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Standard Test Method for Measuring Mass per Unit Area of Geotextiles¹

This standard is issued under the fixed designation D5261; 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 test method covers and can be used as an index to the determination of mass per unit area of all geotextiles.
- 1.2 The values stated in SI units or other units shall be regarded separately as standard. The values stated in parentheses are provided for information only.
- 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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

- D123 [Terminology Relating to Textiles](#)
- D1776 [Practice for Conditioning and Testing Textiles](#)
- D4354 [Practice for Sampling of Geosynthetics for Testing](#)
- D4439 [Terminology for Geosynthetics](#)

2.2 ~~ISO/DIS Document: ISO Standard:~~³

- ~~ISO/DIS 9864-1990~~ [Mass per Unit Area of Geotextiles ISO 9864:1990 Geotextiles -- Determination of mass per unit area](#)

3. Terminology

3.1 Definitions:

- 3.1.1 *atmosphere for testing geotextiles, n*— air maintained at a relative humidity of $65 \pm 5\%$ and temperature of $21 \pm 2^\circ\text{C}$ ($70 \pm 4^\circ\text{F}$).
- 3.1.2 *geosynthetic, n*—a planar product manufactured from polymeric material used with soil, rock, earth, or other geotechnical-engineering-related material as an integral part of a man-made project, structure, or system.
- 3.1.3 *geotextile, n*—any permeable textile used with foundation, soil, rock, earth, or any other geotechnical-engineering-related material as an integral part of a man-made project, structure, or system.
- 3.1.4.1.3.1 *Discussion*—Current textile manufacturing techniques produce: nonwoven fabrics, knitted (non-tabular) fabrics, and woven fabrics.
- 3.2 For definitions of other textile terms used in this test method, refer to Terminology D123.
- 3.3 For definitions of other terms relating to geotextiles used in this test method, refer to Terminology D4439.

4. Summary of Test Method

4.1 The mass per unit area of a geotextile is determined by weighing test specimens of known dimensions, cut from various locations over the full width of the laboratory sample. The calculated values are then averaged to obtain the mean mass per unit area of the laboratory sample.

5. Significance and Use

5.1 This test method is used to determine if the geotextile material meets specifications for mass per unit area. This test method can be used for quality control to determine specimen conformance. This measurement allows for a simple control of the delivered

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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.

³ Available from ISO Case Postale 56, CH-1211, Geneva 20, Switzerland.

³ Available from International Organization for Standardization (ISO), 1, ch. de la Voie-Creuse, Case postale 56, CH-1211, Geneva 20, Switzerland, <http://www.iso.ch>.