
INTERNATIONAL STANDARD



3375

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Textile glass — Determination of stiffness of rovings

Verre textile — Détermination de la rigidité des stratifils

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Descriptors : textile glass, glass cloth, rovings, tests, stiffness tests.

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3375 was drawn up by Technical Committee ISO/TC 61, *Plastics*, and circulated to the Member Bodies in January 1974.

It has been approved by the Member Bodies of the following countries :

Austria	Hungary	Poland
Belgium	Iran	Portugal
Brazil	Ireland	Romania
Bulgaria	Israel	Spain
Canada	Italy	Sweden
Czechoslovakia	Japan	Switzerland
Egypt, Arab Rep. of	Mexico	Turkey
France	Netherlands	United Kingdom
Germany	New Zealand	U.S.A.

No Member Body expressed disapproval of the document.

Textile glass — Determination of stiffness of rovings

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the stiffness of textile glass rovings.

2 REFERENCES

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

ISO 1886, *Textile glass products — Continuous filament yarns, staple fibre yarns and rovings in the form of packages — Sampling of batches or consignments*.

3 PRINCIPLE

Suspension, at its centre, of a test specimen of defined length, and measurement of the separation of the two hanging ends of the test specimen at a standard distance below the suspension point.

4 SAMPLING

Sampling shall be carried out in accordance with ISO 1886.

5 APPARATUS

5.1 Means for the controlled unwinding of the roving (see figure 1).

5.2 Roving stiffness tester, consisting of a stainless steel hook of circular cross-section and a sliding scale positioned 60 mm below the point of suspension (see figure 2).

6 CONDITIONING

The roving shall be unpacked and the packages conditioned for at least 48 h in one of the standard laboratory atmospheres specified in ISO/R 291.

7 PROCEDURE

7.1 Carry out the test in one of the standard atmospheres specified in ISO/R 291.

7.2 Unwind the roving from the outside, as shown in figure 1, pulling it through the guide eye and around the stainless steel rollers.

7.3 The speed of unwinding shall be about 100 mm/s, since the roving must be handled carefully, without too much tension.

7.4 Before taking test specimens from the outer layer of the package, first remove at least 10 m of the roving.

Cut off five test specimens, each 500 ± 5 mm, with a sharp knife.

7.5 Drape the test specimen over the hook, ensuring that an equal length of the test specimen is projecting on either side, and wait 30 ± 5 s before taking any measurement.

7.6 Stand directly in front of the end of the test specimen hanging to the left of the hook (to avoid any parallax error) and align the zero point of the sliding scale with the centre of the roving.

7.7 Move to stand directly in front of the end of the test specimen hanging on the right of the hook (to avoid any parallax error) and read off the distance, in millimetres, between the centres of the hanging ends of the roving.

7.8 Always make the reading at the position where the centres of the draped test specimen intersect with the top of the sliding scale, situated 60 mm below the top of the hook.

7.9 Proceed in the same way with the remaining four test specimens.

8 EXPRESSION OF RESULTS

Report the arithmetic mean of the five tests, expressed in millimetres, as the stiffness of the roving.

9 TEST REPORT

The test report shall include the following particulars :

- a reference to this International Standard;
- a complete reference to the roving tested;
- the outer diameter of the packages from which the samples have been taken;
- details of the preconditioning and the laboratory atmosphere used for testing;
- individual results and their mean.

