



Designation: D7466/D7466M – 23

Standard Test Method for Measuring Asperity Height of Textured Geomembranes¹

This standard is issued under the fixed designation D7466/D7466M; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This test method covers a procedure to measure the asperity height of textured geomembranes.

1.2 This test method does not provide for measurement of the spacing between the asperities nor of the complete profile of the textured surface.

1.3 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.

1.4 *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

D4439 Terminology for Geosynthetics

D5994/D5994M Test Method for Measuring Core Thickness of Textured Geomembranes

E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods

E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

¹ This test method 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.

E2554 Practice for Estimating and Monitoring the Uncertainty of Test Results of a Test Method Using Control Chart Techniques

3. Terminology

3.1 For definitions of other terms used in this test method, refer to Terminology D4439.

3.2 *Definitions:*

3.2.1 *asperity, n*—the individual projections of polyethylene that extend above the core surface of a textured geomembrane resulting in the textured surface profile.

3.2.2 *core thickness, n*—the average thickness of a textured geomembrane as measured using Test Method D5994/D5994M.

3.2.3 *geomembrane, n*—an essentially impermeable geosynthetic composed of one or more synthetic sheets. D4439

3.2.4 *setting block, n*—the component part of a depth gauge that rests on top of the asperities.

3.2.5 *thickness, n*—the perpendicular distance between one surface and its opposite.

3.2.6 *thickness gauge contact point, n*—the tip of a thickness gauge which contacts the base sheet of the geomembrane surface.

4. Summary of Test Method

4.1 The asperity height of a textured geomembrane is measured with a depth gauge, the setting block of which rests on the top of the asperities while the contact point extends to the sheet's core surface.

4.2 The asperity height of a textured geomembrane is calculated as the average value of ten (10) individual measurements taken across the roll width of the sample under investigation.

5. Significance and Use

5.1 The asperity height is an index property used to quantify one of the physical attributes related to the surface roughness of textured geomembranes.

5.2 This test method is applicable to all currently available textured geomembranes that are deployed as manufactured geomembrane sheets.