

INTERNATIONAL
STANDARD

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**Textile glass — Mats — Determination
of tensile breaking force**

Verre textile — Mats — Détermination de la force de rupture en traction



Reference number
ISO 3342:1995(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 3342 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 13, *Composites and reinforcement fibres*.

This third edition cancels and replaces the second edition (ISO 3342:1987), which has been technically revised.

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Textile glass — Mats — Determination of tensile breaking force

1 Scope

This International Standard specifies a method for the determination of the tensile breaking force of textile glass mats.

The method is intended for chopped-strand mat but is equally applicable to certain types of continuous-strand mat usually intended for pultrusion.

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 3374:1990, *Textile glass mats — Determination of mass per unit area*.

3 Definition

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

3.1 tensile breaking force: The maximum force required to break the test specimen in a tensile test carried to rupture.

It is generally expressed in newtons.

4 Principle

A pre-conditioned test specimen of standard dimensions is subjected to tension by a suitable mechanical device which indicates the tensile breaking force on a recorder or scale.

NOTE 1 The test results may vary significantly depending whether they are obtained on rolls of mat or on the mat prior to winding into rolls (normally, the result is higher prior to winding). The method specified in this standard describes the procedure for testing rolls of mat.

5 Apparatus

5.1 Tensile-testing machine.

5.1.1 All testing machines shall include the following elements:

- a) A pair of suitable clamps to grip the specimen. They shall have a width of 160 mm and a minimum depth of 25 mm.

The faces of the clamps shall be plane and parallel, shall ensure uniform pressure over the whole width of the test specimen and shall prevent it from slipping.

The clamps shall also ensure, at all times, alignment of the axis of the test specimen with the direction of the applied force. The initial distance between the clamps shall be 200 mm.

- b) A means for applying tension to the specimen.
- c) A mechanism that will continuously indicate or record the force sustained by specimen. The mechanism shall be practically free from inertia at the specified speed of testing and shall indicate