



Designation: D8199 – 19

Standard Test Method for Determining the Specific Strength of Hydraulically Applied Fiber Matrix Products for Erosion Control¹

This standard is issued under the fixed designation D8199; 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 standard provides a quantitative test method to determine the specific strength of hydraulically applied fiber matrix products using dry and wet preparation methods in a laboratory setting. This method is designed for use as an index test for product quality assurance or quality control, or both to comply with manufacturing requirements. This test method is not indicative of product performance in the field.

1.2 *Units*—The values stated in SI units are to be regarded as the standard. The values given in parentheses are provided for information only and are not considered standard. Reporting of test results in units other than SI shall not be regarded as nonconformance with this standard.

1.3 All observed and calculated values shall conform to the guidelines for significant digits and rounding established in Practice [D6026](#), unless superseded by this test method.

1.3.1 The procedures used to specify how data are collected/recorded and calculated in the standard are regarded as the industry standard. In addition, they are representative of the significant digits that generally should be retained. The procedures used do not consider material variation, purpose for obtaining the data, special purpose studies, or any considerations for the user's objectives; and it is common practice to increase or reduce significant digits of reported data to be commensurate with these considerations. It is beyond the scope of these test methods to consider significant digits used in analysis methods for engineering data.

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 Recom-*

mendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 *ASTM Standards:*²

[D76/D76M Specification for Tensile Testing Machines for Textiles](#)

[D653 Terminology Relating to Soil, Rock, and Contained Fluids](#)

[D3740 Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction](#)

[D4753 Guide for Evaluating, Selecting, and Specifying Balances and Standard Masses for Use in Soil, Rock, and Construction Materials Testing](#)

[D6026 Practice for Using Significant Digits in Geotechnical Data](#)

[D7986 Practice for Preparing Specimens of Hydraulic Erosion Control Products for Index Property Testing](#)

3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of common technical terms used in this standard, refer to Terminology [D653](#).

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *fiber matrix product, n*—in erosion control, hydraulically applied product providing enhanced and extended erosion control protection.

4. Summary of Test Method

4.1 Ten specimens are prepared from a representative sample in accordance with Practice [D7986](#). Five specimens are then tested in the dry condition and five are tested in the wet condition. Each test specimen is clamped in a Constant Rate of Extension (CRE) tensile testing machine and a force is applied to the specimen until it breaks.

¹ This test method is under the jurisdiction of ASTM Committee [D18](#) on Soil and Rock and is the direct responsibility of Subcommittee [D18.25](#) on Erosion and Sediment Control Technology.

Current edition approved July 1, 2019. Published July 2019. DOI: 10.1520/D8199-19.

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.