



Standard Guide for the Selection of Test Methods for Prefabricated Bituminous Geomembranes (PBGM)¹

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1. Scope

1.1 This guide provides recommendations for the selection of appropriate test methods for prefabricated bituminous sheet used in geomembrane applications to provide consistency in data reporting.

1.2 This guide includes test methods for all types of composite bituminous geomembranes fabricated in a plant and consisting of a synthetic fabric saturated by a modified bituminous or an oxidized bituminous blend.

1.3 This guide is intended to aid all personnel involved in the selection, manufacture, installation, or evaluation of prefabricated bituminous geomembranes.

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

2. Referenced Documents

2.1 ASTM Standards:

- D 5 Test Method for Penetration of Bituminous Materials²
- D 36 Test Method for Softening Point of Bitumen: Ring and Ball Apparatus³
- D 1204 Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature⁴
- D 3746 Test Method for Impact Resistance of Bituminous Roofing Systems³
- D 3776 Test Methods for Mass Per Unit Area (Weight) of Woven Fabric⁵
- D 4354 Practice for Sampling of Geosynthetics for Testing⁶
- D 4355 Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)⁶

- D 4437 Practice for Determining the Integrity of Field Seams⁶
- D 4439 Terminology for Geotextiles⁶
- D 4595 Test Method for Tensile Properties of Geotextiles by Wide-Width Strip Method⁶
- D 4833 Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products⁶
- D 5147 Test Methods for Sampling and Testing Modified Bituminous Sheet Material³
- D 5199 Test Method for Measuring Nominal Thickness of Geotextiles and Geomembranes⁶
- D 5262 Test Method for Evaluating the Unconfined Tension Creep Behavior of Geosynthetics⁶
- D 5321 Test Method for Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Friction by Direct Shear Method⁶
- D 5322 Practice for Immersion Procedures for Evaluating the Chemical Resistance of Geosynthetics to Liquids⁶
- D 5635 Test Method for Dynamic Puncture Resistance of Roofing Membrane Specimens³
- D 5641 Practice for Geomembrane Seam Evaluation by Vacuum Chamber⁶
- D 5747 Practice for Tests to Evaluate the Chemical Resistance of Geomembranes to Liquids⁶
- D 5886 Guide for Selection of Test Methods to Determine Rate of Fluid Permeation Through Geomembranes for Specific Applications⁶
- E 96 Test Methods for Water Vapor Transmission of Materials⁷
- G 151 Practice for Exposing Nonmetallic Materials in Accelerated Test Devices That Use Laboratory Light Sources⁸
- G 154 Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials⁸
- G 155 Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials⁸

¹ This guide is under the jurisdiction of ASTM Committee D-35 on Geosynthetics and is the direct responsibility of D35.10 on Geomembranes.

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² Annual Book of ASTM Standards, Vol 04.03.

³ Annual Book of ASTM Standards, Vol 04.04.

⁴ Annual Book of ASTM Standards, Vol 08.01.

⁵ Annual Book of ASTM Standards, Vol 07.02.

⁶ Annual Book of ASTM Standards, Vol 04.09.

3. Terminology

3.1 Definitions:

⁷ Annual Book of ASTM Standards, Vol 04.06.

⁸ Annual Book of ASTM Standards, Vol 14.02.