



Standard Practice for Preparation of Test Specimens of Asphalt-Stabilized Soils¹

This standard is issued under the fixed designation D 4223; 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 covers the selection and proportioning of soils and emulsified or cutback asphalts and the fabrication of 4-in. (102-mm) diameter by 2.5-in. (54-mm) high test specimens.

1.2 All observed and calculated values shall conform to the guidelines for significant digits and rounding established in Practice D 6026.

1.3 The values stated in inch-pound units are to be regarded as standard, except as noted as follows. The values given in parentheses are mathematical conversions to SI units, and are provided for information only and are not considered standard.

1.3.1 The gravitational system of inch-pound units is used when dealing with inch-pound units. In this system, the pound (lbf) represents a unit of force (weight), while the unit for mass is slugs.

1.3.2 The slug unit of mass is almost never used in commercial practice (density, scales, balances, and so forth). Therefore, the standard unit for mass in this practice is either kilogram (kg) or gram (g), or both. Also, the equivalent inch-pound unit (slug) is not given.

1.3.3 It is common practice in the engineering/construction profession in the United States to concurrently use pound to represent both a unit of mass (lbm) and of force (lbf). This use combines two separate system of units, the absolute system and the gravitational system. It is scientifically undesirable to combine the use of two separate sets of inch-pound units within a single standard. As stated in 1.3.2, this practice uses the gravitational system and does not present the slug unit for mass. However, the use of scales or balances recording pounds of mass (lbm) or the recording of density in lbm/ft³ shall not be regarded as nonconformance with this practice.

1.4 *This practice offers a set of instructions for performing one or more specific operations. This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of*

a project's many unique aspects. The word "Standard" in the title of this document means only that the document has been approved through the ASTM consensus process.

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

2. Referenced Documents

2.1 ASTM Standards:

C 117 Test Method for Material Finer Than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing²

C 136 Method for Sieve Analysis of Fine and Coarse Aggregates²

D 8 Terminology Relating to Materials for Roads and Pavements³

D 75 Practice for Sampling Aggregates³

D 653 Terminology Relating to Soil, Rock, and Contained Fluids⁴

D 977 Specification for Emulsified Asphalt³

D 1074 Test Method for Compressive Strength of Bituminous Mixtures³

D 1188 Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens³

D 1559 Test Method for Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus³

D 1560 Test Methods for Resistance to Deformation and Cohesion of Bituminous Mixtures by Means of Hveem Apparatus³

D 1561 Practice for Preparation of Bituminous Mixture Test Specimens by Means of California Kneading Compactor³

D 2026 Specification for Cutback Asphalt (Slow-Curing Type)³

D 2027 Specification for Cutback Asphalt (Medium-Curing Type)³

D 2028 Specification for Cutback Asphalt (Rapid-Curing Type)³

D 2216 Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock Soil-Aggregate Mixtures⁴

¹ This practice is under the jurisdiction of ASTM Committee D-18 on Soil and Rock and is the direct responsibility of Subcommittee D18.15 on Stabilization with Admixtures.

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² Annual Book of ASTM Standards, Vol 04.02.

³ Annual Book of ASTM Standards, Vol 04.03.

⁴ Annual Book of ASTM Standards, Vol 04.08.

*A Summary of Changes section appears at the end of this standard.