



DPC: 21/30419422 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

Date: 08 March 2021

Origin: International

Latest date for receipt of comments: 01 May 2021

Project No. 2020/01048

Responsible committee: GME/33 Small craft

Interested committees:

Title: Draft BS ISO 9650-1 Small craft — Inflatable liferafts. Part 1: Type I and II.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

WARNING: THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD. THIS DRAFT IS NOT CURRENT BEYOND 01 May 2021

This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

No copying is allowed, in any form, without prior written permission from BSI except as permitted under the Copyright, Designs and Patent Act 1988 or for circulation within a nominating organization for briefing purposes. Electronic circulation is limited to dissemination by e-mail within such an organization by committee members.

Further copies of this draft may be purchased from BSI Shop <http://shop.bsigroup.com> or from BSI Customer Services, Tel: +44(0) 20 8996 9001 or email cservices@bsigroup.com. British, International and foreign standards are also available from BSI Customer Services.

Information on the co-operating organizations represented on the committees referenced above may be obtained from <https://standardsdevelopment.bsigroup.com/>.

Responsible Committee Secretary: Miss Sarah Horsfield (BSI)
Direct tel: 020 8996 7142
E-mail: sarah.horsfield@bsigroup.com

Full document details: 21/30419422 DC

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
------------------	------------------------

1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

DRAFT INTERNATIONAL STANDARD

ISO/DIS 9650-1

ISO/TC 188

Secretariat: **SIS**

Voting begins on:
2021-03-08

Voting terminates on:
2021-05-31

Small craft — Inflatable liferafts —

Part 1: Type I and II

ICS: 47.080

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.



Reference number
ISO/DIS 9650-1:2021(E)

AVA Documents
Document Sharing Hub
© ISO 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
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General provisions	2
4.1 Introduction	2
4.2 Types of liferaft	3
5 Requirements	3
5.1 General requirements	3
5.2 Detailed requirements	4
5.2.1 Deployment	4
5.2.2 Inflation	4
5.2.3 Buoyancy	5
5.2.4 Stability and performance at sea	6
5.2.5 Solidity, watertightness, materials	8
5.2.6 Habitability	8
5.2.7 Visibility to rescuers	9
5.2.8 Fittings and equipment	10
5.2.9 Instructions and marking	13
5.2.10 Packaging	15
6 Testing	15
6.1 General	15
6.2 Launching (drop) test	16
6.3 Inflation tests under temperature	16
6.3.1 General	16
6.3.2 Ambient-temperature test	16
6.3.3 High-temperature test	17
6.3.4 Low-temperature test	17
6.4 Testing of stabilization means	17
6.5 Righting test	18
6.6 Boarding test	18
6.7 Towing test with sea anchor deployed	18
6.8 Pressure test	19
6.8.1 Buoyancy chambers and canopy support	19
6.8.2 Inflatable floor (if fitted)	19
6.9 Canopy watertightness test	19
6.10 Visual inspection of the protective outer container	20
6.11 Visual inspection of the liferaft	20
6.12 Equipment	20
6.13 Pressure relief valve test	20
6.14 Lights and Batteries test	20
6.15 Mooring Out Test	20
7 Servicing	20
Bibliography	22

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 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 188, *Small craft*.

This edition cancels and replaces ISO/AWI 9650-1 and -2.

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

- Combined ISO 9650-1 and ISO 9650-2;
- Modified Scope to align with meteorological conditions;
- Rationalization of Types and Groups of liferafts;
- Inclusion of Testing schedule for prototypes, manufacturing and servicing;
- Updated reference standard for sea anchors;
- Included reference standard for gas inflation systems;
- Increased requirements for marking products;
- Reviewed terminology of painter/towing line;
- Modified requirements for canopy;
- Modified requirements for boarding system;
- Modified testing requirements,

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 is intended for inflatable liferafts for small craft used for leisure activities. It does not apply to liferafts required for ships under the International Maritime Organization (IMO) *Safety Of Life At Sea* (SOLAS) Convention.

A liferaft manufactured and maintained in accordance with this document should provide:

- a reasonably safe refuge for a shipwrecked person awaiting rescue;
- a reasonable service lifetime, provided a user meets a manufacturer's clearly specified recommendations on stowage and maintenance.

Compliance with this document does not imply that a liferaft will be suitable in all circumstances.

A liferaft which complies with this document must be constructed in such a manner that maintenance is as easy and straightforward as possible.

A user must be responsible for selecting a liferaft appropriate to the intended circumstances of use. Manufacturers and vendors must inform potential purchasers of the properties of the product, including possible choices (e.g. different equipment packs), limits on normal usage, and recommendations on stowage and maintenance.

The tests in this document have been designed to simulate reality as closely as possible. Compliance with a test does not guarantee similar performance in service. For example, compliance with the re-righting tests does not guarantee that a liferaft can be righted at sea by an exhausted person in all circumstances.

Small craft — Inflatable liferafts —

Part 1: Type I and II

1 Scope

This document specifies the minimum requirements for design, performance and marking characteristics, and gives the test methods for inflatable liferafts:

- having a carrying capacity of 4 persons to 16 persons;
- applicable on small craft of hull length up to 24 m;
- intended for launching overboard from a height not exceeding 6 m;
- of type 1 and type 2.

NOTE Type 1 and Type 2 liferafts are defined within [Clause 4.2](#).

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 12402-3:2020, *Personal flotation devices — Part 3: Lifejackets, performance level 150 — Safety requirements*

ISO 15738:2019, *Ships and marine technology — Maritime safety — Gas inflation systems for inflatable life-saving appliances*

ISO 17339:2018, *Ships and marine technology — Life saving and fire protection — Sea anchors for survival craft and rescue boats*

IMO SOLAS 83, Chapter III, Resolution A.658 (16), Annex 2

SOLAS *International Life-Saving Appliance Code* (LSA Code)

3 Terms and definitions

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

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 <http://www.electropedia.org/>

3.1

operating pressure

pressure determined by the designed reseal pressure of the relief valves, except that, if the actual reseal pressure of the relief valves, determined by testing, exceeds the designed reseal pressure by more than 15 %, the higher figure is used