



Designation: D 4866 – 88 (Reapproved 1997)<sup>ε1</sup>

AMERICAN SOCIETY FOR TESTING AND MATERIALS  
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# Standard Performance Specification for Coal Tar Pitch Emulsion Pavement Sealer Mix Formulations Containing Mineral Aggregates and Optional Polymeric Admixtures<sup>1</sup>

This standard is issued under the fixed designation D 4866; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

<sup>ε1</sup> NOTE—Editorial changes were made throughout in January 1997.

## 1. Scope

1.1 This performance specification covers mixtures of emulsified coal-tar pitch (mineral colloid type), mineral aggregates, and optional polymeric admixtures that are used as a weather-protective and straight aliphatic hydrocarbon resistant coatings over bituminous pavements of airports, parking areas, and driveways.

1.2 The following safety hazards statement applies 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 and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

### 2.1 ASTM Standards:

D 466 Test Methods for Films Deposited from Bituminous Emulsions<sup>2</sup>

D 2939 Test Methods for Emulsified Bitumens Used as Protective Coatings<sup>2</sup>

D 3699 Specification for Kerosine<sup>3</sup>

### 2.2 Federal Specification:

RP-355e Pitch, Coal Tar Emulsion (Coating for Bituminous Pavements)<sup>4</sup>

## 3. Materials

3.1 Ratios of component materials that make up the mixture to be tested, as well as detailed specifications for the mineral aggregate and optional polymeric admixture shall be as agreed upon between the purchaser and the seller.

3.2 The base coal-tar emulsion shall meet the requirements of Federal Specification RP-355e.

3.3 The mineral aggregate shall be either a natural or manufactured product composed of clean, hard, durable, uncoated particles, free from dirt, organic matter, and other objectionable substances.

3.4 The optional polymeric admixture shall be any polymer or mixtures thereof, with added compounding ingredients of such nature and quality that will allow the admixture to be compatible with and enhance the performance of mineral aggregate modified coal-tar emulsion pavement sealers.

3.5 The water used in mixing shall be potable and free from harmful soluble salts. The temperature of the water shall be at least 50°F (10°C).

## 4. Physical Requirements

4.1 The mixture as applied shall be of uniform consistency and suitable for application to properly prepared or primed surfaces at a rate of 1.0 to 2.5 gal/100 ft<sup>2</sup> (0.4 to 1.0 L/m<sup>2</sup>) without appreciable drainage on inclines up to 0.8 % (0.1 in./ft).

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, etc., until the emulsion has dried.

NOTE 2—When these materials are applied in commercial quantities the purchaser or inspector should observe the mixing to ensure that after each step no coagulation or separation of the ingredients occurs and that the mix has a good application consistency. When possible, a small batch should be mixed and observed prior to the onset of major work.

4.2 The mixture shall conform to the physical properties prescribed in Table 1.

## 5. Sampling

5.1 Sample in accordance with Test Methods D 2939.

## 6. Test Methods

6.1 *Redispersibility*—The product (coal-tar emulsion/aggregate/water/optional admixture) shall be of a uniform consistency without settlement or segregation in storage to the extent that it can be readily dispersed and applied to the pavement.

6.2 *Drying Time*—Test Methods D 2939, section on Firm Set except test after drying for 8 h.

6.3 *Resistance to Heat*—Test Method D 2939, section on

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D-8 on Roofing, Waterproofing, and Bituminous Materials and is the direct responsibility of Subcommittee D08.09 on Bituminous Emulsions.

Current edition approved Dec. 15, 1988. Published January 1989.

<sup>2</sup> Annual Book of ASTM Standards, Vol 04.04.

<sup>3</sup> Annual Book of ASTM Standards, Vol 05.03.

<sup>4</sup> Available from General Services Administration, Regional Offices. GSA DC-8911502595.