



SLOVENSKI STANDARD SIST EN ISO 527-5:1999

01-maj-1999

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Plastics - Determination of tensile properties - Part 5: Test conditions for unidirectional fibre-reinforced plastic composites (ISO 527-5:1997)

Kunststoffe - Bestimmung der Zugeigenschaften - Teil 5: Prüfbedingungen für unidirektional faserverstärkte Kunststoffverbundwerkstoffe (ISO 527-5:1997)

Plastiques - Détermination des propriétés en traction - Partie 5: Conditions d'essai pour les composites plastiques renforcés de fibres unidirectionnelles (ISO 527-5:1997)

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Ta slovenski standard je istoveten z: EN ISO 527-5:1997

ICS:

83.120 Ube a] [|ã ^!ã Reinforced plastics

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EUROPEAN STANDARD

EN ISO 527-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1997

ICS 83.120

Descriptors: see ISO document

English version

**Plastics - Determination of tensile properties - Part
5: Test conditions for unidirectional
fibre-reinforced plastic composites
(ISO 527-5:1997)**

Plastiques - Détermination des propriétés en traction - Partie 5: Conditions d'essai pour les composites plastiques renforcés de fibres unidirectionnelles (ISO 527-5:1997) **ITh STANDARD PREVIEW (standards.iteh.ai)** Kunststoffe - Bestimmung der Zugeigenschaften - Teil 5: Prüfbedingungen für unidirektional faserverstärkte Kunststoffverbundwerkstoffe (ISO 527-5:1997)

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This European Standard was approved by CEN on 1997-03-28. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

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

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

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EN ISO 527-5:1997

Foreword

The text of the International Standard ISO 527-5:1997 has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

ISO 527 contains the following parts with the general title: "Plastics - Determination of tensile properties".

- Part 1: General principles
- Part 2: Test conditions for moulding and extrusion plastics
- Part 3: Test conditions for films and sheets
- Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites
- Part 5: Test conditions for unidirectional fibre-reinforced plastic composites

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 October 1997, and conflicting national standards shall be withdrawn at the latest by October 1997.

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

Endorsement notice

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The text of the International Standard ISO 527-5:1997 was approved by CEN as a European Standard without any modification.

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



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 527-1	1993	Plastics - Determination of tensile properties - Part 1: General principles	EN ISO 527-1	1996
ISO 527-4	1997	Plastics - Determination of tensile properties - Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites	EN ISO 527-4	1997

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INTERNATIONAL STANDARD

ISO
527-5

First edition
1997-04-15

Plastics — Determination of tensile properties —

Part 5:

Test conditions for unidirectional fibre-reinforced plastic composites

iTeh STANDARD PREVIEW
Plastiques — Détermination des propriétés en traction —

*Partie 5: Conditions d'essai pour les composites plastiques renforcés de
fibres unidirectionnelles*

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2c7212897e46/sist-en-iso-527-5-1999](https://standards.iteh.ai/catalog/standards/sist/ffc21388-13b6-4665-bdee-2c7212897e46/sist-en-iso-527-5-1999)



Reference number
ISO 527-5:1997(E)

ISO 527-5:1997(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 527-5 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 2, *Mechanical properties*.

Together with part 4, this part of ISO 527 cancels and replaces the first edition of ISO 3268 (ISO 3268:1978), which has been technically revised.

ISO 527 consists of the following parts, under the general title *Plastics — Determination of tensile properties*:

- *Part 1: General principles*
- *Part 2: Test conditions for moulding and extrusion plastics*
- *Part 3: Test conditions for sheet and film*
- *Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites*
- *Part 5: Test conditions for unidirectional fibre-reinforced plastic composites*

Annex A forms an integral part of this part of ISO 527. Annex B is for information only.

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Plastics — Determination of tensile properties —

Part 5:

Test conditions for unidirectional fibre-reinforced plastic composites

1 Scope

1.1 This part of ISO 527 specifies the test conditions for the determination of the tensile properties of unidirectional fibre-reinforced plastic composites, based upon the general principles given in part 1.

1.2 See ISO 527-1, subclause 1.2.

1.3 The test method is suitable for all polymer matrix systems reinforced with unidirectional fibres and which meet the requirements, including failure mode, set out in this part of ISO 527.

The method is suitable for composites with either thermoplastic or thermosetting matrices, including preimpregnated materials (prepregs). The reinforcements covered include carbon fibres, glass fibres, aramid fibres and other similar fibres. The reinforcement geometries covered include unidirectional (i.e. completely aligned) fibres and rovings and unidirectional fabrics and tapes.

The method is not normally suitable for multidirectional materials composed of several unidirectional layers at different angles (see ISO 527-4).

1.4 The method is performed using one of two different types of test specimen, depending on the direction of the applied stress relative to the fibre direction (see clause 6).

1.5 See ISO 527-1, subclause 1.5.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 527. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 527 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 527-1:1993, *Plastics — Determination of tensile properties — Part 1: General principles*.

ISO 527-4:1997, *Plastics — Determination of tensile properties — Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites*.