SLOVENSKI STANDARD
SIST EN ISO 10619-1:2012

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Nadomešča:
SIST EN ISO 1746:2000

Gumene ter polimerne cevi in cevovodi - Merjenje gibljivosti in togosti - 1. del: Upogibni preskus pri temperaturi okolja (ISO 10619-1:2011)

Rubber and plastics hoses and tubing - Measurement of flexibility and stiffness - Part 1: Bending tests at ambient temperature (ISO 10619-1:2011)

Gummi- oder Kunststoffschläuche mit und ohne Einlage; Biegeprüfungen (ISO 10619-1:2011)

Tuyaux et tubes en caoutchouc et en plastique - Mesurage de la flexibilité et de la rigidité - Partie 1: Essais de courbure à température ambiante (ISO 10619-1:2011)

Ta slovenski standard je istoveten z: **EN ISO 10619-1:2011**

ICS:

23.040.70 Gumene cevi in armature Hoses and hose assemblies

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EUROPEAN STANDARD

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EUROPÄISCHE NORM

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English Version

Rubber and plastics hoses and tubing - Measurement of flexibility and stiffness - Part 1: Bending tests at ambient temperature (ISO 10619-1:2011)

Tuyaux et tubes en caoutchouc et en plastique - Mesurage de la flexibilité et de la rigidité - Partie 1: Essais de courbure à température ambiante (ISO 10619-1:2011)

Gummi- und Kunststoffschläuche mit und ohne Einlage - Bestimmung der Biegsamkeit und Steifigkeit - Teil 1: Biegeprüfungen bei Umgebungstemperaturen (ISO 10619-1:2011)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 10619-1:2011) has been prepared by Technical Committee ISO/TC 45 “Rubber and rubber products” in collaboration with Technical Committee CEN/TC 218 “Rubber and plastics hoses and hose assemblies” the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by June 2012, and conflicting national standards shall be withdrawn at the latest by June 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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The text of ISO 10619-1:2011 has been approved by CEN as a EN ISO 10619-1:2011 without any modification.

INTERNATIONAL STANDARD

ISO 10619-1

First edition
2011-12-01

Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness —

Part 1: Bending tests at ambient temperature

Tuyaux et tubes en caoutchouc et en plastique — Mesurage de la flexibilité et de la rigidité —

Partie 1: Essais de courbure à température ambiante

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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ISO 10619-1 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Hoses (rubber and plastics)*.

This first edition cancels and replaces ISO 1746:1998. It also incorporates the Technical Corrigendum ISO 1746:1998/Cor.1:1999. In particular, it specifies additional test methods.

ISO 10619 consists of the following parts, under the general title *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness*:

— *Part 1: Bending tests at ambient temperature*

— *Part 2: Bending tests at sub-ambient temperatures*

— *Part 3: Bending tests at high and low temperatures*

Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness —

Part 1:
Bending tests at ambient temperature

WARNING — Persons using this part of ISO 10619 should be familiar with normal laboratory practice. This part of ISO 10619 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 part of ISO 10619 specifies three methods for measuring the flexibility of rubber and plastics hoses and tubing (methods A1, B and C1), where the deformation of the hose or tubing is measured, and two methods for measuring the stiffness (methods A2 and C2) by measuring the force to bend the hose or tubing when rubber or plastics hoses or tubing are bent to a specific radius at ambient temperature.

Methods A1 and A2 are suitable for rubber and plastics hoses and tubing with inside diameter of up to and including 80 mm.

Method A1 allows the measurement of the flexibility of the hose or tubing by measuring the reduction in outside diameter when the hose is compressed between two plates.

Method A2 provides a means of measuring the force required to reach a specific bend radius, when the hose or tubing is compressed, as between two plates. The test can be carried out at a specified internal pressure.

Method B is suitable for rubber and plastics hoses and tubing with inside diameter of up to and including 100 mm, and provides a means of assessing the behaviour of the hose and tubing when bent around a mandrel. The final mandrel diameter used can be taken as the minimum bend radius of the hose or tubing. As this value is determined by the reduction of the outside diameter which can be used as a measure of the flexibility of the hose or tubing. The hose or tubing being tested can be unpressurized, pressurized or under vacuum and, if required, with the curvature or against the curvature of the hose or tubing, if such curvature is present.

Methods C1 and C2 are suitable for rubber and plastics hoses and tubing with inside diameter of 100 mm and greater.

Method C1 provides a means of determining the flexibility of the hose and tubing at the minimum bend radius.

Method C2 provides a method of measuring the stiffness of the hose and tubing at the minimum bend radius.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4671, *Rubber and plastics hoses and hose assemblies — Methods of measurement of the dimensions of hoses and the lengths of hose assemblies*

ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary*

ISO 23529, *Rubber — General procedures for preparing and conditioning test pieces for physical test methods*