



Designation: D6524/D6524M – 26

# Standard Test Method for Measuring the Resiliency of Turf Reinforcement Mats (TRMs)<sup>1</sup>

This standard is issued under the fixed designation D6524/D6524M; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

## 1. Scope

1.1 This test method covers the resiliency or recovery of turf reinforcement mats (TRMs) after they have been subjected to three cycles of loading at 689 kPa [100 psi] for 1 min/per cycle.

1.2 This test method does not provide resiliency values for TRMs under variable normal compressive stresses. This test method determines nominal resiliency.

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:*<sup>2</sup>

[D123 Terminology Relating to Textiles](#)

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

[D4439 Terminology for Geosynthetics](#)

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee [D35](#) on Geosynthetics and is the direct responsibility of Subcommittee [D35.05](#) on Geosynthetic Erosion Control.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [www.astm.org/contact](http://www.astm.org/contact). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

## 3. Terminology

3.1 *Definitions:*

3.1.1 *pressure, n*—the force or load per unit area.

3.1.2 *thickness—(1)* the distance between one planar surface and its opposite parallel and planar surface; *(2)* for TRMs, the distance between the upper and lower surfaces of the material, measured under a specified pressure and time.

3.1.3 *turf reinforcement mat (TRM), n*—a long-term nondegradable rolled erosion control product composed of UV stabilized, nondegradable, synthetic fibers, nettings, or filaments, or combination thereof, processed into three-dimensional reinforcement matrices.

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 and geomembranes used in this test method, refer to Terminology [D4439](#).

## 4. Summary of Test Method

4.1 The resiliency of TRMs is determined by observing the thickness of the TRM before and after it is subjected to three cycles of loading at 689 kPa [100 psi] for 1 min/cycle.

## 5. Significance and Use

5.1 Resiliency may be used to control the quality of many TRMs. Resiliency may be indicative of a TRM's ability to retain original configuration after exposure to the stresses which may be exerted during manufacture, shipping, and installation. Resiliency is not generally indicative of field performance.

5.2 This test method is used to determine the effect of compressive stress on the final thickness of TRMs.

5.3 This test method may be used for acceptance testing of commercial shipments of TRMs, but caution is advised since information on between-laboratory precision is incomplete. Comparative tests in accordance with [5.3.1](#) may be advisable.

5.3.1 In a case of a dispute arising from differences in reported test results when using this test method for acceptance testing of commercial shipments, the purchaser and the supplier should conduct comparative tests to determine if there is