Designation: D 5047 – 05

Standard Specification for Polyethylene Terephthalate Film and Sheeting[1]

This standard is issued under the fixed designation D 5047; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

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 terephthalic 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 reprocessable 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 brackets are for information only.

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

2. Referenced Documents

2.1 *ASTM Standards:* [3]

D 149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies

D 150 Test Methods for A-C Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials

D 257 Test Methods for D-C Resistance or Conductance of Insulating Materials

D 774 Test Method for Bursting Strength of Paper

D 882 Test Methods for Tensile Properties of Thin Plastic Sheeting

D 883 Terminology Relating to Plastics

D 1004 Test Method for Initial Tear Resistance of Plastic Film and Sheeting

D 1505 Test Method for Density of Plastics by the Density-Gradient Technique

D 1894 Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting

D 1898 Practice for Sampling of Plastics[4]

D 1922 Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method

D 2176 Test Method for Folding Endurance of Paper by the M.I.T. Tester

D 2275 Test Method for Voltage Endurance of Solid Electrical Insulating Materials Subjected to Partial Discharges (Corona) on the Surface

D 2305 Test Methods for Testing Polymeric Films Used for Electrical Insulation

D 3417 Test Method for Heats of Fusion and Crystallization of Polymers by Thermal Analysis

D 3892 Practice for Packaging/Packing of Plastics

D 3985 Test Method for Oxygen Gas Transmission Rate Through Plastic Film and Sheeting Using a Coulometric Sensor

D 5033 Guide for the Development of Standards Relating to the Proper Use of Recycled Plastics

D 5947 Test Methods for Physical Dimensions of Solid Plastics Specimens

D 6988 Guide for Determination of Thickness of Plastic Film Test Specimens

E 96 Test Methods for Water Vapor Transmission of Materials

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*:

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

Current edition approved April 1, 2005. Published June 2005. Originally approved in 1990. Last previous edition approved in 2003 as D 5047 - 95(03).

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

[3] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[4] Withdrawn.

***A Summary of Changes section appears at the end of this standard.**