l'incendie



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Contents

	Page
Foreword	v
Introduction	vii
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Fire prevention	4
4.1 Cooking and heating appliances.....	4
4.1.1 General.....	4
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.....	5
4.2.3 Protection from radiated heat devices.....	6
4.2.4 Protection from solid fuel appliances.....	7
4.2.5 Protection from electrical appliances.....	7
4.3 Engine and fuel compartments and exhausts.....	7
4.3.1 General requirements not dependent on fuel type.....	7
4.3.2 Specific requirements for compartments containing fixed petrol engines and permanently installed petrol tanks.....	8
4.3.3 Specific requirements for compartments containing portable petrol- engine equipment and portable petrol tanks or containers.....	9
4.4 Electrical installations.....	9
4.5 Liquefied petroleum gas (LPG) systems.....	9
4.5.1 General.....	9
4.5.2 LPG systems not used for propulsion.....	9
4.5.3 LPG systems used for propulsion.....	9
4.5.4 Self-contained portable appliances.....	9
4.6 Ignition protection.....	9
4.7 Decklights.....	10
5 Fire detection	10
6 Fire escape	10
6.1 Fire escape routes.....	10
6.1.1 General.....	10
6.2 Fire exits.....	11
6.2.1 General.....	11
6.2.2 Minimum clear dimensions.....	11
6.2.3 Positioning fire exits.....	11
6.2.4 Capability to open fire exits.....	11
6.2.5 Deck hatches designated as fire exits.....	12
6.2.6 Watertightness of fire exits.....	12
7 Fire-fighting equipment	12
7.1 Purpose.....	12
7.2 Protection of habitable spaces containing sleeping bunks.....	12
7.3 Protection of habitable spaces containing cooking and heating appliances.....	12
7.4 Protection of engine compartment(s).....	12
7.4.1 General.....	12
7.4.2 Fire ports.....	13
7.5 Portable fire extinguishers.....	14
7.5.1 Purpose.....	14
7.5.2 General requirements.....	14
7.5.3 Carbon dioxide (CO ₂) extinguishers.....	14

7.5.4	Location and capacity of portable fire extinguishers.....	15
7.6	Fixed fire extinguishing systems.....	15
7.6.1	Purpose.....	15
7.6.2	General requirements.....	15
7.6.3	General installation requirements.....	16
7.6.4	Activation of the system.....	17
7.7	Fire blanket.....	17
8	Displayed information.....	18
8.1	General requirements.....	18
8.2	Fixed system warning for non-asphyxiant medium.....	18
8.3	CO ₂ portable extinguisher.....	18
8.4	Storage of ladder to escape hatch.....	19
8.5	Displayed symbol requirements.....	19
9	Owner's manual.....	19
Annex A (normative) Information in the owner's manual.....		20
Annex B (informative) Classification of fires, fire ratings according to EN 3-7 and selection of portable fire extinguishers.....		23
Annex C (informative) Selection of fixed fire extinguishing systems.....		25
Bibliography.....		27

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).

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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.

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.

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.

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*