



SLOVENSKI STANDARD
SIST EN ISO 10548:1999
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Carbon fibre - Determination of size content (ISO 10548:1994)

Kohlenstoffasern - Bestimmung des Präparationsmassenanteils (ISO 10548:1994)

Fibres de carbone - Détermination du taux d'ensimage (ISO 10548:1994)

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Ta slovenski standard je istoveten z: EN ISO 10548:1996

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ICS:

59.100.20 Ogljikovi materiali Carbon materials

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EUROPEAN STANDARD

EN ISO 10548

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 1996

ICS 59.100.20

Descriptors: see ISO document

English version

**Carbon fibre - Determination of size content
(ISO 10548:1994)**Fibres de carbone - Détermination du taux
d'ensimage (ISO 10548:1994)Kohlenstofffasern - Bestimmung des
Präparationsmassenanteils (ISO 10548:1994)**STANDARD PREVIEW**
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This European Standard was approved by CEN on 1995-11-24. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENEuropean Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard from Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) has been taken over as a European Standard by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN .

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 September 1996, and conflicting national standards shall be withdrawn at the latest by September 1996.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 10548:1994 has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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Annex ZA (normative)**Normative references to international publications
with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 1886	1990	Reinforcement fibres - Sampling plans applicable to received batches	EN ISO 1886	1994

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INTERNATIONAL
STANDARD

ISO
10548

First edition
1994-11-01

**Carbon fibre — Determination of size
content**

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Fibres de carbone — Détermination du taux d'ensimage
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Reference number
ISO 10548:1994(E)

ISO 10548:1994(E)**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.

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.

International Standard ISO 10548 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 13, *Composites and reinforcement fibres*.

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Carbon fibre — Determination of size content

1 Scope

This International Standard specifies test methods for the determination of the size content of carbon fibre yarn. It is applicable to continuous-filament yarns and staple-fibre yarns.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1886:1990, *Reinforcement fibres — Sampling plans applicable to received batches*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 size: Any material applied to fibres to facilitate the handling and use of the fibres.

3.2 size content: The mass of the size expressed as a percentage of the sized carbon fibre yarn.

4 Principle

Test specimens are weighed before and after removal of the size by one of the following three methods:

Method A: size removal by Soxhlet extraction, to be used when the size is completely soluble in a suitable solvent.

Method B: size removal by chemical digestion using a mixture of sulfuric acid and hydrogen peroxide, used when the size is partially hardened and not completely soluble in solvents.

Method C: size decomposition by pyrolysis at high temperature in an atmosphere of nitrogen, used when the size is completely removed by pyrolysis.

The test methods require all weighings to be made to constant mass by repetition of the drying or dissolution stages. In those cases where known materials are being tested regularly, it is permitted to define, by experiment, a minimum time for dissolution and drying which will ensure that constant mass has been obtained.

5 Test specimens

Two test specimens shall be taken adjacent to one another from each elementary unit or yarn sample. The size content is taken as the average of the two determinations. Each test specimen shall have a minimum mass of 2 g.

If the determination is carried out for the purpose of lot acceptance, the lot received shall be sampled in accordance with ISO 1886.

When handling test specimens, gloves shall be worn or tweezers used to avoid damage to the specimens.

NOTE 1 The specification or the person requiring the test may stipulate that additional determinations be carried out at different places within the elementary unit.

6 Conditioning

Elementary units and yarn samples shall be allowed to attain laboratory temperature before testing. Before weighing the yarn, it shall always be dried for 1 h at a temperature of $110\text{ °C} \pm 5\text{ °C}$.