

State: Washington, D.C.	Materials: Re: Section 802 - Bituminous Materials
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Washington, D.C.		Table 1: Requirements for Anionic Emulsified Asphalts for Concrete Vaults (1)								
Property		Test Method AASHTO (T), ASTM (D), or Other	Rapid-Setting		Medium-Setting			Slow-Setting		Quick-Setting
			RS-1	RS-2	MS-1	MS-2	MS-2h	SS-1	SS-1h	QS-1H
EMULSIONS:										
Viscosity, Saybolt Furol seconds	25 °C (77 °F)	T59	20-100	-	20-100	100 min.	100 min.	20-100	20-100	20-100
	50 °C (122 °F)		-	75-400	-	-	-	-	-	-
Settlement, 5 days, %			-	-	-	-	-	-	-	-
Storage Stability Test, 24 hours, % (2)			1 max.	1 max.	1 max.	1 max.	1 max.	1 max.	1 max.	1 max.
Sieve Test, % (2,3)			0.10 max.	0.10 max.	0.10 max.	0.10 max.	0.10 max.	0.10 max.	0.10 max.	0.10 max.
Demulsibility, % (4)			60 min.	60 min.	-	-	-	-	-	-
Cement Mixing Test, %			-	-	-	-	-	2.0 max.	2.0 max.	-
Coating Ability and Water Resistance	Dry Aggregate		-	-	Good	Good	Good	-	-	-
	After Spraying		-	-	Fair	Fair	Fair	-	-	-
	Wet Aggregate		-	-	Fair	Fair	Fair	-	-	-
	After Spraying		-	-	Fair	Fair	Fair	-	-	-
Residue, %			55 min.	63 min.	55 min.	65 min.	65 min.	57 min.	57 min.	57 min.
DISTILLATION RESIDUE:										
Penetration, 25 °C (77 °F), tenths of mm		T49	100-200	100-200	100-200	100-200	40-90	100-200	40-90	40-90
Ductility, 25 °C (77 °F), cm		T51	40 min.	40 min.	40 min.	40 min.	40 min.	40 min.	40 min.	40 min.
Solubility in trichloroethylene or n-propyl bromide, %		T44	97.5 min.	97.5 min.	97.5 min.	97.5 min.	97.5 min.	97.5 min.	97.5 min.	97.5 min.
NOTES:		1. Refer to R5 for typical applications. 2. This test requirement on representative samples is waived if successful application of the material has been achieved in the field. 3. A maximum percentage of 0.30 is acceptable for samples taken at the point of use. 4. The demulsibility test shall be performed within 30 days from the date of shipment. Use 35 ml, 0.02 N CaCl ₂ solution.								

Washington, D.C.		Table 2: Requirements for High Float Anionic Emulsified Asphalt for Concrete Vaults (1)					
Property		Test Method AASHTO (T), ASTM (D), or Other	Rapid-Setting	Medium-Setting			
			HFRS-2	HFMS-1	HFMS-2	HFMS-2h	HFMS-2s
EMULSIONS:							
Viscosity, Saybolt Furol seconds	25 °C (77 °F)	T59	-	20-100	100 min.	100 min.	50 min.
	50 °C (122 °F)		75-400	-	-	-	-
Storage Stability Test, 24 hours, % (2)			1 max.	1 max.	1 max.	1 max.	1 max.
Sieve Test, % (2,3)			0.10 max.	0.10 max.	0.10 max.	0.10 max.	0.10 max.
Demulsibility , % (4)			60 min.	-	-	-	-
Coating Ability and Water Resistance	Dry Aggregate		-	Good	Good	Good	Good
	After Spraying		-	Fair	Fair	Fair	Fair
	Wet Aggregate		-	Fair	Fair	Fair	Fair
	After Spraying		-	Fair	Fair	Fair	Fair
Residue, %			63 min.	55 min.	65 min.	65 min.	65 min.
Oil Distillate, volume of emulsion, %			-	-	-	-	1-7
DISTILLATION RESIDUE:							
Penetration, 25 °C (77 °F), tenths of mm		T49	100-200	100-200	100-200	40-90	200 min.
Ductility, 25 °C (77 °F), cm		T51	40 min.	40 min.	40 min.	40 min.	40 min.
Solubility in trichloroethylene, % (5)		T44	97.5 min.	97.5 min.	97.5 min.	97.5 min.	97.5 min.
Float Test at 60 °C (140 °F), seconds		T50	1200 min.	1200 min.	1200 min.	1200 min.	1200 min.
NOTES:		1. Refer to R5 for typical applications. 2. This test requirement on representative samples is waived if successful application of the material has been achieved in the field. 3. A maximum percentage of 0.30 is acceptable for samples taken at the point of use. 4. The demulsibility test shall be performed within 30 days from the date of shipment. Use 35 ml, 0.02 N CaCl ₂ solution. 5. N-propyl bromide may also be used for HFRS-2.					

