

Adhesives — Determination of shear behaviour of structural adhesives —

Part 2: Tensile test method using thick adherends

ICS 83.180

National foreword

This British Standard reproduces verbatim ISO 11003-2:2001 and implements it as the UK national standard.

The UK participation in its preparation was entrusted to Technical Committee PRI/52, Adhesives, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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**Adhesives — Determination of shear
behaviour of structural adhesives —**

**Part 2:
Tensile test method using thick adherends**

*Adhésifs — Détermination du comportement en cisaillement d'adhésifs
structuraux —*

Partie 2: Méthode d'essai en traction sur éprouvette épaisse



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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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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 part of ISO 11003 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 11003-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

This second edition cancels and replaces the first edition (ISO 11003-2:1993), which has been technically revised.

ISO 11003 consists of the following parts, under the general title *Adhesives — Determination of shear behaviour of structural adhesives*:

- *Part 1: Torsion test method using butt-bonded hollow cylinders*
- *Part 2: Tensile test method using thick adherends*

Annex A of this part of ISO 11003 is for information only.

Adhesives — Determination of shear behaviour of structural adhesives —

Part 2:

Tensile test method using thick adherends

1 Scope

This part of ISO 11003 specifies a test method for determining the shear behaviour of an adhesive in a single lap joint bonded assembly when subjected to a tensile force.

The test is performed on specimens consisting of thick, rigid adherends, with a short length of overlap, in order to obtain the most uniform distribution of shear stresses possible and to minimize other stress states which initiate failure.

This test method may be used to determine:

- the shear-stress against shear-strain curve to failure of the adhesive;
- the shear modulus of the adhesive;
- other adhesive properties that can be derived from the stress/strain curve such as secant shear modulus and maximum shear stress;
- the effect of temperature, environment, test speed, etc., on these properties.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 11003. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 11003 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 291:1997, *Plastics — Standard atmospheres for conditioning and testing*

ISO 683-11:1987, *Heat-treatable steels, alloy steels and free-cutting steels — Part 11: Wrought case-hardening steels*

ISO 1052:1982, *Steels for general engineering purposes*

ISO 4588:1995, *Adhesives — Guidelines for the surface preparation of metals*

ISO 4995:2001, *Hot-rolled steel sheet of structural quality*

ISO 10365:1992, *Adhesives — Designation of main failure patterns*