

INTERNATIONAL STANDARD

**ISO
1746**

Third edition
1998-05-15

Rubber or plastics hoses and tubing — Bending tests

Tuyaux et tubes en caoutchouc ou en plastique — Essais de courbure



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.

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.

International Standard ISO 1746 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Hoses (rubber and plastics)*.

This third edition cancels and replaces the second edition (ISO 1746:1983), which has been technically revised.

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Rubber or plastics hoses and tubing — Bending tests

WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

1 Scope

This International Standard specifies two methods for the determination of the behaviour of rubber or plastics hoses or tubing when bent to a specified radius.

Method A is suitable for hoses and tubing of internal diameter up to about 80 mm; the size of the apparatus for testing hoses and tubing of larger bore sizes becomes excessive. The method also provides a means of measuring the force required to reach a specified bend radius, and the test may be carried out at a specified internal pressure.

In method B, the bending characteristics, including the force required for bending, may be determined over a range of temperatures from $-60\text{ }^{\circ}\text{C}$ to $+200\text{ }^{\circ}\text{C}$. The nature of the apparatus, however, limits its applicability to hoses and tubing of small internal diameter, i.e. up to about 12,5 mm.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 471:1995, *Rubber — Temperatures, humidities and times for conditioning and testing*.

ISO 4671:—¹⁾, *Rubber and plastics hose and hose assemblies — Methods of measurement of dimensions*.

3 Method A

3.1 Apparatus

The apparatus consists of two guides A and B, guide A being fixed in a plane and guide B being movable in that plane, parallel to, and in line with, guide A (see figure 1).

¹⁾ To be published. (Revision of ISO 4671:1984)