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Second edition
2016-11-15

Rubber- or plastics-coated fabrics — Determination of abrasion resistance —

Part 1: Taber abrader

*Supports textiles revêtus de caoutchouc ou de plastique —
Détermination de la résistance à l'usure —*

Partie 1: Appareil d'essai d'abrasion Taber



Reference number
ISO 5470-1:2016(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 (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).

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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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html

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

This second edition cancels and replaces the first edition (ISO 5470-1:1999) which has been technically revised. The changes are as follows:

- in [Clause 4](#), a non-flexible cardboard support or a solid board equivalent to it for thin sample fixation has been added as [4.9](#) and the part of the body text related to it in the third paragraph of [4.1](#) has also been added accordingly;
- in [Clause 5](#), the test piece diameter has been changed from 114 mm to the range of 105 mm to 115 mm and the key 2 in [Figure 1](#) has been changed accordingly;
- the text in [7.2](#) has been revised.

ISO 5470 consists of the following parts, under the general title *Rubber- or plastics-coated fabrics — Determination of abrasion resistance*:

- *Part 1: Taber abrader*
- *Part 2: Martindale abrader*

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Introduction

It has long been accepted that some of the parameters associated with the Taber test as given in ISO 5470:1980 needed to be more closely specified if reasonable reproducibility (R) was to be obtained. Much of the work is now completed and has been acknowledged by ISO/TC 61 in publishing ISO 9352, which employs a zinc plate as a means of calibrating the initial abrasive power of the wheels. This does not, however, entirely overcome the problem of clogging or maintaining abrasion properties between and during tests. It may also be regarded as expensive and time-consuming.

This part of ISO 5470 permits the approach in ISO 9352 to be adopted if so desired. However, the major disadvantages of the Taber abrader are that:

- a) end points can be somewhat subjective unless a gravimetric technique is employed;
- b) only a small strip of material is abraded;
- c) because of the velocity of interfacial friction, localized heating of the coating polymer can cause softening and thus be less representative of abrasive wear in service;
- d) the 6 mm diameter hole in the centre of the test piece does not permit post-abrasion assessments of properties such as hydrostatic heat resistance or resistance to chemical reagents.