

## POLYMER MODIFIED EMULSIFIED ASPHALT (BDE)

Effective: November 1, 2002

Add the following to Article 1009.07 of the Standard Specifications: (insert it before the table on page 853 which begins, "The different grades are, in general, used for the following:")

- (f) Polymer Modified Emulsified Asphalt. Polymer modified emulsified asphalts shall be either anionic (SS-1hP) or cationic (CSS-1hP). They shall meet the SS-1h requirements of Article 1009.07(a) or the CSS-1h requirements of Article 1009.07(b) respectively, with the following exceptions for both types:
- (1) The emulsified asphalt shall be modified with a styrene-butadiene diblock or triblock copolymer, or a styrene butadiene rubber
  - (2) The cement mixing and ductility tests will be waived.
  - (3) Upon examination of the storage stability test cylinder after standing undisturbed for 24 hours, the surface shall show no white, milky colored substance and shall be a homogeneous brown color throughout.
  - (4) The distillation for polymer modified emulsion shall be performed according to AASHTO T 59 except the temperature shall be  $190 \pm 5$  °C ( $374 \pm 9$  °F) and measured using an ASTM 16C (16F) thermometer.
  - (5) The residue from distillation shall have a minimum elastic recovery value of 30 percent when tested according to AASHTO T 301. The specified temperature shall be  $4.0 \pm 0.5$  °C ( $39.2 \pm 1.0$  °F).

Add the following grades "for tack or fog seal" to the table at the end of Article 1009.07 of the Standard Specifications which begins, "The different grades are, in general, used for the following:"

"SS-1hP, CSS-1hP

- 2.1 **Emulsion.** The emulsion shall be a latex modified asphalt emulsion and shall be a grade SS1h or CSS-1h. *It shall show no separation after mixing . A minimum of 2.5 percent latex content, by mass, of an approved latex shall be milled into the asphalt emulsion at the time of manufacture of the emulsion . The emulsion shall be sampled in accordance with AASHTO T 40 and shall comply with the following requirements:*

	Min	Max	Test Method
Test on Emulsions			
Viscosity, Saybolt Furol at 25 Cs	20.00	100.00	AASHTO T 59
Storage Stability test, 24 hr, percent	---	1 (a)	AASHTO T 59
Particle charge test	positive (b)		AASHTO T 59
Sieve test, percent	---	0.50	AASHTO T 59
Distillation:			
Residue, percent	57.00	---	AASHTO T 59
Tests on Residue from Distillation Test			
Penetration, 25 C, 100 g, 5s,	40.00	90.00	AASHTO T 49
Ductility, 25 C, 5 cm/min, cm,	40.00	---	AASHTO T 51
Solubility in Trichloroethylene, percent	97.50	---	AASHTO T 44

Note: (a) The storage stability test may be waived provided the asphalt emulsion storage tank at the project site has adequate provisions for circulating the entire contents of the tank, and provided satisfactory field results are obtained.