

<b>Province:</b> Alberta	<b>Materials:</b> Performance Graded Asphalt Cement
<b>Date Last Reviewed:</b> July 15, 2025	<b>Web Address:</b> <a href="https://www.alberta.ca/transportation.aspx">https://www.alberta.ca/transportation.aspx</a>
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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 (1)					
Property	Test Method: AASHTO (T), ASTM (D) or other	Requirements by Performance Grade					
		PG 46-34 (2)	PG 52-34	PG 58-28 (3)	PG 58-34	PG 58-37	PG 58-40
<b>ORIGINAL</b>							
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.					
<b>RTFO RESIDUE</b>		T240					
Mass Change, %	T240	1.00 max.					
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec.)	At Grade Temperature T315	2.20 min.					
MSCR, % Recovery @ 3.2kPa, R <sub>3.2</sub>	58 °C T350	-			25 min.	40 min.	40 min.
<b>PAV20 RESIDUE</b>		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
Phase angle, δ		6000 max. <sup>Note 4</sup>					
Creep Stiffness, MPa	At Test Temperature T313	-24 °C	-24 °C	-18 °C	-24 °C	-27 °C	-30 °C
M-Value		300 max.					
Direct Tension, % Strain	At Test Temperature T314	0.300 min.					
		-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
<b>ORIGINAL</b>							
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.				
<b>RTFO RESIDUE</b>		T240					
Mass Change, %		T240	1.00 max.				
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec.)	At Grade Temperature	T315	2.20 min.				
MSCR, % Recovery @ 3.2kPa, R <sub>3.2</sub>	58 °C	T350	25 min.	40 min.	55 min.	40 min.	55 min.
<b>PAV20 RESIDUE</b>		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
			6000 max. <sup>Note 4</sup>				
Phase angle, δ			42° min. <sup>Note 4</sup>				
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.				
<b>NOTES</b>		<ol style="list-style-type: none"> <li>1. Requirements in addition to M320 are shown in red.</li> <li>2. Only pre-qualified suppliers for this grade which test as a -37 °C under AASHTO T313.</li> <li>3. Only pre-qualified suppliers for this grade which test as a -30 °C or colder.</li> <li>4. If G*·sin δ is below 5000 kPa, the phase angle limit is not required</li> </ol>					

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