
**Textiles — Biaxial tensile properties
of woven fabric — Determination of
maximum force and elongation at
maximum force using the grab method**

*Textile- Propriétés biaxiales des tissus- Détermination de la force
maximale et de l'élongation par la méthode d'arrachement*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 24, *Conditioning atmospheres and physical tests for textile fabrics*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Textiles — Biaxial tensile properties of woven fabric — Determination of maximum force and elongation at maximum force using the grab method

1 Scope

This document specifies a procedure to determine the maximum force and elongation at maximum force of textiles woven fabrics using a grab method in the biaxial testing machine.

The method is mainly applicable to woven textile fabrics, including fabrics which exhibit stretch characteristics imparted by the presence of an elastomeric fibre, mechanical, or chemical treatment. It can be applicable to fabrics produced by other techniques. It is not applicable to geotextiles^[4], nonwovens^[3], coated fabrics^[5], textile-glass woven fabrics^[2], and fabrics made from carbon fibres or polyolefin tape yarns.

The method is restricted to the use of constant rate of extension (CRE) testing machines to the same axis.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 139, *Textiles — Standard atmospheres for conditioning and testing*

ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

ISO 10012, *Measurement management systems — Requirements for measurement processes and measuring equipment*

ISO 13934-1, *Textiles — Tensile properties of fabrics — Part 1: Determination of maximum force and elongation at maximum force using the strip method*

ISO 13934-2, *Textiles — Tensile properties of fabrics — Part 2: Determination of maximum force using the grab method*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 13934-1, ISO 13934-2 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

biaxial

related to measurement or application along two axes simultaneously