



Designation: D 5546 – 94a01

Standard Test Method for Solubility of Polymer-Modified Asphalt Materials Binders in 1,1,1-Trichloroethane Toluene by Centrifuge¹

This standard is issued under the fixed designation D 5546; 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 determination of the degree of solubility in 1,1,1-trichloroethane of polymer-modified asphalt materials having little or no mineral matter, binders in toluene using centrifugal separation. The test method is also acceptable for testing unmodified asphalt cements, as an alternative to Test Method D 2042.

1.2 The test method has been used successfully on polymer-modified asphalts manufactured with neoprene latex, styrene-butadiene latex (SBR), styrene-butadiene copolymer (SB), styrene-butadiene-styrene block copolymer (SBS), D 2042, and ethylene-vinyl acetate copolymer (EVA). This test method may not be suitable for other polymers, such as polyethylene, which are completely insoluble in 1,1,1-trichloroethane under the conditions of this test. These polymers may float in the centrifuge tubes and be difficult preferable to remove Test Method D 2042 when decanting the solvent.

1.3 The testing modified asphalt binders.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.43 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 and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Documents

2.1 ASTM Standards:

D 36 Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)²

¹ This test method is under the jurisdiction of ASTM Committee D-4 D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.47 on Miscellaneous Asphalt Tests.

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