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Rubber- or plastics-coated fabrics — Determination of resistance to penetration by water

Supports textiles revêtus de caoutchouc ou de plastique — Détermination de la résistance à la pénétration de l'eau

Reference number
ISO 1420:2016(E)

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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. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 4, *Products (other than hoses)*.

This fourth edition cancels and replaces the third edition (ISO 1420:2001), which has been technically revised.

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Introduction

The resistance to penetration by water is often used as a measure of the water-proofing of rubber- or plastics-coated fabrics when a product made from the coated fabric is exposed to various service conditions in the field. There are some environmental factors that affect the resistance to water penetration such as temperature, pressure or chemicals in water, however, the methods in this International Standard only measure the property at a low to high hydrostatic pressure level at ambient temperature.

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Rubber- or plastics-coated fabrics — Determination of resistance to penetration by water

WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This International 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 resistance of rubber- or plastics-coated fabrics to water penetration (hydrostatic resistance) when subjected to a specific hydrostatic pressure over a fixed period of time. Method A specifies the procedure for a low and high hydrostatic pressure and Method B for a low hydrostatic pressure.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 Principle

A test piece of coated fabric is subjected to an increasing pressure of water on one face, under standard conditions, until a predetermined pressure specified in the coated-fabric specification is obtained. The required pressure is maintained for a specified time or until penetration occurs, whichever is the sooner.

4 Apparatus

4.1 Method A

4.1.1 The apparatus shall consist of a test piece supporting plate fitted with a clamp tightening ring to fasten the test piece over the mouth by use of an upper screw handle. The lower part of the vessel shall have a pressure gauge and a nozzle connected with a cylinder that has a mechanical system delivering high pressure water. The other side of the cylinder shall be connected with a water inlet pipe through a three-way valve. The whole system shall have a capability of holding a hydrostatic pressure of 500 kPa at an ambient temperature for a certain period of time. Illustrative examples of the parts of apparatus are given in Figures 1, 2 and 3.

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