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Rubber- or plastics-coated fabrics — Determination of resistance to liquids

Supports textiles revêtus de caoutchouc ou de plastique — Détermination de la résistance aux liquides

Reference number
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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 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 4, *Products (other than hoses)*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 248, *Textile and textile products*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 6450:2005), which has been technically revised.

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

— one surface side immersion with liquid has been added as method B;

— in Clause 10 e), the requirement to include CAS registry number when it is available has been added.

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.

Rubber- or plastics-coated fabrics — Determination of resistance to liquids

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 and to ensure compliance with any national regulatory conditions.

1 Scope

This document specifies two methods of evaluating the resistance of rubber- or plastics-coated fabrics to the action of liquids by measurement of selected properties of the materials before and after immersion in selected liquids.

The two methods are as follows:

— Method A: total immersion with liquid;

— Method B: one surface side immersion with liquid.

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 2231:1989, *Rubber- or plastics-coated fabrics — Standard atmospheres for conditioning and testing*

ISO 2286-1, *Rubber- or plastics-coated fabrics — Determination of roll characteristics — Part 1: Methods for determination of length, width and net mass*

3 Terms and definitions

No terms and definitions are listed in this document.

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/

4 Principle

This document provides a procedure for exposing test pieces to the influence of liquids under defined conditions of temperature and time. Selected properties are determined in accordance with the relevant test method standards. Test pieces are then immersed in selected liquid(s) and the properties determined again. The percentage change or the values before and after immersion are measures of the resistance of the material to the selected liquid(s).

5 Test liquids for method A and B

SAFETY PRECAUTIONS — Appropriate safety precautions should be taken when preparing and handling test liquids, especially those known to be toxic, corrosive or flammable. Products giving off fumes should be handled only under an efficiently ventilated hood, corrosive products should not be allowed to come into contact with the skin or ordinary clothing, and flammable products should be kept away from any source of ignition.

In addition, attention is drawn to the damage which can be caused by corrosive test liquids to test equipment (e.g. clamps or jaws).

As it is possible that commercial liquids do not have an entirely constant composition, a standard immersion liquid consisting of a well-defined chemical compound or a mixture of such compounds should preferably be used. Suitable liquids are given in Annex A.

If a commercial liquid is used, the test report shall mention all the available information about its origin, composition, properties (e.g. viscosity, aniline point) and batch number.

For test purposes, it is usually desirable to use the liquid(s) with which the coated fabric will come into contact during use. When determining the effect of solutions of chemicals, the concentration of the solution should be appropriate to the proposed application.

6 Test conditions for method A and B

6.1 Temperature

Where appropriate, use an immersion temperature T approximating to that encountered during use. Maintain the immersion temperature at (T ± 2) °C.

Preferred immersion temperatures are given in Annex B.

6.2 Immersion period

The following immersion periods are recommended:

— 22 h ± 0,25 h;

— 46 h ± 0,25 h;

— 72 h ± 2 h;

— 168 h ± 2 h;

— multiples of 7 days ± 2 h.

When determining changes in physical properties, it is advisable to use a period of immersion which is long enough to ensure that equilibrium is reached. To determine this equilibrium point, it is recommended that preliminary measurements be carried out using several different periods of immersion, recording the results as a function of time. Whenever practicable, the total period of immersion should extend well beyond the point at which the change in a property reaches its maximum value.

6.3 Light

Immersion tests shall be conducted in the absence of direct light.