

State: New York	Materials: Re: Section 401-2.04 - Bituminous Materials
Date Last Reviewed: 4/1/24	Web Address: www.dot.state.ny.us
Materials Engineer: Karl Vogel	Contact Info: Karl.Vogel@dot.ny.gov

Asphalt Binder		
Section 401-2.04 CPDM Section 6.2.5	Highlights	NYSDOT fully implemented AASHTO M332 (MSCR) for all grades in 2014. MSCR recovery is specified using the curve in AASHTO R92. NYSDOT specifies the use of PMA for all mixtures except temporary pavements or truing and leveling courses. Many local agencies in the state still specify neat binders.
	PMA Notes	58E-34, 64H-22, 64V-22, 64E-22 - Also a special specification for bridge deck overlay using 76E-28
	Exclusions and Limits	All suppliers must indicate whether they are supplying neat or modified binder. Neat PG binders are asphalts free from modification with: fillers, extenders, reinforcing agents, adhesion promoters, thermoplastic polymers, oxidation, acid modification and other additives such as motor oil. The types of modification allowed for New York State Department of Transportation are the following: Block Copolymers (SB, SBS), SBR Latex, Crumb Rubber, Elvaloy, Polyphosphoric Acid (PPA)- PPA modified binder is allowed only for Downstate (Orange, Putnam, Rockland, Westchester, Nassau and Suffolk Counties & City of New York), and cannot be used with aggregates or RAP containing limestone.

New York		Table 1: Requirements for Performance-Graded Asphalt Binders					
Property		Test Method: AASHTO	Requirements by Performance Grade				
			58E-34	64S-22	64H-22	64V-22	64E-22
ORIGINAL							
Flash Point, °C		T 48	230				
Specific Gravity	60° F	T 228	Report				
Rotational Viscosity, Pa·s	135° C	T 316	3.0 max.				
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec)	At Grade Temperature	T 315	1.00 min.				
RTFO RESIDUE		T 240					
Mass Change, %		T 240	1.00 max.				
MSCR Test temp., °C			58	64			
MSCR, Jnr _{3,2} , max., kPa ⁻¹		T 350	0.5	4.5	2.0	1.0	0.5
MSCR, Jnr _{diff} , max., %			75				
MSCR, % recovery @ 3.2kPa, min.			(Note 1)	-	(Note 1)		
PAV RESIDUE		R 28	100° C, 20 hrs, 300 psi				
DSR Test Temperature, °C			16	25			
Dynamic Shear, kPa (G* · sin δ, 10 rad./sec.)		T 315	6000 max.	6000 max. δ min. 42° (Note 2)	6000 max.		
BBR Test Temperature, °C			-24	-12			
Creep Stiffness, MPa		T 313	300 max.				
M-Value			0.300 min.				
NOTES		<ol style="list-style-type: none"> >29.371*(Jnr_{3,2}^{-0.263}) - binder grades H, V, and E must meet the requirements of AASHTO R 92. If G* sin δ is below 5000 the phase angle minimum limit is not required . 					