406-R-583 TACK COAT

(Adopted 07-21-11)

The Standards Specifications are revised as follows:

SECTION 406, BEGIN LINE 9, INSERT AS FOLLOWS:

406.02 Materials

The type and grade of asphalt material shall be in accordance with the following:

Asphalt Emulsion, AE-T, AE-PMT, SS-1h, *AE-NT*.....902.01(b)
PG Asphalt Binder, PG 64-22.....902.01(a)

SECTION 507, BEGIN LINE 107, INSERT AND DELETE AS FOLLOWS:

(b) Partial Depth Patching

Partial depth patching shall be constructed at locations shown on the plans. Existing joints directed to be patched partial depth, shall be milled to a depth of 3 in. (75 mm) the full width of the lane. The minimum length of milling is 6 in. (150 mm) beyond the map-cracked area. The milled area shall be cleaned of all loose material prior to patching. Cleaning shall be by blowing the milled areas with compressed air at a minimum pressure of 100 psi (690 kPa). When the milled areas are satisfactorily cleaned, the milled areas shall be tacked with ~~AE-T~~ *asphalt material* in accordance with 406 and patched with HMA.

SECTION 902, AFTER LINE 115, DELETE AND INSERT AS FOLLOWS:

AE-NT is a fast setting, hard penetration type, intended for tack coats.

The requirements for asphalt emulsions shall be in accordance with the following:

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]
Tests 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 CaC12, %, min.	T 59	50	50		30			25						
Demulsibility w/50 mL, 0.10N CaC12, %, min.	T 59			75		75							25+	25+
Oil Distillate by Distillation, mL/100 g Emul, *max.* [3]	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	68	68	65[5]	54	*50*	27	57	68	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 50°C, s, max.~~ [4]	~~T 50~~													

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 min *at* 200 ± 5°C.
(6) Asphalt shall be polymerized prior to emulsification.