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**Textile glass — Determination of stiffness  
of rovings**

*Verre textile — Détermination de la rigidité des stratifils*



Reference number  
ISO 3375:2009(E)

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## Foreword

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3375 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 13, *Composites and reinforcement fibres*.

This second edition cancels and replaces the first edition (ISO 3375:1975), of which it constitutes a minor revision. The main changes are as follows:

- a) the sampling clause has been deleted (the sampling standard referred to in the previous edition, ISO 1886, has been withdrawn without replacement);
- b) the specimen-conditioning time has been changed from 48 h to a minimum of 6 h.

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# Textile glass — Determination of stiffness of rovings

## 1 Scope

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

## 2 Normative references

The following referenced documents are indispensable for the application 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 291, *Plastics — Standard atmospheres for conditioning and testing*

## 3 Principle

A test specimen of defined length is suspended at its centre, and the separation of the two hanging ends of the specimen measured at a standard distance below the point of suspension.

## 4 Apparatus

**4.1 Means for the controlled unwinding of the roving** (see Figure 1).

**4.2 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).

## 5 Conditioning

The roving shall be unpacked and the packages conditioned for at least 6 h in one of the standard laboratory atmospheres specified in ISO 291.

## 6 Procedure

**6.1** Carry out the test in one of the standard atmospheres specified in ISO 291.

**6.2** Unwind the roving from the outside of the package as shown in Figure 1, pulling it through the guide eye and round the stainless-steel rollers.

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

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

Then cut off five test specimens, each  $(500 \pm 5)$  mm long, with a sharp knife.

**6.5** Drape one of the test specimens over the hook, ensuring that an equal length of the test specimen is hanging down on each side, and wait  $(30 \pm 5)$  s before making any measurements.

**6.6** 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.

**6.7** 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.

**6.8** Always take the readings at the position where the centres of the draped test specimen intersect the top of the sliding scale, situated 60 mm below the top of the hook.

**6.9** Proceed in the same way with the remaining four test specimens.

## **7 Expression of results**

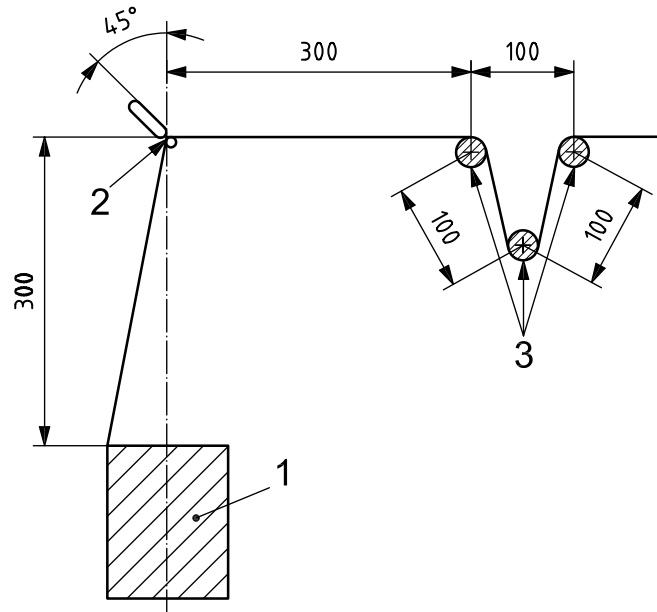
Report the arithmetic mean of the five measurements, expressed in millimetres, as the stiffness of the roving.

## **8 Test report**

The test report shall include the following particulars:

- a) a reference to this International Standard;
- b) all details necessary for complete identification of the roving tested;
- c) the outer diameter of the package from which the specimens were taken;
- d) details of the conditioning and test atmosphere used;
- e) the individual results and their mean;
- f) the date of the test.

Dimensions in millimetres

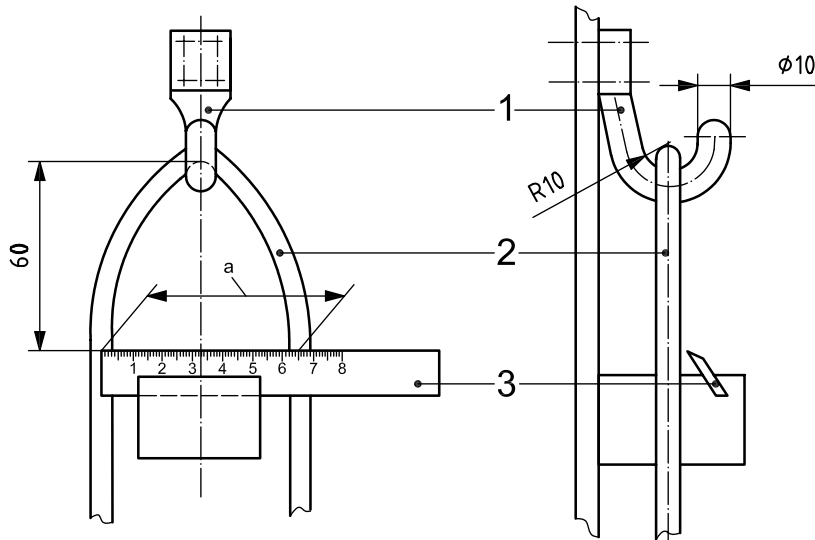


**Key**

- 1 roving package
- 2 ceramic guide eye
- 3 stainless-steel rollers, diameter 10 mm

**Figure 1 — Means for the controlled unwinding of the roving**

Dimensions in millimetres



**Key**

- 1 stainless-steel hook
- 2 test specimen
- 3 sliding scale
- a Stiffness of the roving.

**Figure 2 — Roving stiffness tester**

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**ICS 59.100.10**

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