



Standard Test Method for Sieve Analysis of Mineral Filler for Asphalt Paving Mixtures¹

This standard is issued under the fixed designation D546; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This test method covers the sieve analysis of mineral fillers used in asphalt paving mixtures.

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

NOTE 1—Regarding sieves, per Specification E11, “the values stated in SI units shall be considered standard for the dimensions of the wire cloth openings and the diameter of the wires used in the wire cloth.” When sieve mesh sizes are referenced, the alternate inch-pound designations are provided for information purposes and enclosed in parentheses.

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 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.*

1.5 *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.*

¹ This test method is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.51 on Aggregate Tests.

Current edition approved Oct. 1, 2024. Published October 2024. Originally approved in 1939. Last previous edition approved in 2017 as D546 – 17. DOI: 10.1520/D0546-24.

2. Referenced Documents

2.1 ASTM Standards:²

- C110 Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone
- C670 Practice for Preparing Precision and Bias Statements for Test Methods for Construction Materials
- C702/C702M Practice for Reducing Samples of Aggregate to Testing Size
- C786/C786M Test Method for Fineness of Hydraulic Cement and Raw Materials by the 300-μm (No. 50), 150-μm (No. 100), and 75-μm (No. 200) Sieves by Wet Methods
- D8 Terminology Relating to Materials for Roads and Pavements
- D242/D242M Specification for Mineral Filler for Asphalt Mixtures
- D4753 Guide for Evaluating, Selecting, and Specifying Balances and Standard Masses for Use in Soil, Rock, and Construction Materials Testing
- D6913/D6913M Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
- E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves

3. Terminology

- 3.1 For definition of terms, see Terminology D8.

4. Significance and Use

- 4.1 The method is used to determine compliance of mineral fillers with the grading requirements of Specification D242/D242M.

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.