

**Textiles - Tear properties of fabrics - Part 2:  
Determination of tear force of trouser-  
shaped test specimens (Single tear method)**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 13937-2:2000 sisaldab Euroopa standardi EN ISO 13937-2:2000 ingliskeelset teksti.

Käesolev dokument on jõustatud 12.09.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 13937-2:2000 consists of the English text of the European standard EN ISO 13937-2:2000.

This document is endorsed on 12.09.2000 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 the standard will describe a single-tear method to determine fabric tear force, known as the trouser test, using a test specimen cut to form trouser-shaped legs. The tear force measured is the force required to propagate a previously started single tear when the force is applied parallel to the cut and the fabric tears in the direction of applied force.

### Scope:

This part of the standard will describe a single-tear method to determine fabric tear force, known as the trouser test, using a test specimen cut to form trouser-shaped legs. The tear force measured is the force required to propagate a previously started single tear when the force is applied parallel to the cut and the fabric tears in the direction of applied force.

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English version

Textiles – Tear properties of fabrics

Part 2: Determination of tear force of trouser-shaped test specimens  
(Single tear method)  
(ISO 13937-2 : 2000)

Textiles – Propriétés de déchirement  
des étoffes – Partie 2: Détermination  
de la force de déchirure des  
éprouvettes pantalons (Méthode de la  
déchirure unique)  
(ISO 13937-2 : 2000)

Textilien – Weiterreißigenschaften  
von textilen Flächengebilden – Teil 2:  
Bestimmung der Weiterreißkraft mit  
dem Schenkel-Weiterreißversuch  
(einfacher Weiterreißversuch)  
(ISO 13937-2 : 2000)

This European Standard was approved by CEN on 1999-07-02.

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 Central Secretariat 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 Central Secretariat 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

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## Foreword

The text of EN ISO 13937-2:2000 has been prepared by Technical Committee CEN/TC 248 "Textiles and textile products", the secretariat of which is held by BSI, in collaboration with Technical Committee ISO/TC 38 "Textiles".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by Octobre 2000, and conflicting national standards shall be withdrawn at the latest by Octobre 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

EN ISO 13937 has been prepared as a part of several test methods for the determination of certain mechanical properties of textiles using mainly tensile-testing machines, e.g. tensile properties, seam tensile properties, tear properties, seam slippage. Test requirements for these standards agree where appropriate. The results obtained by one of the methods should not be compared with those obtained by other methods. Annex E lists test methods standardized in this context.

EN ISO 13937 specifies methods for the determination of tear force of fabrics. Part 1 describes a ballistic pendulum method, parts 2 to 4 describe methods using tensile-testing machines.

## 1 Scope

This part of EN ISO 13937 describes a single-tear method to determine fabric tear force, known as the trouser test, using a test specimen cut to form trouser-shaped legs. The tear force measured is the force required to propagate a previously started single tear when the force is applied parallel to the cut and the fabric tears in the direction of applied force.

The test is mainly applicable to woven textile fabrics. It may be applicable to fabrics produced by other techniques, e.g. to some nonwovens (with the same under-mentioned restrictions as for the woven fabrics).

In general the method is not applicable to knitted fabrics and woven elastic fabrics. It is not suitable for highly anisotropic fabrics or loose fabrics where tear transfer from one direction to another direction of the fabric during the tear test is likely to occur.

The method only allows the use of constant-rate-of-extension (CRE) testing machines.

NOTE 1: For other tear test methods using tensile-testing machines part 3 of EN ISO 13937 describes a method known as the wing test and part 4 the tongue test method. Part 1 of EN ISO 13937 describes the ballistic pendulum (Elmendorf) method.

NOTE 2: For the trapezoidal test method, see ISO 9073-4 for nonwovens or ISO 4674 for coated fabrics.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard 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 139	Textiles - Standard atmospheres for conditioning and testing
ISO 7500-1	Metallic materials - Verification of static uniaxial testing machines - Part 1 - Tensile testing machines
ISO 10012-1	Quality assurance requirements for measuring equipment - Part 1: Metrological confirmation system for measuring equipment