



Standard Practice for Construction of Asphalt-Rubber Cape Seal¹

This standard is issued under the fixed designation D7564/D7564M; 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 asphalt-rubber cape seal, which is defined as the application of an asphalt-rubber seal coat placed onto an existing pavement surface, followed by the application of a conventional Type II or III slurry seal.

NOTE 1—An asphalt-rubber seal coat is also known as a stress absorbing membrane (SAM) which consists of an asphalt-rubber membrane seal followed by the application of precoated aggregate chips.

1.2 An asphalt-rubber cape seal is commonly used to extend the service life of low to medium trafficked and moderately distressed asphalt-surfaced pavements. The existing pavement condition can be used to determine the application rates for the asphalt-rubber binder and aggregate as well as the aggregate gradation. Pavements in relatively poor condition will require a coarser aggregate with a higher binder application rate.

1.3 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 non-conformance with 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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

C29/C29M Test Method for Bulk Density (“Unit Weight”) and Voids in Aggregate

C117 Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing

C127 Test Method for Relative Density (Specific Gravity) and Absorption of Coarse Aggregate

C128 Test Method for Relative Density (Specific Gravity) and Absorption of Fine Aggregate

C131 Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

C136 Test Method for Sieve Analysis of Fine and Coarse Aggregates

D946 Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction

D1139 Specification for Aggregate for Single or Multiple Bituminous Surface Treatments

D2196 Test Methods for Rheological Properties of Non-Newtonian Materials by Rotational Viscometer

D2419 Test Method for Sand Equivalent Value of Soils and Fine Aggregate

D3381 Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction

D3910 Practices for Design, Testing, and Construction of Slurry Seal

D4791 Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

D5360 Practice for Design and Construction of Bituminous Surface Treatments

D5821 Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate

D6114 Specification for Asphalt-Rubber Binder

D6373 Specification for Performance Graded Asphalt Binder

D6433 Practice for Roads and Parking Lots Pavement Condition Index Surveys

3. Significance and Use

3.1 The procedure described in this practice is used to design and construct an asphalt-rubber cape seal that will provide a wearing course when subjected to low to medium traffic volumes and where the pavement distress is due to block-type cracking resulting from pavement aging or reflective cracking only (not where there are clear indications of fatigue cracking due to repeated heavy axle loads).

NOTE 2—Block cracking is defined in Practice **D6433**. See **Appendix X1** for an example of block cracking due to aging.

¹ This practice is under the jurisdiction of ASTM Committee **D04** on Road and Paving Materials and is the direct responsibility of Subcommittee **D04.24** on Asphalt Surface Treatments.

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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.