



SLOVENSKI STANDARD SIST EN ISO 9163:2000

01-maj-2000

GHY`YbYh_Ub]bY!`Gbcd]]ghY`Yb] `j`U_Yb`ffcj]b[gL!`Df]dfUj UdfYg_i yUbWj `]b
Xc`c Ub`Y`bUhnY`fXbcgh]`ja dfY[b]fUb] `gbcd] Yj`ghY`Yb] `j`U_Yb`ffcj]b[gL!`GC
- %' .% - * Ł

Textile glass - Rovings - Manufacture of test specimens and determination of tensile strength of impregnated rovings (ISO 9163:1996)

Textilglas - Rovings - Herstellung von Probekörpern und Bestimmung der Zugfestigkeit von imprägnierten Rovings (ISO 9163:1996)

Verre textile - Stratifils - Fabrication d'éprouvettes et essai de traction sur stratifil imprégné (ISO 9163:1996)

<https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000>

Ta slovenski standard je istoveten z: EN ISO 9163:1998

ICS:

59.100.10 Materiali iz steklenih vlaken Textile glass materials

SIST EN ISO 9163:2000

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 9163:2000](https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000)

<https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 9163

August 1998

ICS 59.100.10

Descriptors: see ISO document

English version

Textile glass - Rovings - Manufacture of test specimens and
determination of tensile strength of impregnated rovings (ISO
9163:1996)

Verre textile - Stratifils - Fabrication d'éprouvettes et essai
de traction sur stratifil imprégné (ISO 9163:1996)

Textilglas - Rovings - Herstellung von Probekörpern und
Bestimmung der Zugfestigkeit von imprägnierten Rovings
(ISO 9163:1996)

This European Standard was approved by CEN on 3 August 1998.

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.

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 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.

<https://standards.iteh.ai/catalog/standards/sist/d1741b2-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Page 2
EN ISO 9163:1998

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 an 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 February 1999, and conflicting national standards shall be withdrawn at the latest by February 1999.

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

The text of the International Standard ISO 9163:1996 has been approved by CEN as a European Standard without any modification.

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

[SIST EN ISO 9163:2000](https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000)

<https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000>



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 291	1997	Plastics - Standard atmospheres for conditioning and testing	EN ISO 291	1997
ISO 1886	1990	Reinforcement fibres - Sampling plans applicable to received batches	EN ISO 1886	1994
ISO 1889	1997	Reinforcement yarns - Determination of linear density	EN ISO 1889	1997
ISO 2078	1993	Textile glass - Yarns - Designation	EN ISO 2078	1994

iteh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 9163:2000

<https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 9163:2000

<https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000>

INTERNATIONAL
STANDARD

ISO
9163

First edition
1996-10-15

**Textile glass — Rovings — Manufacture of
test specimens and determination of
tensile strength of impregnated rovings**
iTeh STANDARD PREVIEW

(standards.iteh.ai)

*Verre textile — Stratifils — Fabrication d'éprouvettes et essai de traction
sur stratifil imprégné*

[SIST EN ISO 9163:2000](https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000)

<https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000>



Reference number
ISO 9163:1996(E)

ISO 9163:1996(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 9163 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 13, *Composites and reinforcement fibres*.

Annex A forms an integral part of this International Standard.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN ISO 9163:2000
<https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000>

© ISO 1996

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Introduction

There are several methods of measuring the tensile strength of rovings, using as a specimen either an unimpregnated roving or a roving impregnated with polyester or epoxy resin or with rosin/beeswax mixture.

The results obtained with these different methods are not equivalent.

The test carried out on rovings impregnated with cured resin is considered the reference method. It allows both the tensile stress at break and the modulus of elasticity to be measured. This method is the only one which gives results having a direct correlation with the tensile properties of reinforced plastics made from the continuous roving.

The test results obtained with rovings impregnated with rosin/beeswax are generally 10 % to 20 % lower than those obtained with the reference method. Moreover, the method using rovings impregnated with rosin/beeswax does not give the tensile modulus of elasticity. On the other hand, it is simpler than the reference method.

The measurement of the tensile strength using unimpregnated rovings is even simpler, but the results are lower than those obtained with rovings impregnated with rosin/beeswax mixture. They also show a greater variation. On the other hand, this method is a useful one for the user of the roving to check the quality of the product. This method is not covered by this International Standard but is described in ISO 3341.

iTeh STANDARD PREVIEW
This page intentionally left blank
(standards.iteh.ai)

SIST EN ISO 9163:2000

<https://standards.iteh.ai/catalog/standards/sist/df741f52-270a-44dc-b5ae-79e55ea87202/sist-en-iso-9163-2000>

Textile glass — Rovings — Manufacture of test specimens and determination of tensile strength of impregnated rovings

1 Scope

This International Standard specifies two methods for the determination of the tensile stress at break of an impregnated roving:

- the reference method (roving impregnated with thermosetting resin);
- a rapid method (roving impregnated with rosin/beeswax).

The reference method is used to determine, in addition, the tensile modulus of elasticity of the glass.

The methods are applicable to both assembled (multistrand) and direct (multifilament) rovings.

2 Normative references

The following standards contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 291:—¹⁾, *Plastics — Standard atmospheres for conditioning and testing.*

ISO 1172:—²⁾, *Textile-glass-reinforced plastics — Prepegs, moulding compounds and laminates — Determination of the textile-glass and mineral-filter content — Calculation method.*

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

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

ISO 1889:—³⁾, *Reinforcement yarns — Determination of linear density.*

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

ISO 2602:1980, *Statistical interpretation of test results — Estimation of the mean — Confidence interval.*

ISO 3341:1984, *Textile glass — Yarns — Determination of breaking force and breaking elongation.*

ISO 7822:1990, *Textile glass reinforced plastics — Determination of void content — Loss on ignition, mechanical disintegration and statistical counting methods.*

3 Definitions

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

3.1 breaking force: The maximum tensile force (expressed in newtons) required to break a test specimen in a tensile test.

1) To be published. (Revision of ISO 291:1977)

2) To be published. (Revision of ISO 1172:1975)

3) To be published. (Revision of ISO 1889:1987 and ISO 10120:1991)