



Designation: ~~D6575 – 00 (Reapproved 2006)~~ D6575 – 14

Standard Test Method for Determining Stiffness of Geosynthetics Used as Turf Reinforcement Mats (TRMs)¹

This standard is issued under the fixed designation D6575; 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 the determination of the stiffness of geosynthetics used as Turf Reinforcement Mats (TRM).
- 1.2 The method is applicable to TRMs of any fiber content and any number of components.
- 1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.
- 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:²

[D123 Terminology Relating to Textiles](#)

[D1388 Test Method for Stiffness of Fabrics](#)

[D1776 Practice for Conditioning and Testing Textiles](#)

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

[D4439 Terminology for Geosynthetics](#)

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

2.2 Federal Standards:³

[CCC-T-191b Textile Test Methods No. 5206.2](#)

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *bending length, n:*

3.1.1.1 *general, adj*—a measure of the interaction between geosynthetic weight and geosynthetic stiffness as shown by the way in which a geosynthetic bends under its own weight. It reflects the stiffness of a geosynthetic when bent in one plane under the force of gravity, and is one component of drape.

3.1.1.2 *Discussion*—Bending length is called drape stiffness in Federal Specification CCC-T-191b.

3.1.1.3 *specific, adj*—the cube root of the ratio of the flexural rigidity to the mass per unit area.

3.1.2 *flexural rigidity, n:*

3.1.2.1 *general, adj*—resistance to bending.

3.1.2.2 *Discussion*—Resistance to bending or “flexural rigidity” is called flex stiffness in Federal Specification CCC-T-191b.

3.1.2.3 *specific, adj*—the couple on either end of a sample of unit width bent into unit curvature in the absence of any tension.

3.1.2.4 *Discussion*—The methods measure the bending length. Flexural rigidity is calculated directly by multiplying the cube of the bending length by the weight per unit area (see 3.1.1.3).

¹ 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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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 the U.S. Government Printing Office Superintendent of Documents, US Government Printing Office, 732 N. Capitol St., NW, Washington, DC 20402-20401, <http://www.gpo.gov>.