

International Standard



6239

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

Plastics — Determination of tensile properties by use of small specimens

Plastiques — Détermination des caractéristiques en traction sur petites éprouvettes

First edition — 1986-11-15

To become ISO 527-2:1992
⇒ To be withdrawn
IPG

UDC 678.5/.8:620.17

Ref. No. ISO 6239-1986 (E)

Descriptors : plastics, tests, mechanical tests, determination, tensile properties, test specimens.



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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 6239 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.

Plastics — Determination of tensile properties by use of small specimens

0 Introduction

0.1 This International Standard specifies a method for determining tensile properties of plastics in the form of standard small specimens. Results obtained by this method do not necessarily agree with results obtained with standard specimens specified in ISO 527.

The use of small specimens is not normally suitable for use with reinforced plastics.

0.2 This method of test may provide data for research and development, engineering design quality control, acceptance or rejection under specifications and for special purposes.

1 Scope and field of application

This International Standard¹⁾ specifies a method for determining the tensile properties of plastics in the form of standard small specimens if it is not possible to use the standard type A and B test specimens of ISO 527.

2 References

ISO 37, *Rubber, vulcanized — Determination of tensile stress-strain properties.*

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

ISO 527, *Plastics — Determination of tensile properties.*²⁾

3 Definitions

For the purpose of this International Standard the definitions given in ISO 527 shall apply.

4 Apparatus

Tensile testing machine, extensometer and micrometer, shall be as specified in ISO 527. The extensometer chosen shall meet the precision requirements of ISO 527.

5 Test specimens

5.1 The test specimens shall have the same shape as the standard type A and B specimens of ISO 527. The dimensions of the test specimens type B shall be scaled proportionally to those of specimens of ISO 527 in the ratio 1 : 2 or 1 : 5. The dimensions of the test specimens type A shall be the same as for the small test specimens in ISO 37.

5.2 The types of specimens are shown with detailed dimensions and tolerances in figures 1 and 2.

5.3 The type of specimen to be used should be specified in the relevant International Standard for the material.

5.4 The methods of preparation of the test specimens and other requirements for the test specimens are specified in ISO 527.

All surfaces of the specimen shall be free from visible flaws, scratches and other imperfections that are likely to influence the results.

6 Number of test specimens

A minimum of five test specimens shall be tested in each of the required directions of testing. The test specimens that do not break within the parallel portion shall be discarded and further specimens shall be tested.

1) This International Standard will be incorporated into ISO 527 when the latter is next revised.

2) At present at the stage of draft. (Revision of ISO/R 527.)