Washington, D.C.			Table 3: Requirements for Anionic and Cationic Emulsified Asphalts for Securing Mulch (1)								
Property			Test Method AASHTO (T), ASTM (D), or Other	Anionic	Cationic						
				Slow-Setting	Rapid-Setting		Medium-Setting		Slow-Setting		Quick-Setting
				SS-1	CRS-1	CRS-2	CMS-2	CMS-2h	CSS-1	CSS-1h	CQS-1h
EMULSIONS:											
Viscosity, Saybolt Furol seconds		25 °C (77 °F)	T59	-	-	-	-	-	20-100	20-100	20-100
		50 °C (122 °F)		20-100	20-100	100-400	50-450	50-450	-	-	-
Settlement, 5 days, %		-		-	-	-	-	-	-	-	
Storage Stability Test, 24 hours, % (2)		1 max.		1 max.	1 max.	1 max.	1 max.	1 max.	1 max.	1 max.	
Sieve Test, % (2)		0.10 max. (3)		0.10 max.	0.10 max.	0.10 max.	0.10 max.	0.10 max.	0.10 max.	0.10 max.	
Particle Charge		-		Positive	Positive	Positive	Positive	Positive	Positive	Positive	
Demulsibility , % (4)		-		40 min.	40 min.	-	-	-	-	-	
Cement Mixing Test, %		2.0 max.		-	-	-	-	2.0 max.	2.0 max.	-	
Coating Ability and Water Resistance	Dry Aggregate	-		-	-	Good	Good	-	-	-	
	After Spraying	-		-	-	Fair	Fair	-	-	-	
	Wet Aggregate	-		-	-	Fair	Fair	-	-	-	
	After Spraying	-		-	-	Fair	Fair	-	-	-	
Residue, %		57 min.		60 min.	65 min.	65 min.	65 min.	57 min.	57 min.	57 min.	
Oil Distillate, volume of emulsion, %		-		3 max.	3 max.	12 max.	12 max.	-	-	-	
pH		T200	-	-	-	-	-	-	-	-	
DISTILLATION RESIDUE:											
Penetration, 25 °C (77 °F), tenths of mm			T49	40-90	100-250	100-250	100-250	40-90	100-250	40-90	40-90
Ductility, 25 °C (77 °F), cm			T51	40 min.	40 min.	40 min.	40 min.	40 min.	40 min.	40 min.	40 min.
Solubility in trichloroethylene, %			T44	97.5 min.	97.5 min.	97.5 min.	97.5 min.	97.5 min.	97.5 min.	97.5 min.	97.5 min.
NOTES:			1. Refer to R5 for typical applications. 2. This test requirement on representative samples is waived if successful application of the material has been achieved in the field. 3. A maximum percentage of 0.30 is acceptable for samples taken at the point of use. 4. Use 35 ml of 0.8% sodium dioctyl sulfosuccinate solution.								

Washington, D.C.		Table 4: Requirements for Anionic Emulsified Asphalts for Tack Coat (1)		
Property		Test Method AASHTO (T), ASTM (D), or Other	Slow-Setting	
			SS-1	SS-1h
EMULSIONS:				
Viscosity, Saybolt Furol seconds	25 °C (77 °F)	T59	20-100	20-100
	50 °C (122 °F)		-	-
Settlement, 5 days, %			-	-
Storage Stability Test, 24 hours, % (2)			1 max.	1 max.
Sieve Test, % (2,3)			0.10 max.	0.10 max.
Demulsibility, % (4)			-	-
Cement Mixing Test, %			2.0 max.	2.0 max.
Coating Ability and Water Resistance	Dry Aggregate		-	-
	After Spraying		-	-
	Wet Aggregate		-	-
	After Spraying		-	-
Residue, %			57 min.	57 min.
DISTILLATION RESIDUE:				
Penetration, 25 °C (77 °F), tenths of mm		T49	100-200	40-90
Ductility, 25 °C (77 °F), cm		T51	40 min.	40 min.
Solubility in trichloroethylene or n-propyl bromide, %		T44	97.5 min.	97.5 min.
NOTES:		1. Refer to R5 for typical applications. 2. This test requirement on representative samples is waived if successful application of the material has been achieved in the field. 3. A maximum percentage of 0.30 is acceptable for samples taken at the point of use. 4. The demulsibility test shall be performed within 30 days from the date of shipment. Use 35 ml, 0.02 N CaCl ₂ solution.		