Designation: D977 – 17

Standard Specification for
Emulsified Asphalt[1]

1. Scope

1.1 This specification covers 13 grades of emulsified asphalt for use in pavement construction in the manner designated.

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 *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]

D5/D5M Test Method for Penetration of Bituminous Materials

D113 Test Method for Ductility of Bituminous Materials (Withdrawn 2016)[3]

D139 Test Method for Float Test for Bituminous Materials

D140/D140M Practice for Sampling Asphalt Materials

D244 Test Methods and Practices for Emulsified Asphalts

D2042 Test Method for Solubility of Asphalt Materials in Trichloroethylene

D3910 Practices for Design, Testing, and Construction of Slurry Seal

D6930 Test Method for Settlement and Storage Stability of Emulsified Asphalts

D6933 Test Method for Oversized Particles in Emulsified Asphalts (Sieve Test)

D6935 Test Method for Determining Cement Mixing of Emulsified Asphalt

D6936 Test Method for Determining Demulsibility of Emulsified Asphalt

D6997 Test Method for Distillation of Emulsified Asphalt

D7226 Test Method for Determining the Viscosity of Emulsified Asphalts Using a Rotational Paddle Viscometer

D7496 Test Method for Viscosity of Emulsified Asphalt by Saybolt Furol Viscometer

D7553 Test Method for Solubility of Asphalt Materials in N-Propyl Bromide

3. Requirements

3.1 The emulsified asphalt shall be tested within 14 days of delivery. The emulsified asphalt shall be homogeneous after thorough mixing provided separation has not been caused by freezing. Emulsified asphalts separated by freezing shall not be tested.

3.2 Emulsified asphalt shall conform to the requirements prescribed in Table 1. Specify the test method to be used. Specify either Test Method D7226 or D7496.

4. Sampling

4.1 Samples of emulsified asphalt shall be taken in accordance with Practice D140/D140M.

4.2 Samples shall be stored in clean, airtight sealed containers as specified in Practice D140/D140M at a temperature of not less than 4 °C until tested.

5. Test Methods

5.1 The properties of the emulsified asphalts given in Table 1 shall be determined in accordance with the following ASTM test methods:

5.1.1 *Viscosity*—Test Method D7496 or D7226.

5.1.2 *Storage Stability*—Test Method D6930.

5.1.3 *Demulsibility*—Test Method D6936.

5.1.4 *Coating Ability and Water Resistance*—Test Methods D244.

5.1.5 *Cement Mixing*—Test Method D6935.

5.1.6 *Sieve Test*—Test Method D6933.

5.1.7 *Distillation*—Test Method D6997.