State: New Mexico	**Materials:** Re: Section 402 - Bituminous Materials
Date Last Reviewed: 11/26/2024	**Web Address:** www.nmshtd.state.nm.us
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Asphalt Binder		
Section 402	Highlights	The Supplier shall provide performance-graded asphalt binder in accordance with AASHTO M 320. The Contractor may substitute a performance-graded asphalt binder with a high-end or low-end temperature grade in excess of that shown in the Plans, at no additional cost to the Department.
	PMA Notes	The Contractor shall provide a Polymer-Modified Asphalt Binder that meets the requirements for a PG 76-22+, PG 76-28+, PG 70-22+, PG 70-28+, PG 76-28R+ and PG 70-28R+ per AASHTO M 320 in addition to the requirements in Table 402.2.1.2:1, "Polymer-Modified Asphalt Binders."
	Exclusions and Limits	Asphalt binders are uncracked petroleum asphalts. The Supplier shall prepare asphalt binders by refining petroleum at a maximum temperature of 700 °F. The Supplier shall not use Materials that are prone to cracking. The asphalt binder will be: 1. Free of thermal decomposition products; 2. Free of residue from non-asphalt sources; 3. Homogeneous and free from water; 4. Non-foaming when heated to 350 °F; and 5. Conforming to the requirements of performance-graded asphalt binder. 6. See Note 2.

New Mexico			**Table 1: Requirements for Performance-Graded Asphalt Binders** (Notes 3 and 4)								
Property		**Test Method:**	**Requirements by Performance Grade**								
			58-28	**64-22**	**64-28**	**70-22+**	**70-28+**	**76-22+**	**76-28+**	**70-28R+**	**76-28R+**
ORIGINAL											
Flash Point, ° C		T48	230 min.								
Rotational Viscosity, Pa·s	135° C	T316	3.0 max.								
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec)	At Grade Temp.	T315	1.00 min.								
Solubility, % minimum		D2042	-			97.5					
RTFO RESIDUE		T240									
Mass Change, %		T240	1.00 max.								
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec.)	At Grade Temp.	T315	2.20 min.								
Elastic Recovery, %	25° C	T301	-			65					

TABLE 1 CONTINUED ON PAGE 2

PAV RESIDUE		R28	100° C, 20 hrs, 305 psi								
Dynamic Shear, kPa (G* · sin δ, 10 rad./sec.)	At Test Temperature	T315	19° C	25° C	22° C	28° C	25° C	31° C	28° C	25° C	28° C
			5000 max.								
Creep Stiffness, MPa	At Test Temperature	T313	-18° C	-12° C	-18° C	-12° C	-18° C	-12° C	-18° C	-18° C	-18° C
			300 max.								
M-Value			0.300 min.								
Direct Tension, % Strain	At Test Temperature	T314	-18° C	-12° C	-18° C	-12° C	-18° C	-12° C	-18° C	-18° C	-18° C
			1.00 min.								
NOTES			1. If the solubility of the binder is less than 97.5 percent, test the base asphalt binder. The solubility of the base asphalt binder shall be greater than 99 percent. 2. Tire rubber modifier (TRM) shall be produced from the recycling of automobile and/or truck tires. The specific gravity of the TRM shall be 1.15 +/- 0.05. The fiber content shall be less than 0.5% by weight for all other applications. The TRM shall contain no metal particles. Mineral contaminates shall be less than 0.25% by weight. Minimum of 2.0% Styrene-Butadiene-Styrene (SBS) Polymer content by weight of total formulation. 3. New Mexico specifies non polymer-modified (without the +) PG 70-22, 70-28, 76-22, and 76-28 binders. The extra tests required for polymer modified binders (solubility and elastic recovery) are not necessary on the same grades without polymer 4. Requirements in addition to M320 are shown in red. 5. Per AASHTO T315, report 5000 kPa or 6000 kPa if phase angle >= 42 for PAV residue for all binders.								