S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 702– BITUMINOUS MATERIALS

The purpose of this Supplemental Specification is to adopt new AASHTO specifications for emulsions.

Amend Section 702 to read**:**

Table 702-1 – Anionic Asphalt Emulsion

	Rapid-Setting						Medium Setting							
Grade	RS-1h		RS-1		RS-2		HFMS-2		MS-4		MS-5			**Test Method**
	min	max	min	max	min	max	min	max	min	max	min	max		
Tests on emulsified asphalt:														
Viscosity, Saybolt Furol at 25°C (77° F), s[a]	20	100	20	100										T59
Viscosity, Saybolt Furol at 50°C (122° F), s[a]					75	400	100 see (d)		100	500	100	500		
Storage stability test, 24 h, %[a,b]		1.0		1.0		1.0		1.0		1.0		1.0		
Demulsibility, 35 mL, 0.02 *N* $CaCl_2$, %[a]	60		60		60									
Coating ability and water resistance														
Coating, dry aggregate							good		75%		75%			
Coating, after spraying							fair		see (e) (f)		see (e) (f) (g)			
Coating, wet aggregate							fair							
Coating, after spraying							fair							
Sieve test, %[a,b]		0.10		0.10		0.10		0.10		0.10		0.10		
Distillation														
Oil distillate, %									1.0	7.0	0	3.0		
Residue, %[c]	55		55		65		65		65		65			
Tests on residue from distillation:														
Penetration, 25°C (77°F), 100 g, 5 s, 0.1 mm	40	90	90	150	90	150	90	250	250		150	250		T49
Ductility, 25°C (77°F), 5 cm/min, cm	40		40		40		40							T51
Ash content, %		1.0		1.0		1.0		1.0						T111
Float test, 60°C (140°F), s							1200		50		100			T50

Table 702-2 -- Cationic Asphalt Emulsion

Type	**Rapid-Setting**				
Grade	**CRS-1h**		**CRS-1**		
Tests on emulsified asphalt:	min	max	min	max	**Test Method**
Viscosity, Saybolt Furol at 50°C (122°F), s[a]	20	100	20	100	T59
Storage stability test, 24-h, %[a,b]		1		1	
Sodium dioctyl sulfosuccinate, %[a]	40		40		
Particle charge test	Positive		Positive		
Sieve test, %[a,b]		0.10		0.10	
Distillation:					
Oil Distillate by volume of emulsified asphalt, %		3		3	
Residue, %[c]	60		60		
Tests on residue from distillation:					
Penetration, 25°C (77°F), 100 g, 5 s, 0.1 mm	40	90	90	150	T49
Ductility, 25°C (77°F), 5 cm/min, cm	40		40		T51
Ash content, %		1		1	T111

Footnotes:

a. This test requirement and associated specification limits are waived for emulsified asphalt products following dilution
b. This test requirement on representative samples may be waived if successful application of the material has been achieved in the field.
c. For emulsions that are diluted, the percent residue requirements must be adjusted accordingly.
d. 50 + when material is used for sealing.
e. Wet Coating: Weigh 100 ± 0.5 g of aggregate, 20 to 30 mesh (0.85 to 0.60 mm) standard Ottawa sand, into a 600 mL glass beaker and add soft tap water, approximately twice the volume of that of sand. Weigh into the beaker containing the sand and water 8 ± 0.2 g of the emulsion at room temperature and mix for two minutes with a stiff spatula. Cover the mixture with approximately twice its own volume of tap water and pour the water off without further mixing. Repeat this process. After the second rinse, at least 75 percent of the sand shall remain coated.
f. Stripping: After evaluating the wet coating, place the mixture into a clear 600 mL glass beaker, cover the mixture with tap water, let stand for 1 to 16 hours, and examine. At least 75 percent of the sand shall remain coated.
g. The coating and stripping tests may be waived when MS-5 is used for sand sealing.