Bracketed section numbers refer to the 2006 *Standard Specifications*.

Section 93 Liquid Asphalts

Section 93
Liquid Asphalts

4-9301 General

4-9301
General

Liquid asphalt is used for penetration treatment of untreated material or as a prime coat. The application of liquid asphalt will not contribute to the strength of the treated base.

Penetration treatment consists of an application of liquid asphalt to an underlying compacted roadbed material. It is used principally as a surface stabilizing agent on light traffic detours, medians, and parking areas and as a dust palliative.

Prime coat is used to prepare an untreated base for hot mix asphalt (HMA) surface course or treated permeable base. The purpose of prime coat is to reduce the raveling or displacement of underlying material, reduce the likelihood of erosion of fines, and enhance the adherence of thin-lift HMA to base.

In addition to the specifications for liquid asphalts in Section 93, "Liquid Asphalts," of the *Standard Specifications*, refer to the requirements for liquid asphalts in Section 37, "Bituminous Seals," of the *Standard Specifications* and project special provisions covering work in which liquid asphalts are used.

4-9302 Before Work Begins

4-9302
Before Work
Begins

Before work begins, take the following steps:

- Verify that Form CEM-3101, "Notice of Materials to Be Used," includes liquid asphalt. Refer to Section 6-202, "Responsibilities for Acceptance of Manufactured or Fabricated Materials and Products," of this manual for additional information.
- Examine the distributor truck to ensure it meets the specified requirements.
- When required, ensure the contractor properly equips delivery trucks, storage tanks, and spreading equipment with the specified devices for measuring the volume of liquid asphalt.

4-9303 During the Course of Work

4-9303
During the Course
of Work

During the work, take the following steps:

- Designate the area that will receive the surface treatment using liquid asphalt.
- Determine prime coat quantities under the specifications for liquid asphalt.
- If liquid asphalt is used before sampling and testing, obtain a certificate of compliance containing the specified information.
- Check the temperature of the liquid asphalt to ensure it is within the specified range when applied.
- Before applying liquid asphalt, ensure the surface to be treated is clean and dry.
- Ensure that liquid asphalt is not sprayed outside designated areas and that bituminous material does not drip from distribution equipment.

- Ensure prime coat is not applied to a geosynthetic pavement interlayer.
- Check the application rate of liquid asphalt to ensure the designated rate. After the first few hundred feet of application, check the initial spread rate. The frequency for checking the spread rate will depend on the accuracy and consistency of the first few checks. Record the spot-check results and the overall daily spread rate in the daily report.
- Sample liquid asphalt in accordance with the table in Section 6-1, "Sample Types and Frequencies," and the instructions in Section 6-203C, "Materials Accepted on the Basis of a Certificate of Compliance," of this manual.

4-9304 Measurement and Payment

4-9304 Measurement and Payment

Section 93, "Liquid Asphalts," of the *Standard Specifications*, contains provisions for payment. Payment clauses for liquid asphalts are in the various sections covering work in which liquid asphalts are used.

If there is no bid item for liquid asphalt, the payment is included in the payment for the work involved.

Determine pay quantity for liquid asphalt by collecting initial load slips or weight certificates from each load of liquid asphalt and, if partial loads were used, collect weigh-back slips or certificates to determine pay quantities.

It is a good practice, before the asphalt is discharged, to measure the volume in the distributor truck and to make this volumetric measurement again whenever a partial load leaves the work. These actions result in a good check against scale weights, and the second measurement may be used if the contractor fails to submit a weight ticket for the unused asphalt.

When making volumetric measurements, measure the temperature and apply the proper factors for converting volume to mass.