INTERNATIONAL STANDARD

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Rigid cellular plastics — Determination of tensile properties

Plastiques alvéolaires rigides — Détermination des caractéristiques en traction

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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 1926 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 10, *Cellular plastics*.

This fourth edition cancels and replaces the third edition (ISO 1926:2005), of which it constitutes a minor revision. Changes have been made to the requirements for the conditioning of test specimens in 5.2.

Rigid cellular plastics — Determination of tensile properties

1 Scope

This International Standard specifies a method of determining the behaviour of rigid cellular plastics materials when they are subjected to a tensile stress.

It applies primarily to cellular materials having a compression resistance sufficient to permit suitable gripping of the test specimens. If it is impossible to grip the test specimen, the method is modified so that the ends of the specimen are reinforced with metal plates (see Clause 8).

The relationship between cell size and test specimen size must be such that the test is realistic.

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*

ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*

3 Principle

A test specimen of a given shape is subjected to a tensile stress transmitted to the test specimen by means of a suitable device and corresponding stress-strain curve is plotted.

4 Apparatus

The test machine shall be such that:

a) It has clamps suitable for holding the test specimen. These clamps shall meet the following requirements:

   1) they shall close sufficiently tightly on the faces of the test specimen to avoid slipping;

   2) they shall not exert, on any part of the ends of the test specimen, localized pressure which could cause tears, deformations or ruptures.

      In cases of difficulty, use the variant described in Clause 8.

b) The movable clamp can be moved, with the test specimen in place, away from the fixed clamp at a constant speed of (5 ± 1) mm/min in a direction parallel to the longitudinal axis of the test specimen.

c) The force thus exerted on the test specimen can be determined with a maximum error of 1 %, and can be recorded.