



Designation: D2027/D2027M – 19 (Reapproved 2024)

Standard Specification for Cutback Asphalt (Medium-Curing Type)¹

This standard is issued under the fixed designation D2027/D2027M; 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 specification covers cutback petroleum asphalts of the medium-curing type for use in the construction and treatment of pavements.

1.2 The values stated in SI units or inch-pounds 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 each other. Combining values from the two systems may result in nonconformance with the 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 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

D95 Test Method for Water in Petroleum Products and Bituminous Materials by Distillation

D113 Test Method for Ductility of Asphalt Materials

D140/D140M Practice for Sampling Asphalt Materials

D402/D402M Test Method for Distillation of Cutback Asphalt

D2042 Test Method for Solubility of Asphalt Materials in Trichloroethylene or Toluene

¹ This specification is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.40 on Asphalt Specifications.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

D2170/D2170M Test Method for Kinematic Viscosity of Asphalts

D2171/D2171M Test Method for Viscosity of Asphalts by Vacuum Capillary Viscometer

D3143/D3143M Test Method for Flash Point of Cutback Asphalt with Tag Open-Cup Apparatus

D3666 Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials

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

3. Properties

3.1 The cutback asphalt shall not foam when heated to application temperature and shall conform to the requirements prescribed in Table 1.

4. Test Methods

4.1 The materials shall be sampled in accordance with Practice D140/D140M, and the properties enumerated in this specification shall be determined in accordance with the following ASTM test methods:

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 considered 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 controlling some of those factors.

4.1.1 Flash Point (Tag Open-Cup)—Test Method D3143/D3143M.

4.1.2 Viscosity, Kinematic—Test Method D2170/D2170M.

4.1.3 Viscosity, at 60 °C [140 °F]—Test Method D2171/D2171M.

4.1.4 Distillation—Test Method D402/D402M.

NOTE 2—If a 100 mL graduate does not permit sufficiently close readings to determine conformity to this specification with the desired accuracy, receivers graduated with 0.1 mL divisions shall be used.

4.1.5 Penetration—Test Method D5/D5M.

4.1.6 Ductility—Test Method D113.

4.1.7 Solubility in Trichloroethylene/N-Propyl Bromide—Test Methods D2042 and D7553.

4.1.8 Water—Test Method D95.