



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS K 7128-1 : 1998

**Plastics — Film and sheeting —
Determination of tear resistance —
Part 1: Trouser tear method**

ICS 83.140.10

Descriptors : plastics, materials by form, sheet materials, films (states of matter),
film properties testing, tear tests

Reference number : JIS K 7128-1 : 1998 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

The test method for tear strength is composed of:

Part 1 Trouser tear method,

Part 2 Elmendorf method and

Part 3 Right angled tear method.

When making this establishment, in order to conform to the International Standard, **ISO 6383-1** : 1983 is employed as its base.

Date of Establishment: 1998-11-20

Date of Public Notice in Official Gazette: 1998-11-20

Investigated by: Japanese Industrial Standards Committee

Divisional Council on High Molecular
Materials

JIS K 7128-1:1998, First English edition published in 1999-06

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Printed in Japan

Plastics—Film and sheeting—Determination of tear resistance— Part 1:Trouser tear method

Introduction This Japanese Industrial Standard has been prepared based on ISO 6383-1, *Plastics—Film and sheeting—Determination of tear resistance—Part 1:Trouser tear method*, published in 1983, without any modification of standard form, but the parts with sidelines are where the content of the original International Standard is partially modified.

The parts with dotted underlines are not specified in the original International Standard.

1 Scope This Japanese Industrial Standard 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 pretreatment, 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 that the energy used in the deformation of the specimen legs 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 References The references to this Standard are as follows.

ISO 291 : 1977 *Plastics—Standard atmospheres for conditioning and testing*

ISO 527-1 : 1993 *Plastics—Determination of tensile properties—Part 1: General principles*

ISO 527-3 : 1995 *Plastics—Determination of tensile properties—Part 3: Test conditions for film and sheets*

ISO 4591 : 1989 *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 : 1993 *Plastics—Film and sheeting—Determination of thickness by mechanical scanning*

3 Definitions For the purpose of this Standard, the following definitions apply.

3.1 tearing force The average force required to propagate a tear at a constant tearing speed across a test specimen conforming to Fig. 1.

3.2 tear strength The tearing force divided by the specimen thickness.

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