



Designation: D3549 – 03

Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens¹

This standard is issued under the fixed designation D3549; 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 covers determination of the thickness (or height) of compacted bituminous paving mixture specimens.

1.2 *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D1188 Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples

D2726 Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures

D3203 Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures

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

3. Significance and Use

3.1 The thickness of a compacted bituminous paving mixture is often used as a construction check to insure that the proper quantity of materials has been placed on a project and to correct strength measurement on constant diameter specimens with varying heights.

NOTE 1—The equipment and personnel performing this test method can be evaluated by Practice **D3666**.

4. Apparatus

4.1 Any of the following apparatus may be used to measure the thickness of test specimens:

¹ This test method is under the jurisdiction of ASTM Committee **D04** on Road and Paving Materials and is the direct responsibility of Subcommittee **D04.21** on Specific Gravity and Density of Bituminous Mixtures.

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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.

NOTE 2—In addition to direct measurement, the thickness of test specimens may be determined as described in **6.3**.

4.1.1 A metal tape or rule.

4.1.2 A set of calipers.

4.1.3 A measurement jig or other device, fabricated in such a manner that it is capable of measuring specimen thicknesses in accordance with this procedure.

4.2 Depending upon the requirements of the specifying agency, the units of measurement and subdivisions shall be as follows:

4.2.1 Where inches and fractional portions are specified, the apparatus shall be capable of measuring to $\frac{1}{16}$ in.

4.2.2 Where inches and decimal portions are specified, the apparatus shall be capable of measuring to 0.05 in.

4.2.3 Where decimal portions of feet are specified, the apparatus shall be capable of measuring to 0.005 ft.

4.2.4 Where centimetres are specified, the apparatus shall be capable of measuring to 0.10 cm.

5. Test Specimens

5.1 Test specimens shall be laboratory compacted or from compacted bituminous pavements.

5.2 Pavement test specimens shall be taken with a core drill, diamond or carborundum saw, or by other suitable means.

5.2.1 Thickness measurements shall not be made on any specimen that has been distorted or cracked in removal from the pavement, laboratory compaction molds, or during storage prior to measuring.

5.2.2 Specimens shall be free of foreign materials such as seal coat, foundation material, soil, paper, or foil.

5.2.3 Where desirable, specimens may be separated from other layers by sawing, shearing or other suitable means, provided a well defined construction plane is achieved.

6. Procedure

6.1 Thickness of specimens with relatively plane horizontal surfaces or layers with well defined, uniform lines of demarcation may be measured with a tape, rule, or calipers in accordance with the following:

6.1.1 Measure the thickness of the specimen or layer using any of the apparatus described in **4.1** to the closest applicable interval described in **4.2**. Make thickness measurements approximately perpendicular to the upper plane of the specimen.