Designation: D 7229 – 06

Standard Test Method for Preparation and Determination of the Bulk Specific Gravity of Dense-Graded Cold Mix Asphalt (CMA) Specimens by Means of the Superpave Gyratory Compactor[1]

This standard is issued under the fixed designation D 7229; 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 concerns the preparation and compaction of cylindrical specimens of dense-graded cold mix asphalt (CMA) using the Superpave gyratory compactor (SGC).

1.2 This test method is applicable for road mixes or plant mixes prepared at ambient temperatures.

1.3 This test method also refers to the determination of the bulk specific gravity of the compacted CMA.

1.4 The values given in SI units are to be considered the standard.

1.5 A precision and bias statement for this test method has not been developed at this time. Therefore, this test method should not be used for acceptance or rejection of a material for purchasing purposes.

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

2. Referenced Documents

2.1 *ASTM Standards:* [2]

C 566 Test Method for Total Evaporable Moisture Content of Aggregate by Drying

D 8 Terminology Relating to Materials for Roads and Pavements

D 977 Specification for Emulsified Asphalt

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

D 2041 Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

D 2397 Specification for Cationic Emulsified Asphalt

D 2489 Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures

D 2726 Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures

D 3203 Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures

D 3628 Practice for Selection and Use of Emulsified Asphalts

D 4215 Specification for Cold-Mixed, Cold-Laid Bituminous Paving Mixtures

D 6752 Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Automatic Vacuum Sealing Method

D 6925 Test Method for Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor

D 6934 Test Method for Residue by Evaporation of Emulsified Asphalt

D 6998 Practice for Evaluating Aggregate Coating using Emulsified Asphalts

3. Terminology

3.1 *Definitions*—Definitions are in accordance with Terminology D 8.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *dense-graded aggregate emulsified asphalt cold mixtures*—mixtures of dense-graded aggregate and emulsified asphalt uniformly mixed at or near ambient temperature.

3.2.2 *dense-graded cold mix asphalt (CMA)*—emulsified asphalt that has been mixed with aggregate, dry, and compacted by a suitable compacting device.

3.2.3 *nominal maximum aggregate/sieve size*—one sieve size larger than the first sieve to retain more than 10 %.

4. Significance and Use

4.1 This test method is used to prepare specimens for determination of the bulk specific gravity of a cured compacted specimen. It covers modifications to Test Method D 6925 for preparation of CMA by means of the SGC.

[1] This test method is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.27 on Cold Mix Asphalts.

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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.