

INTERNATIONAL  
STANDARD

**ISO**  
**5079**

Second edition  
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**Textile fibres — Determination of breaking  
force and elongation at break of individual  
fibres**

*Fibres textiles — Détermination de la force de rupture et de l'allongement  
de rupture des fibres individuelles*



Reference number  
ISO 5079:1995(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 5079 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 6, *Fibre testing*.

This second edition cancels and replaces the first edition (ISO 5079:1977), which has been technically revised.

Annex A of this International Standard is for information only.

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# Textile fibres — Determination of breaking force and elongation at break of individual fibres

## 1 Scope

This International Standard specifies the method and conditions of test for the determination of the breaking force and elongation at break of individual fibres in the conditioned or wet state.

The determination of these fibre properties, when carried out on different kinds of testing equipment, will not generally give identical results. To avoid such differences, this International Standard is restricted to the use of constant-rate-of-extension testing apparatus.

The method is applicable to all fibres, including crimped fibres, provided that the length of fibre available enables the initial length specified in this International Standard to be used.

NOTE 1 For natural fibres (especially wool and cotton) the breaking test most commonly performed is that of bundles of fibres (see ISO 3060 and IWTO 32-82).

## 2 Normative references

The following standards contain 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 139:1973, *Textiles — Standard atmospheres for conditioning and testing*.

ISO 1130:1975, *Textile fibres — Some methods of sampling for testing*.

ISO 1973:1995, *Textile fibres — Determination of linear density — Gravimetric method and vibroscope method*.

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

ISO 3060:1974, *Textiles — Cotton fibres — Determination of breaking tenacity of flat bundles*.

IWTO 32-82, *Determination of the bundle strength of wool fibres*, International Wool Textile Organization, Brussels.

## 3 Definitions

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

**3.1 breaking force:** Maximum force applied to a test specimen carried to rupture during a tensile test under specified conditions (see  $A_1$  in figure 1).