State: New Mexico	**Materials:** Re: Section 402-Bituminous Materials
Date: 11/26/2024	**Web Address:** www.dot.state.nm.us
Materials Engineer: Can Chen, P.E., State Asphalt Engineer	**Contact Info:** can.chen@state.nm.us

New Mexico		**Table 1: Requirements for Anionic Emulsified Asphalts (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	.	-	20-100	20-100	20-100
	50 °C (122 °F)		-	75-400	-	100 min	100 min.	-	-	-
Storage Stability Test, 24 hours, % (2)			1 max.	1 max.	1 max.	1 max.	1 max.	1 max.	1 max.	
Sieve Test, % (2,3)			0.10max.	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.	-
DISTILLATION RESIDUE:										
Penetration, 25º C (77° F), tenths of mm		T49	90-150	90-150	90-250	90-250	40-90	90-250	40-90	40-90
Ductility, 25º 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.								

New Mexico		Table 2: Requirements for Cationic Emulsified Asphalts (1)						
Property		**Test Method AASHTO (T), ASTM (D), or Other**	**Rapid-Setting**		**Medium-Setting**		**Slow-Setting**		**Quick-Setting**
			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	100-400	50-450	50-450	-	-	-
Storage Stability Test, 24 hours, % (2)			1 max.	1 max.	1 max.	1 max.	1 max.	1 max.	.
Sieve Test, % (2)			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 , % (3)			40 min.	40 min.	-	-	-	-	-
Cement Mixing Test, %			-	-	-	-	2.0 max.	2.0 max.	-
Residue, %			60 min.	65 min.	65 min.	65 min.	57 min.	57 min.	62 min.
Oil Distillate, volume of emulsion, %			3 max.	3 max.	12 max.	12 max.	-	-	-
DISTILLATION RESIDUE:									
Penetration, 25 ºC (77 °F), tenths of mm		T49	90-150	90-150	90-250	40-90	90-250	40-90	40-90
Ductility, 25 ºC (77 °F), cm		T51	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.
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. Use 35 ml of 0.8% sodium dioctyl sulfosuccinate solution.							

New Mexico		Table 3: Requirements for High Float Emulsified Asphalt (1)				
Property		**Test Method AASHTO (T), ASTM (D), or Other**	**Medium-Setting**			
			HFE-60	**HFE-90**	**HFE-150**	**HFE-300**
EMULSIONS:						
Viscosity, Saybolt Furol seconds	25 °C (77 °F)	T59	-	-	-	-
	50 °C (122 °F)		50 min.	50 min.	50 min.	50 min.
Settlement, 5 days, %			5 max.	5 max.	5 max.	5 max.
Storage Stability Test, 24 hours, % (2)			1 max.	1 max.	1 max.	1 max.
Sieve Test, % (2,3)			0.10 max.	0.10 max.	0.10 max.	0.10 max.
Demulsibility , % (4)			30 min.	30 min.	-	-
Coating Test, 3 minutes		-	Grades, Stones coated thoroughly	Grades, Stones coated thoroughly	Grades, Stones coated thoroughly	Grades, Stones coated thoroughly
Residue, %		T59	65 min. (5)	65 min. (5)	65 min. (5)	65 min. (5)
Oil Distillate, volume of emulsion, %			1 max.	3 max.	7 max.	7 max.
DISTILLATION RESIDUE:						
Penetration, 25 ºC (77 °F), tenths of mm		T49	60-90	90-150	150-300	300 min.
Ductility, 25 ºC (77 °F), cm		T51	-	-	-	-
Solubility in trichloroethylene, % (6)		T44	-	-	-	-
Float Test at 60 °C (140 °F), seconds		T50	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 for HFRS-2, and 1.2 fl. Oz. 0.10 *N* $CaCl_2$ solution for HFE-60 and HFE-90. 5. Distillation to 500 °F. 6. N-propyl bromide may also be used for HFRS-2.				

New Mexico		Table 4: Requirements for Polymer-Modified High Float Emulsified Asphalt					
Property		**Test Method AASHTO (T), ASTM (D), or Other**	**Rapid-Setting**	**Medium-Setting**			
			HFRS-2P	**HFE-60P**	**HFE-100P**	**HFE-150P**	**HFE-300P**
EMULSIONS:							
Viscosity, Saybolt Furol seconds	25 °C (77 °F)	T59	-	-	-	-	-
	50 °C (122 °F)		100-400	50 min.	50 min.	50 min.	50 min.
Storage Stability Test, 24 hours, %			-	1 max.	1 max.	1 max.	1 max.
Sieve Test, %			0.10 max.	0.10 max.	0.10 max.	0.10 max.	0.10 max.
Demulsibility , % (1)			40 min.	30 min.	30 min.	-	-
Residue, %			65 min. (2)	65 min. (3)	65 min. (3)	65 min. (3)	65 min. (3)
Oil Distillate, volume of emulsion, %			3 max.	1 max.	3 max.	7 max.	7 max.
DISTILLATION RESIDUE:							
Penetration, 25 ºC (77 °F), tenths of mm		T49	90-150	60-90	90-150	150-300	300 min.
Ductility, cm (4)	4 ºC (39.2 °F)	T51	20 min.	-	-	-	-
	25 ºC (77 °F)		-	40 min.	40 min.	40 min.	-
Elastic Recovery, %	4 ºC (39.2 °F)	T301	-	-	-	25 min. (6)	25 min. (6)
	10 °C (50 °F)		58 min.	55 min. (5)	58 min. (5)	-	-
Float Test at 60 °C (140 °F), seconds		T50	1200 min.	1200 min.	1200 min.	1200 min.	1200 min.
NOTES:		1. Use 1.2 fl. Oz. 0.02 *N* $CaCl_2$ solution for HFRS-2P, and 1.2 fl. Oz. 0.10 *N* $CaCl_2$ solution for HFE-60P and HFE-90P. 2. Distillation to 450 °F. 3. Distillation 400 °F. 4. Use 2 in/min. pull rate.					

New Mexico		Table 4: Requirements for Asphalt Emulsified Prime (AE-P) and Penetrating Emulsified Prime (PE-P)		
Property		**Test Method AASHTO (T), ASTM (D), or Other**	**AE-P**	**PE-P**
EMULSIONS:				
Viscosity, Saybolt Furol Seconds	25 °C (77 °F)	T59	-	-
	50 °C (122 °F)		15-150	75 max.
Settlement, 24 hr, %			1 max.	-
Sieve, % (1)			-	0.10 max.
Residue, %			65 min.	38 min.
Oil Distillate, volume of emulsion, %			25 max.	0-4
DISTILLATION RESIDUE:				
Solubility in trichloroethylene, %		T44	97.5 min.	-
NOTES:		1. Retained on 0.35 in. sieve.		

New Mexico		Table 5: Requirements for Emulsified Petroleum Resin Prime (EPR-1)	
Property		**Test Method AASHTO (T), ASTM (D), or Other**	**EPR-1**
EMULSIONS:			
Viscosity, Saybolt Furol Seconds	25 °C (77 °F)	T59	14-60
	50 °C (122 °F)		-
Sieve, % (1)			0.1 max.
Residue, % (2)			60 min.
Particle Charge		D 7496	Positive
NOTES:		1. Test procedure with ASTM except that distilled water shall be used in place of two percent (2%) sodium oleate solution. 2. ASTM D-244 Evaporation Test for percent of residue is modified by heating 50 gram sample to 300°F until foaming ceases, then cool immediately and calculate results.	