



SLOVENSKI STANDARD

SIST EN 26922:1998

01-februar-1998

Adhesives - Determination of tensile strength of butt joints (ISO 6922:1987)

Klebstoffe - Bestimmung der Zugfestigkeit von Stumpfklebungen (ISO 6922:1987)

Adhésifs - Détermination de la résistance en traction des joints a bout (ISO 6922:1987)

Ta slovenski standard je istoveten z: EN 26922:1993

(standards.iteh.ai)

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ICS:

83.180

Lepila

Adhesives

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EUROPEAN STANDARD

EN 26922:1993

NORME EUROPÉENNE

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Descriptors: Plastics, adhesives, adhesive bonded joints, butt joints, tension tests, tensile strength, adhesion

English version

**Adhesives - Determination of tensile strength of
butt joints (ISO 6922:1987)**Adhésifs - Détermination de la résistance en
traction des joints à bout (ISO 6922:1987)Klebstoffe - Bestimmung der Zugfestigkeit von
Stumpfklebungen (ISO 6922:1987)**iteh STANDARD PREVIEW**
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This European Standard was approved by CEN on 1993-02-12. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENEuropean Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

Following the positive result of the primary questionnaire, CEN Technical Board decided to submit ISO 6922:1987 Adhesives - Determination of tensile strength of butt joints

to the formal vote. The result was positive.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 1993, and conflicting national standards shall be withdrawn at the latest by September 1993.

In accordance with the CEN/CENELEC Internal Regulations, following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of the International Standard ISO 6922:1987 has been adopted by CEN without any modification.

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INTERNATIONAL STANDARD

ISO
6922

First edition
1987-12-15



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Adhesives — Determination of tensile strength of butt joints

Adhésifs — Détermination de la résistance en traction des joints à bout

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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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6922 was prepared by Technical Committee ISO/TC 61, *Plastics*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Adhesives – Determination of tensile strength of butt joints

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1 Scope and field of application

This International Standard specifies a method for determining the bond strength of a butt joint when subjected to tensile force. The method can be applied to all types of adhesives. Although primarily intended for use under ambient conditions, the basic method can also be applied to testing under a wide range of temperature and other environmental conditions. The method requires rigid adherends that can be produced to the required dimensional tolerances and that will withstand the forces applied to them during the test.

2 References

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

ISO/R 527, *Plastics — Determination of tensile properties*.

ISO 3534, *Statistics — Vocabulary and symbols*.

ISO 5893, *Rubber and plastics test equipment — Tensile, flexural and compression types (constant rate of traverse) — Description*.

ISO 6354, *Adhesives — Vocabulary*.

3 Principle

A joint formed from two bar or rod adherends bonded by faces normal to their length is stressed to rupture by a tensile force, applied through the long axis of the test specimen. The reported result is the observed force at rupture.

4 Apparatus

4.1 Testing machine, so selected that the rupture of the specimen falls between 10 % and 90 % of the full-scale capacity. In addition, the response time of the machine shall be short enough not to affect the accuracy with which the force applied at the time of rupture can be measured. The recorded force shall not differ from the true applied force by more than 1 %. The machine shall be capable of applying a tensile force that increases at a steady rate (see the note). It shall be provided with a suitable pair of self-aligning grips to hold the specimen. The grips shall be so constructed that they will move into alignment with the test specimen as soon as the load is applied so that the long axis of the test specimen will coincide with the direction of the applied force through the centre-line of the grip assembly.

NOTE — If the equipment does not allow for constant rate of load application, use a rate of jaw separation that approximates the rate of loading (see ISO/R 527).

