EXPECTED IMPLEMENTATION JULY 2020

916 BITUMINOUS MATERIALS (REV 11-4-19) (FA 1-9-20) (7-20)

SUBARTICLE 916-2.3 is deleted and the following substituted:

916-2.3 Reporting: Specification compliance testing results shall be reported for the tests in the table below, unless noted otherwise. Quality control (QC) testing results shall be reported for original binder DSR (G/sin δ and phase angle, as applicable).

SUPERPAVE PG ASPHALT BINDER			
Test and Method	Conditions	Specification Minimum/Maximum Value	
Superpave PG Asphalt Binder Grade		Report	
APL Number		Report	
Modifier (name and type)	Polymer, Ground Tire Rubber with Approved Product List (APL) number, Sulfur, PPA, REOB, and any Rejuvenating Agents	Report	
Original Binder			
Solubility, AASHTO T44-14	in Trichloroethylene	Minimum 99.0% (Not applicable for PG 76-22 (ARB))	
Flash Point, AASHTO T48-17	Cleveland Open Cup	Minimum 450°F	
Rotational Viscosity, AASHTO T316-13 (2017)	275°F	Maximum 3 Pa·s ^(a)	
Dynamic Shear Rheometer ^(b) , AASHTO T315-12 (2016)	$G^*/sin \ \delta$	Minimum 1.00 kPa	
	Phase Angle, δ ^(c) PG 76-22 (PMA) and PG 76-22 (ARB) ^(d)	Maximum 75 degrees	
Separation Test, ASTM D7173-14 and Softening Point,	163±5°C 48 hours	Maximum 15°F (PG 76-22 (ARB) only)	
AASHTO T53-09 (2013)		10. 12. (2017)	
Rolling Thin Film Oven Test Residue (AASHTO T240-13 (2017))			
Rolling Thin Film Oven, AASHTO T240-13 (2017)	Mass Change %	Maximum 1.00	

EXPECTED IMPLEMENTATION JULY 2020

Multiple Stress Creep Recovery, J _{nr, 3.2} AASHTO T350-14	Grade Temperature (Unmodified binders only)	"S" = $4.50 \text{ kPa}^{-1} \text{ max}$	
Multiple Stress Creep Recovery, J _{nr, 3.2} ^(d, e, f) AASHTO T350-14	67°C (Modified binders only)	"V" = $1.00 \text{ kPa}^{-1} \text{ max}$ Maximum $J_{nr,diff} = 75\%$	
AASII10 1330-14	76°C (High Polymer binder only)	0.10 kPa ⁻¹ max	
Multiple Stress Creep Recovery, %Recovery ^{(d,}	67°C (Modified binders only)	$%R_{3.2} \ge 29.371 \ (J_{nr, 3.2})^{-1} \ (J_{nr, 3.2})^{-1}$	
AASHTO T350-14	76°C (High Polymer binder only)	$%R_{3.2} \ge 90.0$	
Pressure Aging Vessel Residue (AASHTO R28-12)			
Dynamic Shear Rheometer, AASHTO T315-12 (2016)	G*sin δ, 10 rad/sec.	Maximum 5000 kPa ^(f, g)	
Creep Stiffness, AASHTO T313-12 (2016)	S (Stiffness), @ 60 sec. m-value, @ 60 sec.	Maximum 300 MPa Minimum 0.300	
ΔTc, ASTM D7643-16	20 hours PAV aging S (Stiffness), @ 60 sec. m-value, @ 60 sec.	$\Delta Tc \ge -5.0$ °C	

- (a) Binders with values higher than 3 Pa·s should be used with caution and only after consulting with the supplier as to any special handling procedures, including pumping capabilities.
- (b) Dynamic Shear Rheometer (AASHTO T315-12 (2016)) shall be performed on original binders for the purposes of QC testing only.
- (c) The original binder phase angle (AASHTO T315-12 (2016)) shall be performed at grade temperature.
- (d) AASHTO T315-12 (2016) and AASHTO T350-14 will be performed at a 2-mm gap for PG 76-22 (ARB).
- (e) All binders with a high temperature designation >67 will be tested at 67°C. PG 76-22 (PMA) and PG 76-22 (ARB) shall pass a "V" grade per AASHTO M332-14.
- (f) A maximum Jnr diff = 75% does not apply for any Jnr value \leq 0.50 kPa-1.
- (g) For all PG grades of a PG 67 or higher, perform the PAV residue testing at 26.5°C with a maximum of 5000 kPa.
- (h) For all PG grades of a PG 76 or higher, perform the PAV residue testing at 26.5°C with a maximum of 6000 kPa.