

**Rubber- or plastics-coated fabrics -  
Determination of tear resistance - Part 1:  
Constant rate of tear methods**

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tear resistance - Part 1: Constant rate of tear  
methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 4674-1:2004 sisaldab Euroopa standardi EN ISO 4674-1:2003 ingliskeelset teksti.

Käesolev dokument on jõustatud 23.11.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 4674-1:2004 consists of the English text of the European standard EN ISO 4674-1:2003.

This document is endorsed on 23.11.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

### Käsitlusala:

This part of ISO 4674 describes two methods for determining the forces necessary to initiate and propagate tearing of a coated fabric using the constant rate of tear method. The methods described are: — method A: tongue tear; — method B: trouser tear.

### Scope:

This part of ISO 4674 describes two methods for determining the forces necessary to initiate and propagate tearing of a coated fabric using the constant rate of tear method. The methods described are: — method A: tongue tear; — method B: trouser tear.

ICS 59.080.40

Võtmesõnad:

**English version**

**Rubber- or plastics-coated fabrics – Determination of  
tear resistance**

**Part 1: Constant rate of tear methods  
(ISO 4674-1 : 2003)**

Supports textiles revêtus de caoutchouc ou de plastique – Détermination de la résistance au déchirement – Partie 1: Méthodes à vitesse constante de déchirement  
(ISO 4674-1 : 2003)

Mit Kautschuk oder Kunststoff beschichtete Textilien – Bestimmung der Weiterreißfestigkeit – Teil 1: Verfahren mit konstanter Geschwindigkeit  
(ISO 4674-1 : 2003)

This European Standard was approved by CEN on 2003-08-07.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Management Centre: rue de Stassart 36, B-1050 Brussels**

## Foreword

International Standard

ISO 4674-1 : 2003 Rubber- or plastics-coated fabrics – Determination of tear resistance – Part 1: Constant rate of tear methods,

which was prepared by ISO/TC 45 'Rubber and rubber products' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 248 'Textiles and textile products', the Secretariat of which is held by BSI, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by March 2004 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom.

## Endorsement notice

The text of the International Standard ISO 4674-1 : 2003 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

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## Introduction

Tearing is amongst the more usual ways of destruction for many thin materials such as paper, coated or uncoated textiles, plastic films and leather. Knowledge of the resistance of these materials to this type of behaviour is therefore very important.

In practice, tearing can result from very different circumstances; hence the large number of test methods that have been developed in order to predict the behaviour of materials in various situations.

The present International Standard deals with initiated tearing, i.e. the propagation of a tear from an initiating cut. It consists of the following two parts:

- Part 1: Constant rate of tear methods;
- Part 2: Ballistic pendulum method.

The first part describes two methods using a tensile-testing machine at constant rate of elongation. The second part describes a dynamic method using the kinetic energy of a falling pendulum.

**WARNING** — Persons using this part of ISO 4674 should be familiar with normal laboratory practice. This part of ISO 4674 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 4674 describes two methods for determining the forces necessary to initiate and propagate tearing of a coated fabric using the constant rate of tear method. The methods described are:

- method A: tongue tear;
- method B: trouser tear.

## 2 Normative references

The following referenced documents are indispensable for the application 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 1421:1998, *Rubber- or plastics-coated fabrics — Determination of tensile strength and elongation at break*

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

ISO 2286-1:1998, *Rubber- or plastics-coated fabrics — Determination of roll characteristics — Part 1: Methods for determination of length, width and net mass*

ISO 2602:1980, *Statistical interpretation of test results — Estimation of the mean — Confidence interval*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **peak**

point on an autographic trace where the gradient, relative to the force values recorded, changes from positive to negative

**NOTE** For tear recordings, a peak to be used for calculation is defined by a drop in force of at least 10 % of the last increasing force value.