Designation: D6945/D6945M – 03 (Reapproved 2023)

Standard Specification for Emulsified Refined Coal-Tar (Ready to Use, Commercial Grade)[1]

This standard is issued under the fixed designation D6945/D6945M; 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 specification covers mineral-colloid-stabilized, emulsified refined coal tar suitable for use as a weather-protective and petroleum (aliphatic) solvent resistant coating. This product is typically applied to commercial lots and other low-speed bituminous concrete pavements suitable for protection.

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 *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]

C136/C136M Test Method for Sieve Analysis of Fine and Coarse Aggregates

C142/C142M Test Method for Clay Lumps and Friable Particles in Aggregates

D140/D140M Practice for Sampling Asphalt Materials

D490 Specification for Road Tar

D2939 Test Methods for Emulsified Bitumens Used as Protective Coatings (Withdrawn 2012)[3]

D3423/D3423M Practice for Application of Emulsified Coal-Tar Pitch (Mineral Colloid Type)

D5727/D5727M Specification for Emulsified Refined Coal Tar (Mineral Colloid Type)

3. Terminology

3.1 The refined coal tar emulsion mixed at the contractor's yard or at the job site shall meet the requirements of Specification D5727/D5727M. Mixture Types I and II (see Appendix A of Practice D3423/D3423M for standard definition of terms) are described below:

3.1.1 *Type I material*—a mixture of refined coal tar emulsion meeting Specification D5727/D5727M, water, and aggregate.

3.1.2 *Type II material*—a mixture of refined coal tar emulsion meeting Specification D5727/D5727M, water, aggregate, and additive.

4. Classification

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

4.2 Normal aggregate loadings for Type I materials should range from 0.360 to 0.600 kg/L [3 to 5 lb/gal]. Type II materials can have slightly higher loadings of aggregate; however, aggregate loadings in excess of 0.720 kg/L [6 lb/gal] are strongly discouraged.

NOTE 1—Several researchers have shown that high aggregate loadings result in a lack of fuel resistance as determined by the Resistance to Kerosene test according to Test Methods D2939. Poor adhesion may also occur with high sand loadings.

5. Materials and Manufacture

5.1 *Base Refined Coal Tar Emulsion*—This emulsion shall be made using binders prepared from a high-temperature

[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.