

Province: Alberta	Materials: Performance Graded Asphalt Cement
Date Last Reviewed: 02-04-2021	Web Address: https://www.alberta.ca/transportation.aspx
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Asphalt Binder		
	Description	All asphalt binders shall be prepared from petroleum oils. Performance grade asphalt cements (PGAC) shall meet the requirements of AASHTO M320 Standard Specification for PGAC (Table 1) with modifications as outlined within the specification.
	Exclusions	Re-refined Engine Oil Bottoms (REOB), also known as Vacuum Tower Asphalt Extenders (VTAE), shall not be added in any proportion to PGAC. The Department may perform a chemical composition analysis to determine if REOB has been used.

Alberta		Table 1: Requirements for Performance-Graded Asphalt Binders (Note 3)						
Property		Test Method: AASHTO (T), ASTM (D) or other	Requirements by Performance Grade				PG 58-40	
			PG 46-34 (1)	PG 52-34	PG 58-28 (2)	PG 58-34		PG 58-37
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.					
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.					
MSCR, J _{nr} @ 3.2kPa (kPa ⁻¹)	58 °C	T350	-					
MSCR, % Recovery @ 3.2kPa, R _{3.2}			-		25 min.	40 min.	40 min.	
PAV20 RESIDUE		R28	90 °C		100 °C			
Dynamic Shear, kPa (G* · sin δ, 10 rad./sec.)	At Test Temperature	T315	10 °C	13 °C	19 °C	16 °C	14.5 °C	13.0 °C
			5000 max.					
Creep Stiffness, MPa	At Test Temperature	T313	-24 °C	-24 °C	-18 °C	-24 °C	-27 °C	-30 °C
M-Value			300 max.					
			0.300 min.					
Direct Tension, % Strain	At Test Temperature	T314	-24 °C	-24 °C	-18 °C	-24 °C	-27 °C	-30 °C
			1.0 min.					
TABLE 1 CONTINUED ON PAGE 2								

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



Property		Test Method: AASHTO (T), ASTM (D) or other	Requirements by Performance Grade				
			PG 64-28	PG 64-34	PG 64-37	PG 70-28	PG 76-28
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.				
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.				
MSCR, J _{nr} @ 3.2kPa (kPa ⁻¹)	58 °C	T350	-				
MSCR, % Recovery @ 3.2kPa, R _{3.2}			25 min.	40 min.	55 min.	40 min.	55 min.
PAV20 RESIDUE		R28	100 °C				
Dynamic Shear, kPa (G* · sin δ, 10 rad./sec.)	At Test Temperature	T315	22 °C	19 °C	17.5 °C	25 °C	30 °C
			5000 max.				
Creep Stiffness, MPa	At Test Temperature	T313	-18 °C	-24 °C	-27 °C	-18 °C	-18 °C
			300 max.				
M-Value			0.300 min.				
Direct Tension, % Strain	At Test Temperature	T314	-18 °C	-24 °C	-27 °C	-18 °C	-18 °C
			1.0 min.				
NOTES		1. Only pre-qualified suppliers for this grade which test as a -37 °C under AASHTO T313. 2. Only pre-qualified suppliers for this grade which test as a -30 °C or colder. 3. Requirements in addition to M320 are shown in red.					

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