



Standard Specification for Biaxially Oriented Polymeric Resin Film for Capacitors in Electrical Equipment¹

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1. Scope

1.1 This specification covers thin biaxially oriented polymeric resin film for use in capacitors for electrical equipment. The material is biaxially oriented to improve the tensile properties in the machine (MD) and transverse (TD) directions.

1.2 The values stated in SI units are the standard. The values in parentheses are for information only.

NOTE 1—This standard resembles IEC 60674–3–2, Specification for plastic films for electrical use, in title only. The content is significantly different.

1.3 The following safety hazards caveat pertains only to the test methods section of this specification. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* For specific warning statements see 9.3 and Table 1 footnote B.

2. Referenced Documents

2.1 ASTM Standards:²

- D149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies
- D150 Test Methods for AC Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulation
- D202 Test Methods for Sampling and Testing Untreated Paper Used for Electrical Insulation
- D257 Test Methods for DC Resistance or Conductance of Insulating Materials
- D374 Test Methods for Thickness of Solid Electrical Insulation (Metric) D0374_D0374M

¹ This specification is under the jurisdiction of ASTM Committee D09 on Electrical and Electronic Insulating Materials and is the direct responsibility of Subcommittee D09.07 on Electrical Insulating Materials.

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² 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.

- D543 Practices for Evaluating the Resistance of Plastics to Chemical Reagents
- D570 Test Method for Water Absorption of Plastics
- D756 Practice for Determination of Weight and Shape Changes of Plastics Under Accelerated Service Conditions (Withdrawn 1998)³
- D774/D774M Test Method for Bursting Strength of Paper (Withdrawn 2010)³
- D882 Test Method for Tensile Properties of Thin Plastic Sheeting
- D1004 Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting
- D1204 Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature
- D1434 Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting
- D1435 Practice for Outdoor Weathering of Plastics
- D1505 Test Method for Density of Plastics by the Density-Gradient Technique
- D2176 Test Method for Folding Endurance of Paper and Plastics Film by the M.I.T. Tester
- D2305 Test Methods for Polymeric Films Used for Electrical Insulation
- D2863 Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index)
- D3417 Test Method for Enthalpies of Fusion and Crystallization of Polymers by Differential Scanning Calorimetry (DSC) (Withdrawn 2004)³
- D3420 Test Method for Pendulum Impact Resistance of Plastic Film
- D3636 Practice for Sampling and Judging Quality of Solid Electrical Insulating Materials
- D3755 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials Under Direct-Voltage Stress
- D3985 Test Method for Oxygen Gas Transmission Rate Through Plastic Film and Sheeting Using a Coulometric Sensor

³ The last approved version of this historical standard is referenced on www.astm.org.