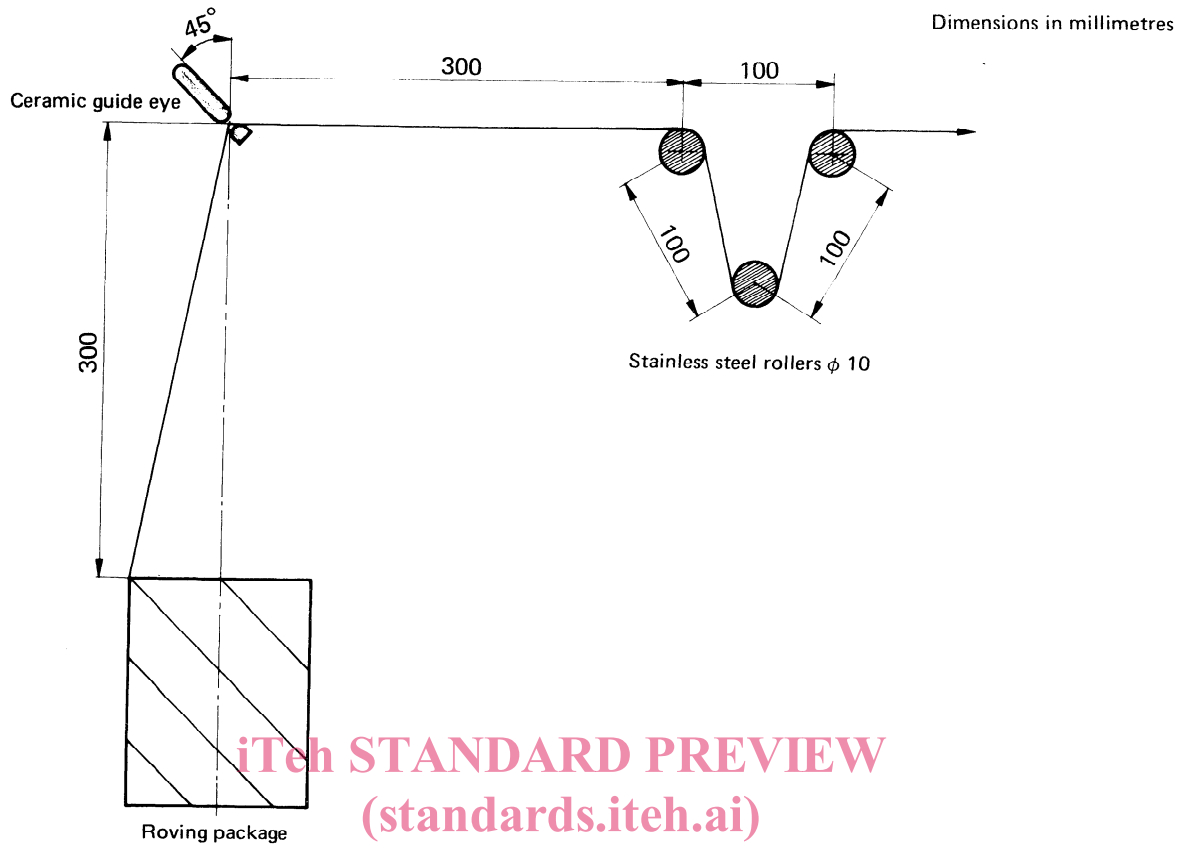


FIGURE 1 – Means for the controlled unwinding of the roving
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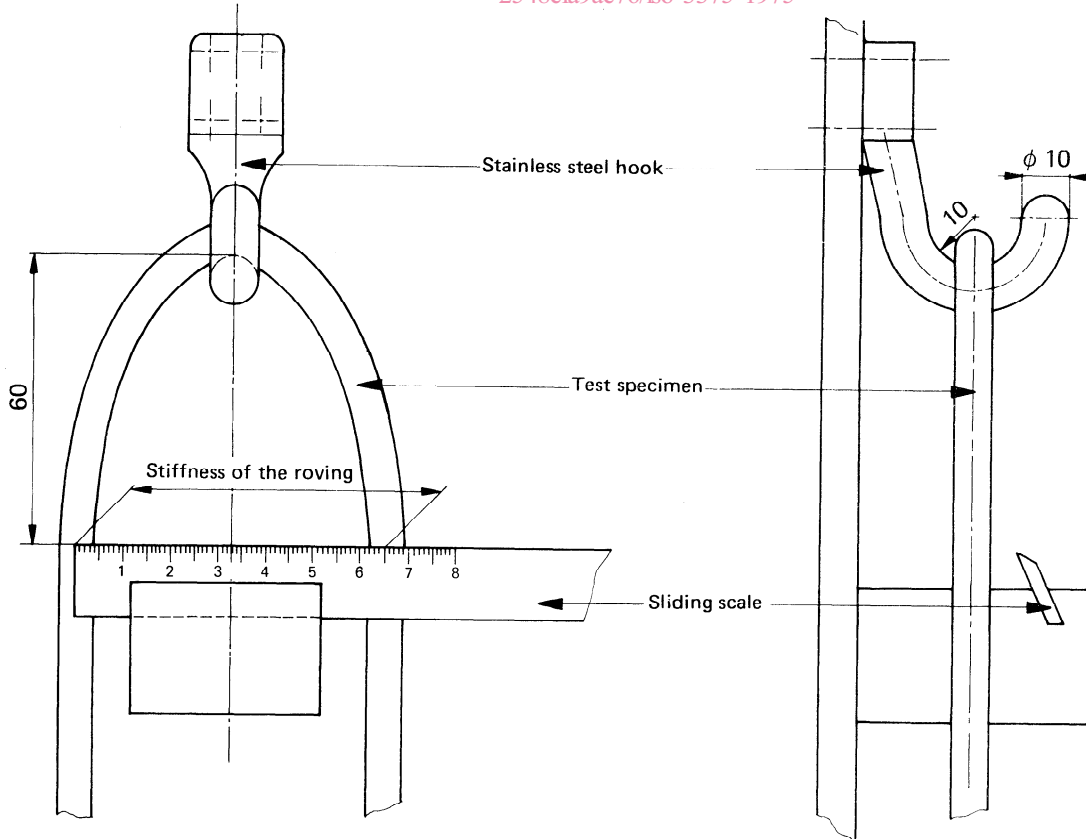


FIGURE 2 – Roving stiffness tester