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AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Practice for Application of Emulsified Coal-Tar Pitch (Mineral Colloid Type)¹

This standard is issued under the fixed designation D 3423; 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.

^{e1} NOTE—Editorially switched from English dominant to SI dominant.

1. Scope

1.1 This practice covers the application of mineral-colloid-stabilized, emulsified coal-tar pitch meeting the requirements of Specification D 3320, as a weather protection and aliphatic-solvent-resistant sealer for use on bituminous pavements of airports, parking lots, and driveways.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

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 limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 3320 Specification for Emulsified Coal-Tar Pitch (Mineral Colloid Type)²

3. Preparation of Surface

3.1 *Old Asphalt Surfaces* (those which have weathered over a change of seasons):

3.1.1 Repair and patch all pavement defects. If a solvent containing cold-applied material is used, this should be done a minimum of 90 days prior to the planned application of the sealer to permit solvent escape before sealing.

3.1.2 Thoroughly inspect the pavement surface for minor cracks or other imperfections. Ignore hairline cracks. Open minor cracks (less than 12.7 mm (1/2 in.)) to a minimum depth and width of 12.7 mm and fill with a crack filler approved by the manufacturer of the sealer. Wider cracks, along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced.

3.1.3 Treat old, badly oxidized asphalt pavement or asphalt pavement that has lost binder by erosion leaving exposed

aggregate with a prime coat recommended by the sealer manufacturer after all loose aggregate is removed. This prime coat is to dry thoroughly before proceeding.

3.1.4 Immediately prior to application of the sealer, clean the surface of all loose dust, dirt, leaves, and other foreign materials by sweeping, by flushing well with water, or a combination of both.

3.1.5 Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent until a water-break-free surface is obtained after thorough flushing with clear water. If cleaning is unable to produce a true “water-break-free” surface, and the size of the unsatisfactory area is too small to warrant replacement as described in 3.1.1, the questionable area should be treated with a spot sealer as per the pavement sealer manufacturer’s recommendation. Do not use only solvents to remove oil or grease as the solvents may affect adhesion of the sealer.

3.1.6 Remove and patch pavement that has been penetrated by oil and grease in accordance with the precautions described in 3.1.1 if a cold patch is required.

3.1.7 Treat old parking and traffic control lines with a prime coat. If control lines are excessively built-up from multiple applications, abrade to the pavement surface before application of the prime coat.

3.2 *New Asphalt Surfaces:*

3.2.1 Allow conventional hot-mix asphalt surfaces to age a minimum of 30 days prior to the application of the sealer.

3.2.2 Before application of sealer over a pavement constructed by the use of solvent-containing cold-mix asphalt, age the pavement a minimum of 90 days. A careful review and inspection of the pavement should be made by the supplier to ensure that all solvents have escaped prior to application of the sealer.

3.2.3 Extend the curing period for new asphalt surfaces during cool or cold weather.

3.2.4 The surface should be clean and free from oil and grease (see 3.1.4, 3.1.5, and 3.1.6).

4. Preparation of Emulsion

4.1 Stir the emulsion to a uniform consistency prior to use. Mechanical mixing is preferred as it will lessen the stirring time and usually result in a more uniform mix.

¹ This practice 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.

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² *Annual Book of ASTM Standards*, Vol 04.04.