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**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*



## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 5470-1 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*.

It cancels and replaces ISO 5470:1980, which has been technically 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*

Annex A forms an integral part of this part of ISO 5470.

## 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.

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

## Part 1:

### Taber abrader

**WARNING** — Persons using this part of ISO 5470 should be familiar with normal laboratory practice. This part of ISO 5470 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 part of ISO 5470 describes a method of assessing the abrasive wear resistance of coated fabrics using the Taber abrader.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 5470. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 5470 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 48:1994, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*.

ISO 105-A02:1993, *Textiles — Tests for colour fastness — Part A02: Grey Scale for assessing change in colour*.

ISO 525:—<sup>1)</sup>, *Bonded abrasive products — General requirements*.

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

ISO 2286:1998 (all parts), *Rubber- or plastics-coated fabrics — Determination of roll characteristics*.

ISO 5084:1996, *Textiles — Determination of thickness of textiles and textile products*.

ISO 6103:—<sup>2)</sup>, *Bonded abrasive products — Static balancing of grinding wheels — Testing*.

ISO 6506-1:1999, *Metallic materials — Brinell hardness test — Part 1: Test method*.

ISO 6507-1:1997, *Metallic materials — Vickers hardness test — Part 1: Test method*.

1) To be published. (Revision of ISO 525:1986)

2) To be published. (Revision of ISO 6103:1986)