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Standard Guide for the Selection of Test Methods for Flexible Polypropylene Geomembranes[1]

This standard is issued under the fixed designation D6434; 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 guide covers recommendations for the selection of appropriate test methods for flexible polypropylene sheet used in geomembrane applications to provide consistency in data reporting.

1.2 This guide includes test methods for three types of flexible polypropylene geomembranes, including smooth nonreinforced sheet, textured nonreinforced sheet, and scrim-reinforced sheet.

1.3 This guide is intended to aid all personnel involved in the selection, manufacture, installation, or evaluation of flexible polypropylene geomembrane sheet.

1.4 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D471 Test Method for Rubber Property—Effect of Liquids

D573 Test Method for Rubber—Deterioration in an Air Oven

D618 Practice for Conditioning Plastics for Testing

D696 Test Method for Coefficient of Linear Thermal Expansion of Plastics Between −30°C and 30°C with a Vitreous Silica Dilatometer

D746 Test Method for Brittleness Temperature of Plastics and Elastomers by Impact

D751 Test Methods for Coated Fabrics

D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

D792 Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement

D1004 Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting

D1149 Test Methods for Rubber Deterioration—Cracking in an Ozone Controlled Environment

D1204 Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature

D1238 Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer

D1505 Test Method for Density of Plastics by the Density-Gradient Technique

D1603 Test Method for Carbon Black Content in Olefin Plastics

D2136 Test Method for Coated Fabrics—Low-Temperature Bend Test

D2137 Test Methods for Rubber Property—Brittleness Point of Flexible Polymers and Coated Fabrics

D3389 Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Abrader)

D3418 Test Method for Transition Temperatures and Enthalpies of Fusion and Crystallization of Polymers by Differential Scanning Calorimetry

D4218 Test Method for Determination of Carbon Black Content in Polyethylene Compounds By the Muffle-Furnace Technique

D4364 Practice for Performing Outdoor Accelerated Weathering Tests of Plastics Using Concentrated Sunlight

D4439 Terminology for Geosynthetics

D4833/D4833M Test Method for Index Puncture Resistance of Geomembranes and Related Products

[1] This guide is under the jurisdiction of ASTM Committee D35 on Geosynthetics and is the direct responsibility of Subcommittee D35.10 on Geomembranes.

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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.