State: Oregon	**Specification:** Standard Specification for Asphalt Materials
Date: 11/24/25	**Web Address:** https://www.oregon.gov/odot/Construction/Documents/2025_asphalt_materials_specs.pdf
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Oregon		**Table 1: Requirements for Anionic High Float Emulsified Asphalts**			
Property		**Test Method AASHTO (T), ASTM (D), or Other (1)**	**Rapid-Setting**	**Medium-Setting**	
			HFRS-2	**HFMS-2**	**HFMS-2S**
EMULSIONS:					
Viscosity, Saybolt Furol seconds	25° C (77° F)	T59	-	-	-
	50° C (122° F)		50 min.	100 min.	100 min.
Storage Stability Test, 24 hours, %			1.0 max.	1.0 max.	1.0 max.
Sieve Test, %			0.10 max.	0.10 max.	0.10 max.
Demulsibilty, %			30 min	-	-
Residue, %			63 min.	65 min.	65 min.
Oil Distillate, volume of emulsion, %			7 max.	7 max.	1-7
DISTILLATION RESIDUE:					
Penetration, 25º C (77° F), tenths of mm		T49	90-200	100-300	200 min.
Ductility, 25º C (77° F), cm		T51	40 min.	40 min.	-
Float Test at 60° C (140° F), seconds		T50	1200 min.	1200 min.	1200 min.
NOTES:		1. Test methods are the current version of either AASHTO (T), ASTM (D), or ODOT (TM) publications			

Oregon		Table 2: Requirements for Cationic Emulsified Asphalts							
Property		**Test Method AASHTO (T), ASTM (D), or Other**	**Rapid-Setting**		**Medium-Setting**			**Slow-Setting**	
			CRS-1 (4)	**CRS-2 (4)**	**CMS-2S**	**CMS-2**	**CMS-2H**	**CSS-1**	**CSS-1H**
EMULSIONS:									
Viscosity, Saybolt Furol seconds	25° C (77° F)	T59	-	-	-	-	-	20-100	20-100
	50° C (122° F)		20-100	100-400	50-450	50-450	50-450	-	-
Settlement, 5 days, %			-	-	-	-	-	-	-
Storage Stability Test, 24 hours, %			1.0 max.	1.0 max.	1.0 max.	1.0 max.	1.0 max.	1.0 max.	1.0 max.
Sieve Test, % (1)			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 , % (2)			40 min.	40 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, %			60 min.	65 min.	60 min.	65 min.	65 min.	57 min.	57 min.
Oil Distillate, volume of emulsion, %			3 max.	3 max.	12 max. (3)	8 max. (3)	8 max. (3)	3 max. (3)	3 max. (3)
pH		T200	-	-	-	-	-	-	-
DISTILLATION RESIDUE:									
Penetration, 25º C (77° F), tenths of mm		T49	90-250 (4)	90-250 (4)	90-250	90-250	40-90	90-250	40-90
Ductility, 25º C (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. This test requirement on representative samples is waived, if successful application of the material has been achieved in the field (per AASHTO M-140)
2. The demulsibility test shall be performed within 30 days from date of shipment.
3. Required under Oregon Administrative Rules, Chapter 340, Division 232-0120- Department of Environmental Equality
4. When CRS-1h or CRS-2h is specified, the penetration range is changed from 100-250 tenths of mm to 40-90 tenths of mm.

