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

Part 2: Bending tests at sub-ambient temperatures

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

Partie 2: Essais de courbure à des températures inférieures à l'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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Rubber and plastics hoses and hose assemblies*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 218, *Rubber and plastics hoses and hose assemblies*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 10619-2:2017), which has been technically revised. The change compared to the previous edition is: the procedure for Method B for hoses greater than 22 mm has been changed.

A list of all parts in the ISO 10619 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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

Part 2:
Bending tests at sub-ambient temperatures

WARNING — Persons using this document should be familiar with normal laboratory practice. This document 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.

1 Scope

This document specifies two methods for measuring the stiffness and one method for the determination of the flexibility of rubber and plastics hoses and tubing when they are bent to a specific radius at sub-ambient temperatures.

Method A is suitable for non-collapsible rubber and plastics hoses and tubing with a bore of up to and including 25 mm. This method provides a means of measuring the stiffness of the hose or tubing when the temperature is reduced from a standard laboratory temperature.

Method B is suitable for rubber and plastics hoses and tubing with a bore of up to 100 mm and provides a means of assessing the flexibility of the hose or tubing when bent around a mandrel at a specified sub-ambient temperature. It can also be used as a routine quality control test.

Method C is suitable for rubber and plastics hoses and tubing with a bore of 100 mm and greater. This method provides a means of measuring the stiffness of the hose and tubing at sub-ambient temperatures. This method is only suitable for hoses and tubing which are non-collapsible.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1402, *Rubber and plastics hoses and hose assemblies — Hydrostatic testing*

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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8330 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

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