

State: Missouri	Materials: Re: Section 1015 – Bituminous Material
Date Last Reviewed: 2/25/25	Web Address: www.modot.org
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Asphalt Binder		
Section 1015	Highlights	MODOT continues to specify M 320 graded binders but allows the substitution of M 332 (MSCR) graded binders as follows: PG 64V-22 in lieu of PG 76-22; PG 64H-22 in lieu of PG 70-22; PG 64S-22 in lieu of PG 64-22. There are no elastic recovery requirements for M 332 graded binders.
	PMA Notes	See elastic recovery below for M320 graded binders. Ground tire rubber (GTR) with 4.5% transpolyoctenamer rubber (TOR) may be used for modification.
	Exclusions and Limits	Performance graded asphalt binder shall be an asphalt-based binder produced from petroleum residue either with or without the addition of non-particulate organic modifiers, except Re-refined Engine Oil Bottoms (REOB) and Vacuum Tower Asphalt Extenders (VTAE) shall not be used as modifiers.

Missouri		Table 1: Requirements for Performance-Graded Asphalt Binders					
Property	Test Method: AASTHO (T), ASTM (D) or other	Requirements by Performance Grade (Note 1)					
		64-22	64S-22	70-22	64H-22	76-22	64V-22
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 Temperature T315	1.00 min.					
Separation of Polymer, % diff. (2)	D5976	-	-	10 max.	-	10 max.	-
RTFO RESIDUE		T240					
Mass Change, %	T240	1.00 max.					
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec.)	At Grade Temperature T315	2.20 min.	-	2.20 min.	-	2.20 min.	-
MSCR: test temp., ° C J _{nr3.2} , max., kPa ⁻¹ J _{nrdiff} , max., %	At Grade Temperature T350	-	64 4.5 75	-	64 2.0 75	-	64 1.0 75
Elastic Recovery, % (3)	25° C T301	-	-	55 min.	-	65 min.	-
PAV RESIDUE		R28 100° C, 20 hrs, 300 psi					
Dynamic Shear, kPa (G* · sin δ, 10 rad./sec.)	At Test Temperature T315	25° C		28° C		31° C	
		5000 max.		5000 max.	6000 max.	5000 max.	6000 max.
Creep Stiffness, MPa	At Test Temperature T313	-12° C					
		300 max.					
M-Value		0.300 min.					
NOTES	<ol style="list-style-type: none"> Requirements in addition to M320 and M332 are shown in red. Separation test to be performed in accordance with ASTM D5976, except test upper and lower portions as original binder for G* value according to AASHTO T315. 10cm elongation 						

To ensure the most accurate and current information, the specific agency should be contacted.