INTERNATIONAL STANDARD

**ISO 6383-1**

Second edition
2015-12-15

# Plastics — Film and sheeting — Determination of tear resistance —

## Part 1: Trouser tear method

*Plastiques — Film et feuille — Détermination de la résistance au déchirement —*

*Partie 1: Méthode de déchirement pantalon*



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# Foreword

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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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.



The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

This second edition cancels and replaces the first edition (ISO 6383-1:1983), of which it constitutes a minor revision.



ISO 6383 consists of the following parts, under the general title *Plastics — Film and sheeting — Determination of tear resistance*:

— *Part 1: Trouser tear method*

— *Part 2: Elmendorf method*

# Plastics — Film and sheeting — Determination of tear resistance —

# Part 1: Trouser tear method

## 1 Scope

This part of ISO 6383 specifies a method of determining the tear resistance of plastic film or sheet less than 1 mm thick, in the form of standard trouser-shaped test specimens, tested under defined conditions of pre-treatment, temperature, humidity, and speed of testing.

The method is applicable to film and sheeting of both flexible and rigid materials, provided that the material is not so rigid that brittle fracture occurs during the test, or so deformable, in an irreversible way, that the energy used in the deformation of the specimen legs is significant (i.e. is not negligible) with respect to the energy used in tearing.

The method may not be suitable for determining the tear properties of cellular sheet and film.



## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.



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

ISO 527–3, *Plastics — Determination of tensile properties — Part 3: Test conditions for films and sheets*

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 Terms and definitions

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

**3.1**
**tearing force**
average force required to propagate a tear at a constant tearing speed across a test specimen conforming to Figure 1

**3.2**
**tear resistance**
tearing force divided by the specimen thickness

## 4 Significance

**4.1** This method may provide data for quality control, acceptance, or rejection in accordance with the terms of specifications and for research and development.