

STN	Malé plavidlá Konštrukcia trupu a dimenzovanie Časť 1: Materiály: Termosetické živice, sklovláknová výstuž, referenčný laminát (ISO 12215-1: 2000)	STN EN ISO 12215-1 32 0871
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Small craft - Hull construction and scantlings - Part 1: Materials: Thermosetting resins, glass-fibre reinforcement, reference laminate (ISO 12215-1:2000)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/19

Obsahuje: EN ISO 12215-1:2018, ISO 12215-1:2000

Oznámením tejto normy sa ruší
STN EN ISO 12215-1 (32 0871) z mája 2003

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EUROPEAN STANDARD

EN ISO 12215-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2018

ICS 47.080

English Version

**Small craft - Hull construction and scantlings - Part 1:
Materials: Thermosetting resins, glass-fibre reinforcement,
reference laminate (ISO 12215-1:2000)**

Petits navires - Construction de coques et échantillons -
Partie 1 : Matériaux : Résines thermodurcissables,
renforcement de fibres de verre, stratifié de référence
(ISO 12215-1:2000)

Kleine Wasserfahrzeuge - Rumpfbauweise und
Dimensionierung - Teil 1: Werkstoffe: Härtbare Harze,
Verstärkungsfasern aus Textilglas, Referenzlaminat
(ISO 12215-1:2000)

This European Standard was approved by CEN on 15 July 2018.

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.

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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

EN ISO 12215-1:2018 (E)

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European foreword

The text of ISO 12215-1:2000 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 12215-1:2018 by Technical Committee CEN/SS T01 "Shipbuilding and maritime structures" the secretariat of which is held by CCMC.

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 12215-1:2000.

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 the relationship with EU Directive(s) see informative Annex ZA or ZB, 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 12215-1:2000 has been approved by CEN as EN ISO 12215-1:2018 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 1.A.3.1	All clauses	This standard supports the selection and combination of reinforcement fibres and resins and the mechanical properties of the reference laminate that shall be achieved by any manufacturing process for construction of watercraft only.

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.

INTERNATIONAL STANDARD

ISO 12215-1

First edition
2000-09-01

Small craft — Hull construction and scantlings —

Part 1:

Materials: Thermosetting resins, glass-fibre reinforcement, reference laminate

Petits navires — Construction de coques et échantillons —

*Partie 1: Matériaux: Résines thermodurcissables, renforcement de fibres de
verre, stratifié de référence*



Reference number
ISO 12215-1:2000(E)

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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.

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

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.

International Standard ISO 12215-1 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*

The following will be the subjects of future parts of ISO 12215:

— *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*

Small craft — Hull construction and scantlings —

Part 1:

Materials: Thermosetting resins, glass-fibre reinforcement, reference laminate

1 Scope

This part of ISO 12215 is applicable to thermosetting resins and glass-fibre reinforcement used in the construction of small craft with a length of the hull (L_H) of up to 24 m, in accordance with ISO 8666. This part of ISO 12215 specifies the minimum requirements for material properties of glass reinforcement and resin matrix and the reference laminate made thereof.

This part of ISO 12215 may be applicable to materials other than those specified, provided that the minimum requirements and properties of the reference laminate are met.

NOTE The underlying reason for preparing this International Standard is to harmonize existing standards and recommended practices for loads on the hull and the dimensioning of small craft because they differ too considerably and thus limit general worldwide acceptability of boats.

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 62:1999, *Plastics — Determination of water absorption.*

ISO 75-1:1993, *Plastics — Determination of temperature of deflection under load — Part 1: General test method.*

ISO 75-2:1993, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite.*

ISO 178:1993, *Plastics — Determination of flexural properties.*

ISO 527-1, *Plastics — Determination of tensile properties — Part 1: General principles.*

ISO 527-4, *Plastics — Determination of tensile properties — Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites.*

ISO 1675:1985, *Plastics — Liquid resins — Determination of density by the pycnometer method.*

ISO 1887:1995, *Textile glass — Determination of combustible-matter content.*

ISO 1889:1997, *Reinforcement yarns — Determination of linear density.*

ISO 2078:1993, *Textile glass — Yarns — Designation.*

ISO 2535:1997, *Plastics — Unsaturated polyester resins — Measurement of gel time at 25 °C.*

ISO 2555:1989, *Plastics — Resins in the liquid state or as emulsions or dispersions — Determination of apparent viscosity by the Brookfield Test method.*

ISO 2811-1:1997, *Paints and varnishes — Determination of density — Part 1: Pyknometer method.*

ISO 2884-1:1999, *Paints and varnishes — Determination of viscosity using rotary viscometers — Part 1: Cone-and-plate viscometer operated at a high rate of shear.*

ISO 3344:1997, *Reinforcement products — Determination of moisture content.*

ISO 3374:2000, *Reinforcement products — Mats and fabrics — Determination of mass per unit area.*

ISO 3521:1997, *Plastics — Unsaturated polyester and epoxy resins — Determination of overall volume shrinkage.*

ISO 4901:1985, *Reinforced plastics based on unsaturated polyester resins — Determination of residual styrene monomer content.*

ISO 8666:—¹⁾, *Small craft — Principal data.*

ISO 14130:1997, *Fibre-reinforced plastic composites — Determination of apparent interlaminar shear strength by short-beam method.*

EN 59:1977, *Glass reinforced plastics — Measurement of hardness by means of a Barcol-impresor.*

DIN 16945:1989, *Testing of resins, hardeners and accelerators, and catalysed resins.*

ASTM D 4255, *Testing in-plane shear properties of composite laminates.*

in one direction;

— cloth, which is a fabric woven from yarn.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

1) To be published.