# EMULSIFIED ASPHALT FOR FOG SEAL, SPECIAL

Eff. 02-17-2022

This work shall consist of the application of an emulsified asphalt as a fog seal.

Materials. Materials shall be according to the following.

Item Article/Section

(a) Emulsified Asphalts (Note 1)…………………………………………………………1032

Note 1. The emulsified asphalt used to construct the fog seal shall be either SS-1h or CSS-1h.

Equipment. Equipment shall be according to the following.

Item Article/Section

(a) General Use Pressure Distributor (Note 1) 1102.05(a)

(b) Mechanical Sweeper ......................................................................................... 1101.03

Note 1. The general use pressure distributor shall have a minimum capacity of 3000 gal (11,500 L). The application rate control shall be automated and shall control the application rate regardless of ground speed or spray bar width. The computer shall have the capability of recording the application rate, gallons sprayed, square yards, and feet traveled. The general use pressure distributor shall be capable of maintaining the asphalt emulsion at the specified temperature. The spray bar nozzles shall produce a uniform triple lap application fan spray, and the shutoff shall be instantaneous, with no dripping. The general use pressure distributor shall be capable of maintaining the specified application rate within ± 0.015 gal/sq yd (± 0.070 L/sq m) for each load. The spray-bar nozzles shall be turned to make the same angle with the longitudinal axis of the spray bar as recommended by the manufacturer.

Application rates shall be determined according to the Manual of Test Procedures for Materials “Determination of Residual Asphalt in Prime and Tack Coat Materials”, except the sample may be taken on three 12 in x 12 in. (300 x 300 mm) metal plates. The three plates shall be positioned as directed by the Engineer.

CONSTRUCTION REQUIREMENTS

Weather Limitations. This work shall be done between May 1 and August 31. Emulsified asphalts shall be applied only when the temperature of the air in the shade is above 55 °F (13 °C). No work shall be started if local conditions indicate that rain is imminent.

Fog seal operations shall be performed during daylight hours and not during foggy weather. The road surface may be damp but shall be free of standing water.

This work may be done between September 1 and September 15 provided both of the following conditions are met:

(a) The temperature of the air in the shade is above 70 °F (20 °C) and the temperature of the surface to which the asphalt will be applied is 70 °F (20 °C) or above, and

(b) The National Weather Service forecast for the area does not show any rain or any temperatures below 55 °F (13 °C) for the day the work is to be done or for the following five days.

Preparation of Emulsified Asphalt. The temperature of the emulsified asphalt at the time of application shall be such that it sprays uniformly without clogging the spraying nozzles and is applied within the temperature range of 150 – 190 °F (65 – 90 °C).

Preparation of Base.Preparation of old bituminous, brick, and concrete bases shall be as follows. The base course shall be cleaned by means of a mechanical sweeper, hand brooms, flushing with water, or by other approved methods. Special care shall be taken to clean the surface of the base course adjacent to the edges, so that the full width of the surface to be treated will be clean. The surface of the base course shall be clean and dry when the emulsified asphalt fog seal is placed.

Application of Emulsified Asphalt. The emulsified asphalt shall be applied with a general use pressure distributor. The entire length of the spray bar shall be set at the height above the surface recommended by the manufacturer for even distribution of the emulsified asphalt. A hand spray bar shall be used at locations not covered by the distributor.

 The distributor shall be operated in a manner such that missing transverse joints shall be avoided.

Adjacent construction, such as concrete pavement, curb and gutter, bridge floors, raised reflective pavement markers, and bridge handrails, shall be protected by shields, covers or other means. If emulsified asphalt is applied to adjacent construction, the Contractor shall remove such material to the satisfaction of the Engineer.

The emulsified asphalt shall be applied uniformly and at a rate that will provide a residual asphalt rate on the prepared surface of 0.05 lb/sq ft (0.244 kg/sq m). The Contractor shall demonstrate the application will produce 100 percent coverage of the surface after curing. If the application demonstration does not meet the coverage requirements, the spray pattern shall be adjusted until approved by the Engineer. The emulsified asphalt shall be applied in a manner to minimize the amount of overspray.

Basis of Payment. Emulsified Asphalt for fog seal will be paid for at the contract unit price per pound (kilogram) of residual asphalt for BITUMINOUS MATERIALS (FOG SEAL).