



Designation: D2643/D2643M – 21

Standard Specification for Prefabricated Bituminous Geomembrane Used as Canal and Ditch Liner (Exposed Type)¹

This standard is issued under the fixed designation D2643/D2643M; 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 prefabricated bituminous geomembranes intended to provide a continuous, exposed lining for canals and ditches.

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

1.3 *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.*

1.4 *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

[D1204 Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature](#)

[D4354 Practice for Sampling of Geosynthetics and Rolled Erosion Control Products \(RECPs\) for Testing](#)

[D4439 Terminology for Geosynthetics](#)

[D4798/D4798M Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials](#)

¹ This specification is under the jurisdiction of ASTM Committee D35 on Geosynthetics and is the direct responsibility of Subcommittee D35.06 on Geosynthetic Specifications.

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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.

(Xenon-Arc Method)

[D4833/D4833M Test Method for Index Puncture Resistance of Geomembranes and Related Products](#)

[D5147/D5147M Test Methods for Sampling and Testing Modified Bituminous Sheet Material](#)

[D5199 Test Method for Measuring the Nominal Thickness of Geosynthetics](#)

[D5261 Test Method for Measuring Mass per Unit Area of Geotextiles](#)

[D5884/D5884M Test Method for Determining Tearing Strength of Internally Reinforced Geomembranes](#)

[D6455 Guide for the Selection of Test Methods for Prefabricated Bituminous Geomembranes \(PBGMs\)](#)

[D7275 Test Method for Tensile Properties of Bituminous Geomembranes \(BGMs\)](#)

[E96/E96M Test Methods for Water Vapor Transmission of Materials](#)

3. Terminology

3.1 *Definitions*—For definitions of terms related to geosynthetics, refer to Terminology [D4439](#).

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *mineral stabilizer, n*—a fine, water-insoluble inorganic material, used as a filler material in the bitumen of a prefabricated bituminous geomembrane.

3.2.2 *prefabricated bituminous geomembrane, n*—a material fabricated in a plant and consisting principally of a geotextile saturated and coated with an oxidized or an elastomeric modified bitumen blend incorporating a filler.

3.2.3 *selvage, n*—the edge portion of a prefabricated bituminous geomembrane that is parallel to the machine direction.

4. Classifications

4.1 Prefabricated bituminous geomembranes covered by this specification shall be classified as Type I, Type II, and Type III. Distinction between those types is related to the requirements found in [Table 1](#).

4.2 Prefabricated bituminous geomembranes covered by this specification, regardless of their type indicated in [4.1](#), shall also be classified using the following grades, essentially governed by their minimal installation temperature: