INTERNATIONAL STANDARD

ISO 4603

Second edition
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Textile glass — Woven fabrics — Determination of thickness

Verre textile — Tissus — Détermination de l'épaisseur

Reference number
ISO 4603:1993(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 4603 was prepared by Technical Committee ISO/TC 61, *Plastics*, Sub-Committee SC 13, *Composites and reinforcement fibres*.

This second edition cancels and replaces the first edition (ISO 4603:1978), which has been technically revised.

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Textile glass — Woven fabrics — Determination of thickness

1 Scope

This International Standard specifies a method of determining the thickness of a textile-glass fabric having a thickness of 0,1 mm or more.[1)]

This method is applicable to woven fabrics of single or folded (plied) yarns (continuous-filament textile-glass products or staple-fibre textile-glass products), rovings, textured yarns or combinations of these yarns.

For woven fabrics made from staple-fibre or textured yarns, including those with such yarns in the weft or warp only, this standard also enables the compressibility to be determined.

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 291:1977, *Plastics — Standard atmospheres for conditioning and testing.*

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

3 Definition

For the purposes of this International Standard, the following definition applies.

3.1 thickness of a textile-glass fabric: The perpendicular distance, in millimetres, between the surfaces of the fabric, measured at a specified pressure.

4 Principle

Measurement of thickness of conditioned test specimens under a known pressure by means of a suitable apparatus.

5 Apparatus

5.1 Dead-weight micrometer, with two ground and lapped circular surfaces, flat to within 0,001 mm and parallel to within 0,003 mm. The faces shall move on an axis perpendicular to themselves. The measuring spindle shall be vertical. The frame of the micrometer shall be of such rigidity that a force of 15 N applied to the housing, out of contact with the pressure-foot, will produce a deflection of the frame not greater than 0,01 mm, as indicated on the micrometer read-out. The calibration gauge used to check the instrument shall be accurate to within ± 0,001 mm.

The types of micrometer described in 5.1.1 and 5.1.2 may be used.

5.1.1 Electronic micrometer.

A suitable electronic micrometer with a digital read-out to 0,001 mm.

5.1.2 Dial-gauge micrometer.

The dial shall be at least 50 mm in diameter. It shall be capable of being continuously read directly to

1) Attention is drawn to the following International Standard: ISO 5084:1977, *Textiles — Determination of thickness of woven and knitted fabrics (other than textile floor coverings).*