Oregon		Table 3: Requirements for Polymer-Modified Anionic High Float Emulsified Asphalt	
Property		**Test Method AASHTO (T), ASTM (D), or Other**	**HFMS-2SP**
EMULSIONS:			
Viscosity, Saybolt Furol seconds	25° C (77° F)	T59	-
	50° C (122° F)		50 min.
Storage Stability Test, 24 hours, %			(1)
Sieve Test, %			0.10 max.
Residue, % (2)			65 min. (3)
Oil Distillate, volume of emulsion, % (2)			7.0 max.
DISTILLATION RESIDUE:			
Penetration, 25º C (77° F), tenths of mm		T49	300 min.
Ductility, 25º C (77° F), cm		T51	-
Elastic Recovery, % (4)		ODOT TM429 (5)	25 min.
Solubility in trichloroethylene, %		T44	97.0 min.
Float Test at 60° C (140° F), seconds		T50	1200 min.
NOTES:		1. The material after setting undisturbed for 24 hours shall show no white, milky separation, but shall be smooth and homogeneous throughout. 2. AASHTO T59, with modifications to include a 204 ± 6° C maximum temperature to be held for 15 minutes. 3. The combined percentage of the residue portion and the oil portion from the residue by distillation test shall be 70.0% minimum. 4. Elastic Recovery Test to be performed on Rolling Thin Film Oven aged residue (AASHTO T 240). 5. Method of testing on file at ODOT Materials Laboratory in Salem, OR.	

Oregon		Table 4: Requirements for Polymer Modified Asphalt for Chip Seals				
Property		**Test Method AASHTO (T), ASTM (D), or Other**	**Anionic**			**Cationic**
			HFRS-1P	**HFRS-2P**	**RS-LTP**	**CRS-2P**
EMULSIONS:						
Viscosity, Saybolt Furol Seconds, range	25°C (77°F)	T59	-	-	-	-
	50°C (122°F)		100 min.	100 min.	100 min.	100-400
Settlement, 5 days, %			-	-	-	-
Storage Stability Test, 24 hours, %			1.0 max.	1.0 max.	1.0 max.	1.0 max.
Sieve Test, %			0.10 max.	0.10 max.	0.10 max.	0.10 max.
Particle Charge Test			-	-	-	-
Demulsibilty, %			30 min.	40 min.	60 min.	40 min.
Breaking Index @ 25° C (77° F)		-	-	-	-	-
Residue by Evaporation, %	(1)	T59	65 min.	65 min.	65 min.	65 min.
Oil Distillate, volume of emulsion, %	(1)		3.0 max.	2.0 max.	3.0 max.	3.0 max.
EVAPORATION RESIDUE:						
Penetration, 25° C		T49	90-200	90-200	150-300	90-150
Ductility, 25º C, 50mm/minute, mm		T51	-	-	-	-
Solubility in trichloroethylene, %	(2)	T44	97.5 min.	97.5 min.	-	97.5 min.
Float Test at 60° C (140° F), seconds		T50	1200 min.	1200 min.	-	-
Elastic Recovery, %		ODOT TM429 (1)	30 min.	58 min.	45 min.	45 min.
-or-						
Torsional Recovery, %		-	-	-	-	-
NOTES:		1. For HFRS-1P, HFRS-2P, and RS-LTP, use AASTHO T59 with modifications to include a 204 ± 5° C (400 ± 10° F) maximum temperature to be held for 15 minutes. For CRS-2P, use AASHTO T59 with modifications to include 300 grams of emulsion and a 177 ± 5° C (350 ± 10° F) maximum temperature to be held for 15 minutes. 2. May be waived if polymer modification interferes with test accuracy.				

Oregon		Table 5: Requirements Cold-In-Place Recycling Agents		
Property		**Test Method AASHTO (T), ASTM (D), or Other**	**Anionic**	**Cationic**
			HFMS-2RA	**CMS-2RA**
EMULSIONS:				
Viscosity, Saybolt Furol seconds	25° C (77° F)	T59	-	-
	50° C (122° F)		50 min.	50-450
Storage Stability Test, 24 hours, %			1.0 max.	1.0 max.
Sieve Test, %			0.10 max.	0.10 max.
Residue, %			65 min.	60 min.
Oil Distillate, volume of emulsion, %			7 max.	5-15
DISTILLATION RESIDUE:				
Penetration, 25º C (77° F), tenths of mm		T49	200-350	100-250
Ductility, 25º C (77° F), cm		T51	-	-
Elastic Recovery, 4º C %		T301	-	-
Solubility in trichloroethylene, %		T44	97.5 min.	97.5 min.
Float Test at 60° C (140° F), seconds		T50	1200 min.	-
NOTES:		None.		