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BS ISO 13636:2012



BSI Standards Publication

Plastics — Film and sheeting — Non-oriented poly(ethylene terephthalate) (PET) sheets

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Plastics — Film and sheeting — Non-oriented poly(ethylene terephthalate) (PET) sheets

*Plastiques — Film et feuille — Films en poly(éthylène téréphtalate)
(PET) non-orientés*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 13636 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

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Introduction

Oriented and non-oriented films and sheets are both made from polyethylene terephthalate (PET). ISO 15988:2003^[2] covers only oriented PET films and sheets which have crystalline structure. Non-oriented PET (APET) films and sheets show quite different properties because of their non-crystalline structure and require a separate International Standard.

This International Standard is based on JIS Z 1716:2004,^[4] in which, however, only virgin PET resin is allowed to be used as the raw material.

Additional features of this International Standard are:

- a) recycled PET resin can also be used under controlled specified conditions;
- b) the structure and classification of film and sheet, such as single, double or triple layer, are specified in conjunction with applications;
- c) applications for food packaging are described in conjunction with food and sanitary laws or regulations of each country or region.

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Plastics — Film and sheeting — Non-oriented poly(ethylene terephthalate) (PET) sheets

1 Scope

This International Standard specifies the requirements and test methods for non-oriented polyethylene terephthalate (PET) or copolymer sheets made from virgin PET resin or recycled PET resin or combinations thereof. It applies only to sheets of thickness less than 2,0 mm. It excludes foamed sheets and shrinkable films.

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 472, *Plastics — Vocabulary*

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

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

ISO 1628-5, *Plastics — Determination of the viscosity of polymers in dilute solution using capillary viscometers — Part 5: Thermoplastic polyester (TP) homopolymers and copolymers*

ISO 2818, *Plastics — Preparation of test specimens by machining*

ISO 7792-1, *Plastics — Thermoplastic polyester (TP) moulding and extrusion materials — Part 1: Designation system and basis for specifications*

ISO 11501, *Plastics — Film and sheeting — Determination of dimensional change on heating*

ISO 12418-1:2012, *Plastics — Post-consumer poly(ethylene terephthalate) (PET) bottle recyclates — Part 1: Designation system and basis for specifications*

ISO 14782, *Plastics — Determination of haze for transparent materials*

ISO 15105-1, *Plastics — Film and sheeting — Determination of gas-transmission rate — Part 1: Differential-pressure methods*

ISO 15105-2, *Plastics — Film and sheeting — Determination of gas-transmission rate — Part 2: Equal-pressure method*

ISO 15270, *Plastics — Guidelines for the recovery and recycling of plastics waste*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 472 and ISO 15270 apply.

4 Material

Sheets shall be made of virgin polyethylene terephthalate (PET) or copolymer or combination thereof mainly polymerized from ethylene glycol and terephthalic acid as defined in ISO 7792-1. Sheets can also