BS ISO 1922:2012

BSI Standards Publication

Rigid cellular plastics — Determination of shear strength

This British Standard is the UK implementation of ISO 1922:2012. It supersedes BS ISO 1922:2001 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/24, Testing of rigid and flexible cellular materials.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Contents

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.

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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 1922 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 10, *Cellular plastics*.

This fourth edition cancels and replaces the third edition (ISO 1922:2001), of which it constitutes a minor revision to amend Clause 7, which concerns conditioning and test temperatures and humidities.

Rigid cellular plastics — Determination of shear strength

1 Scope

This International Standard specifies a method of determining the shear strength of rigid cellular plastics. It also provides for the optional determination of shear modulus.

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 1923, *Cellular plastics and rubbers — Determination of linear dimensions*

3 Principle

A shear stress is applied to a test specimen of defined shape by means of metal supports bonded to the specimen.

4 Apparatus

4.1 Test machine

The test machine (see Figure 1) shall be such that:

a) a test specimen having the form and dimensions specified in Clause 5 is held vertically between two fixing devices each comprising a metal support, one of these devices being fixed and the other movable, and the stress being transmitted along the longitudinal axis of the specimen;

b) the movable grip will be moved away from the fixed grip at a constant rate of (1 ± 0,5) mm per minute in a direction parallel to the longitudinal axis of the specimen;

c) the force exerted on the specimen shall be known with a maximum error of 1 %, and the distance between the grips shall be known with a maximum error of 0,01 mm, by means of recording devices.

4.2 Metal supports

These shall consist of flat, rectangular-section, mild-steel plates, machined on one side, with a thickness of (16 ± 1) mm and a width of 50^{+1}_{0} mm.

They shall be attached to the grips by the method shown in Figure 1.

The thickness of the adaptors that connect the metal supports to the test machine grips shall be equal to the thickness of the test specimen.