



Standard Specification for Emulsified Refined Coal-Tar (Driveway Sealer, Ready to Use, Primarily Residential Grade)¹

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1. Scope

1.1 This specification covers mineral-colloid-stabilized, emulsified refined coal tar suitable for use as a weather-protective and petroleum (aliphatic) solvent resistant coating over bituminous concrete pavements.

1.2 Both products specified are prepackaged ready to use driveway sealers primarily for retail homeowner use.

1.3 *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 requirements prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

C 136 Test Method for Sieve Analysis of Fine and Coarse Aggregates²

C 142 Test Method for Clay Lumps and Friable Particles in Aggregates²

D 140 Practice for Sampling Bituminous Materials³

D 490 Specification for Road Tar³

D 2939 Test Methods for Emulsified Bitumens Used as Protective Coatings⁴

D 5727 Specification for Emulsified Refined Coal Tar (Mineral Colloid Type)⁴

3. Terminology

3.1 For both types of mixtures, the ingredients are combined during the manufacturing process and shipped ready-to-use.

3.1.1 *Type I material*—a mixture of refined coal tar emulsion meeting Specification D 5727, water, and optional additive.

3.1.2 *Type II material*—a mixture of refined coal tar emulsion meeting Specification D 5727, water, aggregate, and optional additive.

4. Classification

4.1 This specification is designed to give specifying authorities the information necessary to ensure that the appropriate refined coal tar emulsion mixtures are specified for protecting bituminous concrete pavements where fuel resistance is required.

5. Materials and Manufacture

5.1 *Base Refined Coal Tar Emulsion*—This emulsion shall be made using binders prepared from a high temperature refined coal tar conforming to the requirements of Specification D 490 for RT11 or higher. Base refined coal tar emulsion shall be in accordance with all requirements of Specification D 5727.

5.2 *Aggregate*—Aggregate is used in Type II materials to improve traction and wearability. The aggregate shall be either a natural or manufactured aggregate composed of clean, hard, durable particles free of clay and other objectionable material when tested in accordance with Test Method C 142. (Boiler slag has been used successfully.)

NOTE 1—It is recommended that the nominal maximum size of the aggregate not exceed the 0.6 mm (No. 30) sieve when tested in accordance with Test Method C 136.

6. Performance Requirements

6.1 *Composition*—The refined coal tar emulsion seal coat shall consist of a mixture of ingredients listed in Section 5 for either specific Type I or II and shall meet all the requirements of Table 1.

6.2 *Aggregate Verification Test*—In order to verify that the proper amount of aggregate specified in Table 1 is contained in the mixture, conduct an aggregate content test according to Test Methods D 2939.

6.3 The material, after stirring to homogeneity, shall be suitable for application brush, squeegee, roller, or suitable spray equipment without heating. The mixture shall be of suitable consistency for application by the selected method in single coats of approximately (depending on pavement texture) 2.9 to 4.9 m²/L (60 to 100 ft²/gal) without appreciable drainage on inclines up to 0.8 %. The mixture shall conform to the physical properties prescribed in Table 1 for Type I or Type II.

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 Bituminous Emulsions.

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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 04.04.