



BSI Standards Publication

Small craft – Hull construction and scantlings

Part 2: Materials: Core materials for sandwich construction,
embedded materials (ISO 12215-2:2002)

National foreword

This British Standard is the UK implementation of EN ISO 12215-2:2018. It is identical to ISO 12215-2:2002. It supersedes BS EN ISO 12215-2:2002, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GME/33, Small craft.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Text affected
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EUROPEAN STANDARD

EN ISO 12215-2

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Supersedes EN ISO 12215-2:2002

English Version

Small craft - Hull construction and scantlings - Part 2: Materials: Core materials for sandwich construction, embedded materials (ISO 12215-2:2002)

Petits navires - Construction de coques et échantillons -
Partie 2: Matériaux: Matériaux d'âme pour les
constructions de type sandwich, matériaux enrobés
(ISO 12215-2:2002)

Kleine Wasserfahrzeuge - Rumpfbauweise und
Dimensionierung - Teil 2: Werkstoffe: Kernwerkstoffe
für Verbundbauweise, eingebettete Werkstoffe (ISO
12215-2:2002)

This European Standard was approved by CEN on 16 April 2018.

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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

European foreword

The text of ISO 12215-2:2002 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 12215-2:2018.

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 April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.

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 12215-2:2002.

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 2013/53/EU.

For relationship with EU Directive 2013/53/EU, 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 12215-2:2002 has been approved by CEN as EN ISO 12215-2:2018 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 Annex I of Directive 2013/53/EU

Essential Requirements of Directive 2013/53/EU	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
Annex I, Part A, 3.1 - Structure	3, 4, Annex A	This standard only specifies the requirements for core materials for structural use and materials that are imbedded in sandwich construction of watercraft. It is intended that it is used with Part 5 where necessary to ensure material shall have adequate properties to enable the structure to fulfil the requirements specified in Part 5 for a normal service life and that the watercraft is strong enough in all respects.
Annex I, Part A, 2.5 - Owner's Manual	5	

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.

Contents

Page

Foreword.....	iv
1 Scope	1
2 Normative references	1
3 Sandwich core properties.....	2
4 Embedded materials — inserts	3
5 Owner's manual	3
Annex A (normative) Mechanical properties of some sandwich core materials.....	4

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 12215 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12215-2 was prepared by Technical Committee ISO/TC 188, *Small craft*.

ISO 12215 consists of the following parts, under the general title *Small craft — Hull construction and scantlings*:

- *Part 1: Materials: Thermosetting resins, glass-fibre reinforcement, reference laminate*
- *Part 2: Materials: Core materials for sandwich construction, embedded materials*
- *Part 3: Materials: Steel, aluminium alloys, wood, other materials*
- *Part 4: Workshop and manufacturing*
- *Part 5: Design pressures, design stresses, scantling determination*
- *Part 6: Structural arrangements and details*

Annex A forms a normative part of this part of ISO 12215.

Small craft — Hull construction and scantlings —

Part 2:

Materials: Core materials for sandwich construction, embedded materials

1 Scope

This part of ISO 12215 specifies requirements for core materials for structural use and materials that are embedded in sandwich construction. It is applicable to small craft with a hull length (L_H) according to ISO 8666 of up to 24 m.

NOTE The underlying reason for preparing this part of ISO 12215 is that sandwich structures of small craft require careful selection of core materials from a multitude of choices, and that the manufacturing has to follow certain procedures to achieve the intended long-term durability under the expected loads and environmental conditions.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 12215. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 12215 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 844:2001, *Rigid cellular plastics — Determination of compression properties*

ISO 845:1988, *Cellular plastics and rubbers — Determination of apparent (bulk) density*

ISO 1922:2001, *Rigid cellular plastics — Determination of shear strength*

ISO 1926:—¹⁾, *Cellular plastics — Determination of tensile properties of rigid materials*

ISO 2896:2001, *Rigid cellular plastics — Determination of water absorption*

ISO 3131:1975, *Wood — Determination of density for physical and mechanical tests*

ISO 3132:1975, *Wood — Testing in compression perpendicular to grain*

ISO 3345:1975, *Wood — Determination of ultimate tensile stress parallel to grain*

ISO 3346:1975, *Wood — Determination of ultimate tensile stress perpendicular to grain*

ISO 4589 (all parts):1996, *Plastics — Determination of burning behaviour by oxygen index*

1) To be published. (Revision of ISO 1926:1979)