



Designation: D8292 – 20

Standard Test Method for Permanent Deformation Behavior and Rutting Resistance of Compacted Asphalt Mix in the Modified Loaded Wheel Tracker Test Utilizing Controlled Confining Pressure¹

This standard is issued under the fixed designation D8292; 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 describes a procedure for testing permanent deformation behavior and rutting resistance of compacted asphalt mixtures using a modified version of a loaded wheel tracker device² utilizing controlled confining pressure. The test specimen is tested either dry or moisture conditioned. A laboratory roller compactor or its equivalent is used to prepare test slabs of 305 mm by 305 mm [12 in. by 12 in.] and thickness 50 mm, 75 mm, or 100 mm [2 in., 3 in., or 4 in.] depending on the nominal maximum aggregate size. The thickness of the specimen must be at least two and half times the nominal maximum aggregate size. Alternatively, saw-cut slab specimens with dimensions 305 mm by 305 mm [12 in. by 12 in.] and thickness 50 mm to 100 mm [2 in. to 4 in.] may be secured from the field.

1.2 *Units*—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.

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 Since a precision estimate for this standard has not been fully developed, the test method is to be used for research and informational purposes only. Therefore, this standard should not be used for acceptance or rejection of a material for purchasing purposes.

1.5 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.

1.6 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*:³

- D8 Terminology Relating to Materials for Roads and Pavements
- D2041/D2041M Test Method for Theoretical Maximum Specific Gravity and Density of Asphalt Mixtures
- D2493/D2493M Practice for Viscosity-Temperature Chart for Asphalt Binders
- D2726/D2726M Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Asphalt Mixtures
- D3203/D3203M Test Method for Percent Air Voids in Compacted Asphalt Mixtures
- D3666 Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
- D5361/D5361M Practice for Sampling Compacted Asphalt Mixtures for Laboratory Testing
- D6027/D6027M Practice for Calibrating Linear Displacement Transducers for Geotechnical Purposes
- D6857/D6857M Test Method for Maximum Specific Gravity and Density of Asphalt Mixtures Using Automatic Vacuum Sealing Method
- D8079 Practice for Preparation of Compacted Slab Asphalt Mix Samples Using a Segmented Rolling Compactor
- E1 Specification for ASTM Liquid-in-Glass Thermometers

¹ This test method is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.20 on Mechanical Tests of Asphalt Mixtures.

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² The modified wheel tracker is covered by a patent. Interested parties are invited to submit information regarding the identification of an alternative(s) to this patented item to the ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee,¹ which you may attend.

³ 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.