Designation: ~~D6626 – 15 (Reapproved 2021)~~ D6626 – 23

Standard Specification for Performance-Graded Trinidad Lake Modified Asphalt Binder[1]

This standard is issued under the fixed designation D6626; 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 performance-graded Trinidad Lake modified asphalt binders. Grading designations are related to the ~~average seven-day~~ LTPPBind Online calculated maximum pavement design ~~temperature, °C, the intermediate pavement design temperature, °C, and~~ temperature and the minimum pavement design ~~temperature, °C.~~ temperature.

NOTE 1—For more information on LTPPBind Online, see https://infopave.fhwa.dot.gov/Tools/LTPPBindOnline accessed July 10, 2023.

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]

D8 Terminology Relating to Materials for Roads and Pavements
D92 Test Method for Flash and Fire Points by Cleveland Open Cup Tester
D95 Test Method for Water in Petroleum Products and Bituminous Materials by Distillation
D140/D140M Practice for Sampling Asphalt Materials
D1754/D1754M Test Method for Effects of Heat and Air on Asphaltic Materials (Thin-Film Oven Test)
~~D2170/D2170M~~D2042 Test Method for ~~Kinematic Viscosity of Asphalts~~Solubility of Asphalt Materials in Trichloroethylene or Toluene
~~D2171/D2171M Test Method for Viscosity of Asphalts by Vacuum Capillary Viscometer~~
D2872 Test Method for Effect of Heat and Air on a Moving Film of Asphalt Binder (Rolling Thin-Film Oven Test)
D4402/D4402M Test Method for Viscosity Determination of Asphalt at Elevated Temperatures Using a Rotational Viscometer
D6521 Practice for Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)
D6648 Test Method for Determining the Flexural Creep Stiffness of Asphalt Binder Using the Bending Beam Rheometer (BBR)
D6723 Test Method for Determining the Fracture Properties of Asphalt Binder in Direct Tension (DT) (Withdrawn 2021)[3]
D7175 Test Method for Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer
D7553 Test Method for Solubility of Asphalt Materials in N-Propyl Bromide

[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 service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] The last approved version of this historical standard is referenced on www.astm.org.

3. Terminology

3.1 *Definitions:*

3.1.1 Definitions for many terms common to asphalt cement are found in Terminology D8.

4. Ordering Information

4.1 When ordering under this specification, include in the purchase order the grade of Trinidad Lake modified asphalt binder required from Table 1 (for example, TLG 52-16 or TLG 64-34).

5. Materials and Manufacture

5.1 Trinidad Lake modified asphalt binder shall be prepared by the addition of Trinidad Lake asphalt modifier to base asphalt produced from the refining of petroleum crude, with or without the inclusion of organic or inorganic modifiers.

5.2 Modifiers may be any suitable form of Trinidad Lake asphalt that may include also organic or inorganic modifiers of suitable manufacture and preparation, and that is dissolved, dispersed, or reacted in asphalt cement to enhance its performance.

5.3 The base asphalt binder shall be homogeneous, free from water and deleterious materials, and shall not foam when heated to 175 °C.

5.4 The base asphalt binder shall be at least 99.0 % soluble ~~in N-Propyl Bromide~~ as determined by Test Method D2042 or D7553.

5.5 The grades of asphalt binder shall conform to the requirements given in Table 1.

6. Sampling

6.1 The materials shall be sampled in accordance with Practice D140/D140M.

7. Test Methods

7.1 The properties outlined in 5.3 – 5.5 shall be determined in accordance with Practice D6521 and Test Methods D92, D95, D1754/D1754M, D2042, D2872, D4402/D4402M, D6648, D6723, D7175, and D7553.

8. Inspection and Certification

8.1 Inspection and certification of the material shall be agreed upon between the purchaser and the seller. Specific requirements shall be made part of the purchase contract.

9. Rejection and Rehearing

9.1 If the results of any test do not conform to the requirements of this specification, retesting to determine conformity is performed as indicated in the purchase order or as otherwise agreed upon between the purchaser and the seller.

10. Keywords

10.1 asphalt binder; asphalt cement; direct tension; flash point; graded specifications; modifier; pressure aging; rheology; trinidad lake asphalt