



Designation: D6930 – 04

Standard Test Method for Settlement and Storage Stability of Emulsified Asphalts¹

This standard is issued under the fixed designation D6930; 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 (ϵ) indicates an editorial change since the last revision or reappraisal.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This test method covers the ability of an emulsified asphalt to remain as a uniform dispersion during storage. It is applicable to emulsified asphalts composed principally of a semisolid or liquid asphaltic base, water, and an emulsifying agent.

1.2 *This test method 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

D6934 Test Method for Residue by Evaporation of Emulsified Asphalt

3. Significance and Use

3.1 This test method is useful for determining, in a comparatively short time, the storage stability or settlement of an emulsified asphalt. It is a measure of the permanence of the dispersion as related to time, but it is not to be construed to have significance as a measure of other stability aspects involved in use.

4. Summary of Test Method

4.1 This test method determines the difference in percent residue of samples taken from the top and bottom of material placed in undisturbed simulated storage for a specified time period. The result is expressed by determining the difference between the percent residue of the top and bottom samples for the storage cylinder.

¹ This test method is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.42 on Emulsified Asphalt Tests.

Current edition approved Aug. 1, 2004. Published August 2004. DOI: 10.1520/D6930-04.

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.

5. Sample Conditioning for Testing

5.1 All emulsified asphalts shall be properly stirred to achieve homogeneity before testing.

5.2 All emulsified asphalts with viscosity testing requirements of 50°C shall be heated to $50 \pm 3^\circ\text{C}$ in the original sample container in a water bath or oven. The container should be vented to relieve pressure. After the sample reaches $50 \pm 3^\circ\text{C}$, stir the sample to achieve homogeneity.

5.3 Emulsified asphalts with viscosity testing requirements of 25°C should be mixed or stirred at $25 \pm 3^\circ\text{C}$ in the original sample container to achieve homogeneity.

NOTE 1—Emulsified asphalts with viscosity testing requirements of 25°C may be heated and stirred as specified in 5.2, if necessary. In the event the 5.2 method is used, the sample should be cooled to $25 \pm 3^\circ\text{C}$ before testing.

6. Apparatus

6.1 *Cylinder*—500-mL glass cylinder, with pressed or molded glass base and cork, rubber, or glass stopper, having an outside diameter of 50 ± 5 mm.

NOTE 2—The use of a cylinder containing *side arm* glass tubes to permit the siphoning of the material rather than pipetting is an acceptable alternative method.

6.2 *Glass Pipet*—A 50-mL siphon glass-tube pipet of optional form.

6.3 *Balance*, capable of weighing 1000 g to 0.1 g.

6.4 *Beakers*—Two 1000 mL glass or metal beakers.

6.5 *Stir Rods*—Glass or Stainless Steel with rounded ends.

6.6 *Oven*—Capable of maintaining a temperature of $163 \pm 3^\circ\text{C}$.

7. Procedure

7.1 Bring the emulsified asphalt to room temperature, 22°C to 28°C. Place a 500-mL representative sample in the glass cylinder. Stopper the cylinder and allow it to stand undisturbed, at laboratory air temperature 22°C to 28°C, for 24 h for storage stability or 5 days for settlement test. After standing for this period, remove approximately 55 mL of emulsified asphalt from the top of the cylinder by means of the pipet or siphon