

902-R-645 ASPHALT MATERIALS

(Adopted 06-16-16)

The Standard Specifications are revised as follows:

SECTION 902, BEGIN LINE 69, INSERT AS FOLLOWS:

(b) Asphalt Emulsions

Asphalt emulsions shall be composed of an intimate homogeneous suspension of a base asphalt, an emulsifying agent, and water. Asphalt emulsions may contain additives to improve handling and performance characteristics. Failure of an emulsion to perform satisfactorily in the field shall be cause for rejection, even though it passes laboratory tests. The grade used shall be in accordance with the table for asphalt emulsions as shown herein. *A type A certification for the asphalt emulsion shall be furnished in accordance with ITM 804.*

SECTION 902, BEGIN LINE 120, DELETE AND INSERT AS FOLLOWS:

Characteristic ⁽¹⁾⁽²⁾	AASHTO Test Method	RS-2	HFRS-2	AE-90	AE-90S	AE-T	AE-NT	AE-F	SS-1h	AE-150	AE-150L	AE-PL	AE-PMT ⁽⁶⁾	AE-PMP ⁽⁶⁾
Test on Emulsion														
Viscosity, Saybolt Furol at 25°C, min.	T 59			50			15		20	50				20+
Viscosity, Saybolt Furol at 25°C, max.	T 59					100	100	100	100		100	115	100	
Viscosity, Saybolt Furol at 50°C, min.	T 59	75	75		50					75				
Viscosity, Saybolt Furol at 50°C, max.	T 59	400	400							300				
Demulsibility w/35 mL, 0.02N CaCl ₂ , % min.	T 59	50	50		30			25						
Demulsibility w/50 mL, 0.10N CaCl ₂ , % min.	T 59			75		75							25+	25+
Oil Distillate by Distillation, mL/100 g Emul ⁽³⁾ max.	T 59	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	7.0	7.0	3.0	3.0	3.0
Residue by Distillation, % min.	T 59	68 65	68 65	68 65	65 ⁽⁵⁾	54	50	27	57	68 65	60	30		
Residue by Distillation, % max.	T 59					62		35			65			
Sieve Test, % max.	T 59	0.10	0.10	0.10	0.10	0.10	0.30	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Penetrating Ability, mm, min.	902.02(w)											6		
Stone Coating Test, %	902.02(t)3a			90						90	90			
Settlement, % max.	T 59	5	5	5			5							
Storage Stability, % max.	T 59				1									
Asphalt Content by Distillation at 204°C, % min.													54	45
Asphalt Content by Distillation at 204°C, % max.													62	
Tests on Residue														
Penetration (0.1 mm) at 25°C, 100g, 5 s, min. ⁽⁴⁾	T 49	100	100	100	90	50		40	40				50	300+
Penetration (0.1 mm) at 25°C, 100g, 5 s, max. ⁽⁴⁾	T 49	200	200	200	150	200	40	90	90				200	
Penetration (0.1 mm) at 25°C, 50g, 5 s, min. ⁽⁴⁾	T 49									100	100			
Penetration (0.1 mm) at 25°C, 50g, 5 s, max. ⁽⁴⁾	T 49									300	300			
Ductility at 25°C, mm, min.	T 51	400	400	400		400			400					
Solubility in Org. Sol., % min.	T 44	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5
Float Test at 60°C, s, min. ⁽⁴⁾	T 50		1200	1200	1200	1200				1200	1200			
Force Ratio	T 300				0.3									
Elastic Recovery, at 4°C	T 301				58									
Polymer Content by Infrared													1.5+	1.5+
Notes: (1) Broken samples or samples more than 10 days old will not be tested. (2) Combined percentage of the residue and oil distillate by distillation shall be at least 70% (note the different units – ml for oil and % for residue). (3) Oil distillate shall be in accordance with ASTM D 396, table 1, grade no. 1 (4) The Engineer may waive the test. (5) Maximum temperature to be held for 15 minutes at 200 ± 5°C. (6) Asphalt shall be polymerized prior to emulsification.														

(c) Cutback Asphalts

Cutback asphalts shall be composed of an intimate homogeneous mixture of an asphalt base and a suitable distillate designed for medium, or slow curing. Cutback asphalts may also contain an additive as an aid in uniformly coating wet, damp, or dry aggregates used in patching mixtures or HMA pavements. These asphalts shall not contain more than 0.3% water as determined by ASTM D 95, shall not separate when allowed to stand, and shall not foam when heated to permissible temperatures. When an additive is used, it shall be incorporated homogeneously in the asphalt at the point of manufacture. The temperature of the cutback asphalt shall not be higher than shown for that grade in 902.03. *A type A certification for the cutback asphalt shall be furnished in accordance with 916.*

SECTION 902, AFTER LINE 148, INSERT AS FOLLOWS:

A type A certification for the utility asphalt shall be furnished in accordance with 916.

SECTION 902, AFTER LINE 153, INSERT AS FOLLOWS:

A type A certification shall be submitted to the pipe fabricator in accordance with 908.07.

902.02 Sampling and Testing Asphalt Materials

The tests and AASHTO references are as follows:

- (a) Sampling Bituminous Materials AASHTO T-40 R 66

The following exceptions to AASHTO T-40 R 66 shall apply:
