



Designation: D7000 – 19a

Standard Test Method for Sweep Test of Emulsified Asphalt Surface Treatment Samples¹

This standard is issued under the fixed designation D7000; 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 measures the curing performance characteristics of emulsified asphalt and aggregates by simulating the brooming of a surface treatment in the laboratory.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 The text of this standard references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the 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, 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:²

[D75/D75M Practice for Sampling Aggregates](#)

[D226/D226M Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing](#)

[D3666 Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials](#)

[E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method](#)

[2.2 ISSA Document:³](#)

[ISSA Technical Bulletin No. 100 Test Method for Wet Track Abrasion of Slurry Surfaces](#)

3. Summary of Test Method

3.1 The sweep test is effective for defining the film formation stage of emulsified asphalt. A brush (designed to closely replicate the sweeping action of a broom) exerts a force on the aggregate used on surface treatments. Emulsified asphalt is applied to an asphalt felt disk. Aggregate is applied and embedded into the emulsified asphalt. The sample is then conditioned at a prescribed temperature and time period before testing. A mixer abrades the surface of the sample using a nylon brush. After 1 min of abrasion, the test is stopped, any loose aggregate is removed, and the percent mass loss is calculated.

4. Significance and Use

4.1 This test method is useful for classifying rapid-setting emulsified asphalt and is applicable to surface treatments that require a quick return to traffic. It has the capability to predict surface treatment performance in the formative stage using construction components. This performance test is intended to evaluate the potential curing characteristics of a binder-aggregate combination to ensure that the surface treatment is sufficiently cured before allowing traffic onto the seal.

NOTE 1—The quality of the results produced by this standard are dependent on the competence of the personnel performing the procedure and the capability, calibration, and maintenance of the equipment used. Agencies that meet the criteria of Specification [D3666](#) are generally capable of competent and objective testing, sampling, inspection, etc. Users of this standard are cautioned that compliance with Specification [D3666](#) alone does not completely ensure reliable results. Reliable results depend on many factors; following the suggestions of Specification [D3666](#) or some similar acceptable guideline provides a means of evaluating and

¹ This test method is under the jurisdiction of ASTM Committee [D04](#) on Road and Paving Materials and is the direct responsibility of Subcommittee [D04.24](#) on Asphalt Surface Treatments.

Current edition approved Dec. 15, 2019. Published January 2020. Originally approved in 2004. Last previous edition approved in 2019 as D7000 – 19. DOI: 10.1520/D7000-19A.

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 International Slurry Surfacing Association (ISSA), 3 Church Circle, PMB 250, Annapolis, MD 21401, <http://www.slurry.org>.