

Plastics - Film and sheeting - Determination of tear resistance - Part 2: Elmendorf method

Plastics - Film and sheeting - Determination of tear resistance - Part 2: Elmendorf method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 6383-2:2004 sisaldab Euroopa standardi EN ISO 6383-2:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 26.10.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 6383-2:2004 consists of the English text of the European standard EN ISO 6383-2:2004.</p> <p>This document is endorsed on 26.10.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p>Käsitlusala:</p> <p>This part of ISO 6383 specifies a method of determining the force required to propagate a tear through a specified distance and from a specified slit, cut in a test specimen of thin flexible plastic sheeting or film, under specified conditions of loading</p>	<p>Scope:</p> <p>This part of ISO 6383 specifies a method of determining the force required to propagate a tear through a specified distance and from a specified slit, cut in a test specimen of thin flexible plastic sheeting or film, under specified conditions of loading</p>
--	--

ICS 83.140.10

Võtmesõnad:

English version

Plastics – Film and sheeting

Determination of tear resistance

Part 2: Elmendorf method

(ISO 6383-2 : 1983)

Plastiques – Film et feuille – Détermination de la résistance au déchirement – Partie 2: Méthode Elmendorf (ISO 6383-2 : 1983)

Kunststoffe – Folien und Bahnen – Bestimmung der Reißfestigkeit – Teil 2: Elmendorf-Verfahren (ISO 6383-2 : 1983)

This European Standard was approved by CEN on 2004-06-21.

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.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

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 6383-2 : 1983 Plastics – Film and sheeting – Détermination of tear resistance – Part 2: Elmendorf method, which was prepared by ISO/TC 61 'Plastics' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 249 'Plastics', the Secretariat of which is held by IBN, 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 January 2005 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, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 6383-2 : 1983 was approved by CEN as a European Standard without any modification.

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

0 Introduction

ISO 6383 consists of the following parts :

Part 1: Trouser tear method.

Part 2: Elmendorf method.

1 Scope and field of application

1.1 This part of ISO 6383 specifies a method of determining the force required to propagate a tear through a specified distance and from a specified slit, cut in a test specimen of thin flexible plastic sheeting or film, under specified conditions of loading.

The upper limit of thickness that can be tested depends on the tearing force of the material in relation to the capacity of the testing machine.

Materials that can be tested according to this method include flexible poly(vinyl chloride) (PVC) and polyolefin films, but variable elongation and oblique tearing effects on the more extensible films may cause poor reproducibility of test results. This method may not be suitable for testing more rigid materials such as rigid PVC, nylon and polyester films.

1.2 The tear resistance test specified by this method is applied to specimens cut from semi-finished and finished products. The test is suitable for the control of production and manufactured products as well as for acceptance or rejection testing under specifications for semi-finished and finished products, provided that it has been demonstrated that the data for a particular material are acceptably reproducible.

1.3 There is no direct linear relationship between tearing force and specimen thickness. Data from this method are expressed as tearing force in newtons, with specimen thickness also reported. Only data obtained at the same thickness should be compared because sets of data from specimens of dissimilar thickness are generally not comparable.

2 References

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*.

ISO 4591, *Plastics — Film and sheeting — Determination of average thickness of a sample and average thickness and yield of a roll by gravimetric techniques (gravimetric thickness)*.

ISO 4593, *Plastics — Film and sheeting — Determination of thickness by mechanical scanning*.

3 Definition

For the purpose of this part of ISO 6383, the following definition applies.

tear resistance: The force, in newtons, required to tear a test specimen by the specified method.

4 Principle

A test specimen having a specified precut slit is subjected to a tearing force generated by the energy stored in a pendulum of specified dimensions. The energy expended in tearing the specimen is used to calculate the tear resistance of the specimen.

5 Apparatus

The test machine shall be of the Elmendorf type (an example of a suitable test machine is shown diagrammatically in figure 1), comprising the following.

5.1 Stationary jaw, accurately aligned with a movable jaw carried on a pendulum, preferably formed by a sector of a circle, free to swing on ball bearings or other substantially frictionless bearings. Each jaw shall have a clamping surface of not less than 25 mm in the horizontal direction [dimension *b* (see