



# SLOVENSKI STANDARD SIST EN ISO 1746:2000

01-december-2000

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**Rubber or plastics hoses and tubing - Bending tests (ISO 1746:1998, including technical corrigendum 1:1999)**

Rubber or plastics hoses and tubing - Bending tests (ISO 1746:1998, including technical corrigendum 1:1999)

Gummi- oder Kunststoffschläuche mit und ohne Einlage - Biegeprüfungen (ISO 1746:1998, einschließlich technischen Corrigendum 1:1999)

Tuyaux et tubes en caoutchouc ou en plastique - Essai de courbure (ISO 1746:1998, corrigendum technique 1:1999 compris)

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**Ta slovenski standard je istoveten z: EN ISO 1746:2000**

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**ICS:**

23.040.70      Gumene cevi in armature      Hoses and hose assemblies

**SIST EN ISO 1746:2000**

**en**

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EUROPEAN STANDARD  
 NORME EUROPÉENNE  
 EUROPÄISCHE NORM

**EN ISO 1746**

April 2000

ICS 23.040.20; 23.040.70

Supersedes EN 21746:1993

English version

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This European Standard was approved by CEN on 7 March 2000.

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.

This European Standard exists 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN 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

The text of the International Standard from Technical Committee ISO/TC 45 "Rubber and rubber products" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 218 "Rubber and plastics hoses and hose assemblies", the secretariat of which is held by BSI.

This European Standard replaces EN 21746:1993.

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 October 2000, and conflicting national standards shall be withdrawn at the latest by October 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## Endorsement notice

The text of the International Standard ISO 1746:1998, including technical corrigendum 1:1999, has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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**Annex ZA** (normative)**Normative references to international publications with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 4671	1984	Rubber and plastics hose and hose assemblies - Methods of measurement of dimensions	EN 24671	1993

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# INTERNATIONAL STANDARD

**ISO  
1746**

Third edition  
1998-05-15

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## Rubber or plastics hoses and tubing — Bending tests

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

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Reference number  
ISO 1746:1998(E)

**ISO 1746:1998(E)****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  $-60^{\circ}\text{C}$  to  $+200^{\circ}\text{C}$ . 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:—<sup>1)</sup>, *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).

<sup>1)</sup> To be published. (Revision of ISO 4671:1984)