



Designation: D3320/D3320M – 18 (Reapproved 2024)

Standard Specification for Emulsified Coal-Tar Pitch (Mineral Colloid Type)¹

This standard is issued under the fixed designation D3320/D3320M; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This specification covers mineral-colloid-stabilized, emulsified coal-tar pitch suitable for use as a weather-protective and aliphatic-solvent resistant coating over bituminous pavements of airports, parking areas, and driveways.

1.2 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 following precautionary caveat pertains only to the test method portion, Section 6, of this specification: *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.*

1.4 *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:²

D140/D140M Practice for Sampling Asphalt Materials

D490 Specification for Road Tar (Withdrawn 2023)³

D529 Practice for Enclosed Carbon-Arc Exposures of Bituminous Materials (Withdrawn 2013)³

¹ This specification is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.09 on Liquid Applied Coatings for Roofing and Asphaltic Concrete Pavement.

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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.

³ The last approved version of this historical standard is referenced on www.astm.org.

D2939 Test Methods for Emulsified Bitumens Used as Protective Coatings (Withdrawn 2012)³
D3699 Specification for Kerosine

2.2 Federal Specification:⁴

VV-K-211 Kerosene

3. Materials and Manufacture

3.1 The emulsion shall be made using tars having viscosities of RT-11 or higher. The tars shall conform to the requirements of Specification D490.

3.2 Mineral filler (mineral colloids) shall consist of finely ground clay, silica, or other inert inorganic materials. (**Warning**—Bentonitic or highly expansive clays may cause drying and shrinkage problems, which may affect the durability of the pavement sealer.)

3.3 When specified, the emulsion shall be fortified with antifreeze.

4. Physical Requirements

4.1 The emulsion shall be of suitable consistency for application by brush, squeegee, roller, or suitable spray equipment. The material shall be used as received. It shall not be diluted with water or thinned by heating. It shall bond firmly to properly prepared damp or primed surfaces.

NOTE 1—Pavement and ambient temperature should be not less than 7 °C [45 °F] at the time of application and for at least 12 h thereafter, with no precipitation of rain, snow, and so forth, until the emulsion has dried.

4.2 The product shall be of smooth, uniform consistency without settlement or segregation in storage to the extent that it cannot be readily dispersed by ordinary stirring.

4.3 The material, after stirring to homogeneity, shall be suitable for application by the selected method in single coats of approximately 0.3 to 0.4 L/m² [$\frac{3}{4}$ to 1 gal/100 ft²] without appreciable drainage on inclines up to 0.8 % [0.1 in./ft].

4.4 The material shall conform to the physical properties prescribed in Table 1 prior to fortification with antifreeze.

⁴ Obsolete. Previously available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave. Philadelphia, PA 19111-5094, Attn: NPODS.