



Designation: D 5047 – 95

Standard Specification for Polyethylene Terephthalate Film and Sheeting¹

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1. Scope

1.1 This specification covers requirements for biaxially oriented polyethylene terephthalate film and sheeting in thicknesses from 1.5 μm (0.06 mil) to 35.5 μm (14.0 mil). For this specification polyethylene terephthalate film and sheeting shall be defined as the material derived from terephthalate acid and ethylene glycol and shall consist of at least 90 % polyethylene terephthalate homopolymer. This specification does not apply to coated, coextruded, tinted, pigmented, or metallized film or sheeting.

1.2 Polyethylene terephthalate materials, being thermoplastic, are reprocessible and recyclable.² This specification allows for the use of those polyethylene terephthalate plastic materials, provided that any specific requirements as governed by the producer and end user are met.

1.3 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

NOTE 1—There is no similar or equivalent ISO standard.

2. Referenced Documents

2.1 ASTM Standards:

- D 149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies³
- D 150 Test Methods for A-C Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials³
- D 257 Test Methods for D-C Resistance or Conductance of Insulating Materials³
- D 374 Test Methods for Thickness of Solid Electrical Insulation³
- D 774 Test Method for Bursting Strength of Paper⁴

- D 882 Test Methods for Tensile Properties of Thin Plastic Sheeting⁵
- D 883 Terminology Relating to Plastics⁵
- D 1004 Test Method for Initial Tear Resistance of Plastic Film and Sheeting⁵
- D 1505 Test Method for Density of Plastics by the Density-Gradient Technique⁵
- D 1894 Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting⁵
- D 1898 Practice for Sampling of Plastics⁵
- D 1922 Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method⁵
- D 2176 Test Method for Folding Endurance of Paper by the M.I.T. Tester⁴
- D 2275 Test Method for Voltage Endurance of Solid Electrical Insulating Materials Subjected to Partial Discharges (Corona) on the Surface³
- D 2305 Test Methods for Testing Polymeric Films Used for Electrical Insulation³
- D 3417 Test Method for Heats of Fusion and Crystallization of Polymers by Thermal Analysis⁶
- D 3892 Practice for Packaging/Packing of Plastics⁶
- D 3985 Test Method for Oxygen Gas Transmission Rate Through Plastic Film and Sheeting Using a Coulometric Sensor⁴
- D 5033 Guide for the Development of Standards Relating to the Proper Use of Recycled Plastics⁷
- E 96 Test Methods for Water Vapor Transmission of Materials⁸

3. Terminology

3.1 *Definitions*—Unless otherwise indicated, the terminology used in this specification is in accordance with Terminology D 883.

3.2 *Description of Term Specific to This Standard:*

3.2.1 *polyethylene terephthalate film and sheeting*—material derived from terephthalate acid and ethylene glycol and consisting of at least 90 % polyethylene terephthalate homopolymer.

¹ This specification is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D20.19 on Film and Sheeting.

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This revision includes the additional ISO equivalency statement, reference to recycled materials, and the addition of a keywords section.

² See Guide D 5033 for information and definitions related to recycled plastics.

³ *Annual Book of ASTM Standards*, Vol 10.01.

⁴ *Annual Book of ASTM Standards*, Vol 15.09.

⁵ *Annual Book of ASTM Standards*, Vol 08.01.

⁶ *Annual Book of ASTM Standards*, Vol 08.02.

⁷ *Annual Book of ASTM Standards*, Vol 08.03.

⁸ *Annual Book of ASTM Standards*, Vol 04.06.