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Rubber threads — Methods of test

Fils élastiques — Méthodes d'essai

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 4, *Products (other than hoses)*.

This fourth edition cancels and replaces the third edition (ISO 2321:2006), which has been technically revised.

The main changes compared to the previous edition are as follows:

— Clause 3 has been added to list all the terms and definitions;

— the distance between cutting blades in Figure 1 has been added;

— the tensile testing of type A rings in Figure 2 has been added and all the figure numbers have been updated;

— a new test, namely tension set, has been added in Clause 13;

— the clause numbers in Table 1 and Table 2 have been updated;

— the unit of density has been changed from megagram per cubic metre (Mg/m^3) to gram per cubic centimetre (g/cm^3).

Rubber threads — Methods of test

1 Scope

This document specifies methods of test for determining general physical and mechanical properties of rubber threads, as well as specific mechanical properties of such threads in contact with fabrics. Owing to the comparatively small cross-section and the unusual conditions of service of this material, certain special methods have been developed.

Some of the tests included in this document are not entirely suitable for threads made from certain synthetic rubbers (e.g. urethane rubber). These tests are intended for natural or synthetic polyisoprene rubbers.

Comparisons can only be made on new rubber threads or on those with identical processing histories. In the interpretation of results from threads which have been subjected to spooling, fabrication or any other process, the previous history is important, and what is known of this and of any relaxation treatments used is intended to be reported.

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 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 105-A03, *Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining*

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 648, *Laboratory glassware — Single-volume pipettes*

ISO 1042, *Laboratory glassware — One-mark volumetric flasks*

ISO 1183-2, *Plastics — Methods for determining the density of non-cellular plastics — Part 2: Density gradient column method*

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 following terms and definitions apply.

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

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

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

3.1
metric yield
unstretched length, in metres, of 1 000 g of the thread