



Designation: D6608 – 20 (Reapproved 2024)

Standard Practice for the Identification of Trinidad Lake Asphalt in Asphalt Mixes¹

This standard is issued under the fixed designation D6608; 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 practice shall be used for the qualitative determination of Trinidad Lake Asphalt in Trinidad Lake Modified Asphalt Cements obtained from production blends or recovered binder from asphalt paving mixtures.

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 practice is limited to asphalt binders which are produced in accordance with Specification **D5710/D5710M**.

1.4 **Warning**—Mercury has been designated by the United States Environmental Protection Agency and many state agencies as a hazardous material that can cause central nervous system, kidney, and liver damage. Mercury, or its vapor, may be hazardous to health and corrosive to materials. Caution should be taken when handling mercury and mercury-containing products. See the applicable Material Safety Data Sheet (MSDS) for details and EPA's website—<http://www.epa.gov/mercury/index.htm>—for additional information. Users should be aware that selling mercury and/or mercury-containing products into your state may be prohibited by state law.

1.5 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.

1.6 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.7 *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 Recom-*

mendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 *ASTM Standards:*²

D140/D140M Practice for Sampling Asphalt Materials

D1856 Test Method for Recovery of Asphalt from Solution by Abson Method

D2172/D2172M Test Methods for Quantitative Extraction of Asphalt Binder from Asphalt Mixtures

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

D5710/D5710M Specification for Trinidad Lake Modified Asphalt

3. Summary of Test Method

3.1 A polished copper strip is immersed in a given quantity of sample and heated at a temperature and for a given time characteristic of the material being tested. At the end of this period the copper strip is removed, washed, and compared with the classifications of the TLA Copper Tarnishing Ranges for copper strips.

4. Significance and Use

4.1 Asphalt contains sulfur compounds, most of which are removed during refining; the resulting asphalt also contains sulfur compounds which are released at the temperatures above 230 °C. Trinidad Lake Modified Asphalt contains sulfur compounds which are released at lower temperatures between 170 °C and 230 °C. The release of sulfur from Trinidad Lake Modified Asphalt tarnishes the copper strip and appears to be related directly to the total TLA content. The copper strip test is designed to assess the qualitative presence of TLA in asphalt.

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.

¹ This practice is under the jurisdiction of ASTM Committee **D04** on Road and Paving Materials and is the direct responsibility of Subcommittee **D04.47** on Miscellaneous Asphalt Tests.

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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.