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.

Designation: D7322/D7322M – 17

Standard Test Method for Determination of Erosion Control Product (ECP) Ability to Encourage Seed Germination and Plant Growth Under Bench-Scale Conditions[1]

This standard is issued under the fixed designation D7322/D7322M; 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 guidelines, requirements, and procedures for evaluating the effect of Erosion Control Products (ECPs) on seed germination and vegetation enhancement.

1.2 This test method will evaluate the effects of both rolled erosion control products (RECPs) and hydraulically-applied erosion control products (HECPs) on seed germination in a controlled environment.

1.3 This test method utilizes bench-scale testing procedures and shall not be interpreted as indicative of field performance.

1.4 This test method is not intended to replace full-scale simulation or field testing in acquisition of performance values that are required in the design of erosion control measures utilizing RECPs and HECPs.

1.5 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.6 *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.*

1.7 *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]

D653 Terminology Relating to Soil, Rock, and Contained Fluids

D4354 Practice for Sampling of Geosynthetics and Rolled Erosion Control Products (RECPs) for Testing

D5268 Specification for Topsoil Used for Landscaping Purposes

D6475 Test Method for Measuring Mass per Unit Area of Erosion Control Blankets

D6566 Test Method for Measuring Mass per Unit Area of Turf Reinforcement Mats

E145 Specification for Gravity-Convection and Forced-Ventilation Ovens

3. Terminology

3.1 For definitions of terms used in this test method, see Terminology D653.

4. Summary of Test Method

4.1 Containers containing soil are sown with seeds and then covered with an ECP. Additional containers of soil are sown with seed and left uncovered as *controls*. The light, temperature, and humidity are maintained and documented. The amount of germination and growth is measured periodically throughout the test, and the mass of vegetation is calculated at the conclusion of the test.

4.2 Each ECP under consideration as well as control containers of uncovered soil undergo testing in a controlled environment.

5. Significance and Use

5.1 This test method evaluates the effect of an ECP on seed germination and initial plant growth in a controlled environment.

[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.

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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.

*A Summary of Changes section appears at the end of this standard

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