STANDARD **8295**

Second edition
1995-10-01

Plastics — Film and sheeting — Determination of the coefficients of friction

Plastiques — Film et feuille — Détermination des coefficients de frottement

Reference number
ISO 8295:1995(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 8295 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

This second edition cancels and replaces the first edition (ISO 8295:1986), which has been technically revised.

Annex A of this International Standard is for information only.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Plastics — Film and sheeting — Determination of the coefficients of friction

1 Scope

1.1 This International Standard specifies a method for determining the coefficients of starting and sliding friction of plastic film and sheeting when sliding over itself or other substances. The method is intended to be used for non-sticky plastic film and sheeting (in the following text, referred to simply as "film") of up to approximately 0,5 mm thickness.

1.2 This test method serves primarily for quality control. It does not give a comprehensive assessment of the machinability on packaging or processing machines since other effects, e.g. electrostatic charges, air cushion, local rise of temperature and abrasion are, as a rule, involved.

1.3 The static frictional force increases as a rule, with the time the surfaces are in contact. Therefore, to get comparable results, this time span is specified.

1.4 Slip properties are sometimes generated by additives in the plastic material. The additives have varying degrees of compatibility with the film matrix. They may bloom or exude to the surface and change the slip properties. Since these effects are time-dependent, measurements on such films have to be related to the age of the film.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

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

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 friction: The resistance that two surfaces lying in contact with each other build up against sliding. A distinction is made between static friction and dynamic friction.

3.1.1 static friction: Friction which has to be overcome as a "threshold value" at the onset of sliding motion.

3.1.2 dynamic friction: Friction which persists during a sliding motion at a given speed.

3.2 frictional force: The force necessary to overcome friction. A distinction is made between the static frictional force F_S and the dynamic frictional force F_D.

3.3 normal force, F_p: The force acting perpendicular to the surfaces in contact.

3.4 coefficient of friction: The ratio of the frictional force to the normal force, acting perpendicular to the two surfaces in contact.

3.4.1 static coefficient of friction:

$$\mu_S = \frac{F_S}{F_p}$$