

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

The European Standard EN ISO 9163:2005 has the status of a British Standard

ICS 59.100.10

National foreword

This British Standard is the official English language version of EN ISO 9163:2005. It is identical with ISO 9163:2005. It supersedes BS EN ISO 9163:1999 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/42, Fibre reinforced thermosetting plastics and prepregs, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 12 May 2005

Summary of pages

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English version

**Textile glass - Rovings - Manufacture of test specimens and
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9163:2005)**

Verre textile - Stratifils - Fabrication d'éprouvettes et essai
de traction sur stratifié imprégné (ISO 9163:2005)

This European Standard was approved by CEN on 15 March 2005.

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.

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Foreword

This document (EN ISO 9163:2005) 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.

This document supersedes EN ISO 9163:1998.

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 2005, and conflicting national standards shall be withdrawn at the latest by October 2005.

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

Endorsement notice

The text of ISO 9163:2005 has been approved by CEN as EN ISO 9163:2005 without any modifications.

INTERNATIONAL STANDARD

ISO
9163

Second edition
2005-04-01

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

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



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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 2.

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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

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

This second edition cancels and replaces the first edition (ISO 9163:1996), which has been technically revised, as follows:

- The reference method remains essentially the same, with a few corrections, as in ISO 9163:1996.
- The so-called “fast method” described in ISO 9163:1996 has been deleted because it was no longer used. It has been replaced by a method which needs far less time and gives results consistent with the reference method.

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1 Scope

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

- a reference method using test specimens produced with moulded epoxy tabs;
- a short method using test specimens with no tabs or simple cardboard or composite tabs.

The methods are applicable to both assembled (multistrand) and direct (multifilament) rovings; nevertheless the reference method may be used for various linear densities, but the short method is described for 1 200 tex rovings only, which is the linear density that allows the fibres in the roving to spread out most easily during impregnation.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

ISO 472, *Plastics — Vocabulary*

ISO 1172, *Textile-glass-reinforced plastics — Prepregs, moulding compounds and laminates — Determination of the textile-glass and mineral-filler content — Calcination methods*

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

ISO 1889, *Reinforcement yarns — Determination of linear density*

ISO 2078, *Textile glass — Yarns — Designation*

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 3951-1, *Sampling procedures for inspection by variables — Part 1: Specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection for a single quality characteristic and a single AQL*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 472 and the following apply.