4.2 Jig, for accurately aligning the adherends during bonding. An example of a simple jig is shown in the figure.

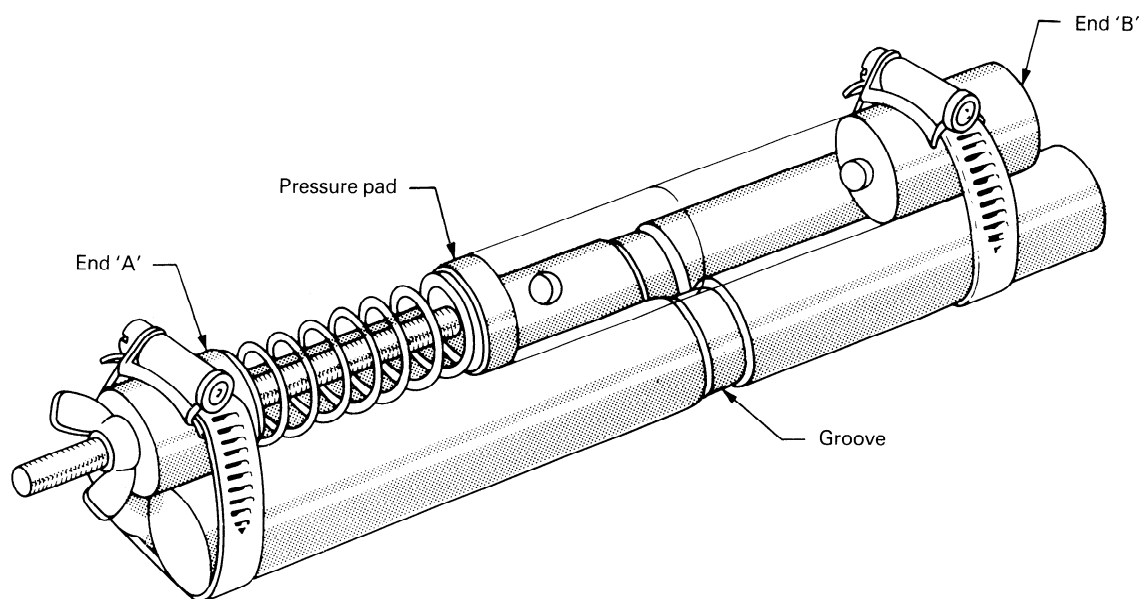


Figure — Example of suitable simple jig for butt joint assembly

NOTES

- 1 In the jig shown, first adjust the position of end 'B' so that any fillet of adhesive forced from the joint coincides with the groove.
- 2 Then adjust end 'A' so that, with the joint in position, the spring will exert the required pressure.
- 3 Then withdraw the pressure pad by turning the wing nut and insert the joint. Slacken the wing nut so that the full spring pressure is applied to the joint.

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5 Test specimens

5.1 Adherends

5.1.1 For purposes of comparison of adhesives and for inter-laboratory testing, the two adherends shall be of identical material and shall be strong enough to prevent appreciable deformations. For other purposes, the two adherends may differ.

5.1.2 Unless otherwise specified, the dimensions of the adherends shall be as follows:

- for circular sections: diameter 10, 15, 25 or 50 mm;
- for square sections: length of side of square 10, 15, 25 or 50 mm.

The tolerance on all the above dimensions shall be $\pm 0,1$ mm.

The length of the adherends may be 50 mm or three times the diameter (or side), whichever is the smaller.

5.1.3 The surfaces for bonding shall be plane and normal to the long axis of the prism. The opposite ends of the adherends shall be machined to fit the grips or adaptors of the test machine (4.1).

5.1.4 Before bonding, the surfaces of the adherends shall be prepared in accordance with the recommendations of the adhesive manufacturer or as specified when this method is called up.

5.2 Dimensions of joint

The size of joint used depends on the following:

- a) the strength of the adhesive under examination;
- b) the range of capabilities of the test machine;
- c) the nature of the adherend material;
- d) the nature of the environmental tests to be applied to the joint.

5.3 Bonding

Apply the adhesive to the adherends and perform the bonding operation under conditions recommended by the manufacturer of the adhesive or as specified when this method is called up. In the absence of such recommendations, the procedure shall be such as to obtain an optimum bond. In any case use the jig (4.2) to ensure accurate alignment of the adherends.

Apply sufficient adhesive to avoid a starved joint and to provide a slight surplus around the edge of the joint. Removal of the surplus adhesive is not usually necessary, but when it is necessary do this before the adhesive has set. At the conclu-